DESIRABLE REVENUE MANAGEMENT PRACTICES FOR A SUSTAINABLE OIL AND GAS INDUSTRY IN UGANDA

 $\mathbf{B}\mathbf{y}$

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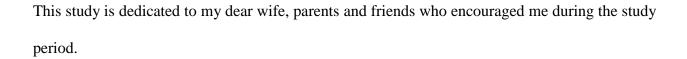
A Dissertation submitted to the School of Business and Management in partial fulfillment of the requirements for the award of the Executive Master of Business Administration in Oil Governance and Management of Uganda Technology and Management University

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DECLARATION

I, Ambrose Twinamatsiko, declare that this study is my original work and has not been submitted	d
for an award of a degree in any other University for examination purposes.	
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DEDICATION



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I wish to extend my gratitude to my supervisor for his professional guidance and advice throughout my project.

I also want to sincerely thank the managements of Uganda Technology and Management University, Bank of Uganda and Ministry of Energy and Mineral Development and the staff for the assistance they accorded to me during the data collection period.

To the entire academic staff of Uganda Technology and Management University and my course mates, thank you for your great support.

To my family and friends, kindly accept my appreciation.

May God bless you all

TABLE OF CONTENTS

DECLARATION						ii
DEDICATION			•••••			iii
ACKNOWLEDGEMENTS			•••••			iv
ABSTRACT						ix
CHAPTER ONE: INTRO	ODUCTION					11
1.1 Introduction						11
1.2 Background to the	study					11
1.2.1 Historical Backg	round					11
1.2.2Theoretical B	ackground:	The	Permanent	Income	Hypothesis	(PIH)
	•••••	•••••		• • • • • • • • • • • • • • • • • • • •		12
1.2.3Conceptual Backs	ground					14
1.2.4Contextual Backg	ground	• • • • • • • • • •				16
1.3Statement of the resear	ch problem					18
1.4Purpose of the Study						19
1.4.1Objectives of the	study					19
1.5Research questions						19
1.6Research Hypotheses						20
1.7 Conceptual framework						20
Figure 1: Conceptua	l Framework.	•••••	••••••	•••••	•••••	21
1.8 Significance of the stud	y		•••••			22
1.9 Justification of the stud	ly					22
1.10 Scope of the study			•••••			23
1.10.1 Geographical So	cope					23
1.10.2 Context scope						24

1.10.3 Time scope
1.11 Operational definitions
CHAPTER TWO: LITERATURE REVIEW
2.1 Introduction
2.2 The Case for Oil and Sustainable Development: A Conceptual Review27
2.2.1 Transparency in Oil Revenue Management and Sustainable development
2.2.2 Institutional Capacity Building for Oil and Gas governance
2.2.3 The Citizens' part in the Management of the anticipated Oil and Gas revenues 30
2.3 Theoretical review
2.3.1 The Permanent Income Hypothesis (PIH)
2.4 Contextual review
2.4.1 Anticipated Transparency and Accountability challenges in the management of the Oil Revenue
2.4.2 Anticipated Institutional Capacity bottlenecks for Oil and Gas Revenue Management 37
2.4.3 Anticipated motivations behind citizens' imminent discontentment with the management of the oil revenue
2.4.4 Empirical studies
2.4.5 Synthesis of the literature review
CHAPTER THREE: METHODOLOGY46
3.1 Introduction45
3.2 Research design
3.3 Study population45
3.4 Determination of sample size and selection
3.5 Sampling Techniques and Procedure
3.6 Data Collection methods and instruments
3.6.1 Questionnaire Method

3.6.2 Interview Method	49
3.7 Validity and reliability of Instruments	50
3.7.1 Validity of instruments	50
3.7.2 Reliability of instruments	51
3.8 Procedures of data collection	52
3.9 Data Analysis	52
3.9.1 Qualitative data analysis	52
3.9.2 Quantitative data analysis	52
3.10 Measurement of variables	53
3. 11 Ethical Considerations	54
CHAPTER FOUR	55
PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS	55
4.1 Introduction	55
4.2 Response rate	55
4.3 Study findings	56
4.3.1 Background information (Primary data)	56
4.3.2 Descriptive Analysis of the Core findings based on merged responses (Primary data	.) 59
4.4 Inferential analysis of the core findings	71
4.4.1 Correlation analysis between the independent variables based on MS Excel's Pe	earson
Rank Correlation Coefficient	71
4.4.2 Regression analysis based on Number Analytics Software output	72
CHAPTER FIVE	76
SUMMARY, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS	76
5.1 Introduction	76
5.2 Summary	76
5.3 Discussion	77

5.3.1 Effect of transparency and accountability on the sustainability of Uganda's oil sector and
development
5.3.2 Effect of tax administration and contract negotiation on the sustainability of Uganda's oil
sector and development
5.3.3 Effect of citizens' involvement in the oil matters on the sustainability of Uganda's oil
sector and development
5.4 Conclusions
5.4.1 Effect of transparency and accountability on the sustainability of Uganda's oil sector and
development
5.4.2 Effect of tax administration and contract negotiation on the sustainability of Uganda's oil
sector and development
5.4.3 Effect of citizens' involvement in the oil matters on the sustainability of Uganda's oil
sector and development
•
5.5 Recommendations81
5.5.1 Effect of transparency and accountability on the sustainability of Uganda's oil sector and
development
5.5.2 Effect of tax administration and contract negotiation on the sustainability of Uganda's oil
sector and development
5.5.3 Effect of citizens' involvement in the oil matters on the sustainability of Uganda's oil
sector and development
5.6 Contributions of the study83
5.7 Recommendations for further research83
REFERENCES84
APPENDIX90
Appendix 1: Questionnaire90

ABSTRACT

This study was aimed at examining the desirable revenue management practices for a sustainable oil and gas industry in Uganda which involved studying the relationship between transparency and accountability, tax administration and contract negotiation as well as citizens' involvement in the Oil sector and sustainability of the sector. The researcher adopted a descriptive survey research design to examine perceptions of 48 respondents drawn from the Oil Governance and Management class of UTAMU, Bank of Uganda and the Ministry of Energy and Mineral Development who were sampled by convenience and by stratification. Descriptive analysis was used to establish the distributions of the sample on demographic variables of age, sex, level of education, and occupation while the Pearson Rank Correlation in the MS Excel programme was used to measure the degree of association between the two variables. Additionally, regression analysis was also run using number analytics software to determine the strength of the model. The study established that while transparency and accountability is a major contributor to sustainability development of the oil sector, it has a less positive marginal effect compared to tax administration and contract negotiation, yet a better determinant of sustainability than citizens' involvement. Altogether, the study established that the marginal effect of instituting proper tax administration and contract negotiation processes will have a more positively significant effect to the sustainability of the oil resource while citizens' involvement may not have a significant effect. Since the Government of Uganda holds all oil, gas and sub-soil mineral assets in trust for the nation, care must be taken in formulating taxation policies and in negotiating contracts pertinent to oil and gas exploration and development in the country. It may also consider the Extractive Industries Transparency Initiative (EITI) because it provides avenues for addressing the general failure to account, transform resource wealth into sustainable development, i.e. the

resource curse and the associated governance problems in the extractive sector.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This study was aimed at determining the desirable revenue management practices for a sustainable oil and gas industry in Uganda, while also citing international lessons of success and inadequacies in the petroleum sector. This chapter presents the introduction, background to the study, problem statement, the objectives, research questions and hypotheses, the conceptual framework, scope of the study, justification and significance of the study as well as the operational definitions.

1.2 Background to the study

1.2.1 Historical Background

Norway, Chile, Botswana and Indonesia are often cited as countries that have been able to exploit their natural resources sustainably and for the benefit of all (Shepherd, 2013). Other resource-rich countries, such as Malaysia and Australia, have also significantly diversified their production structures, laying the ground for broad-based balanced growth. In Africa, Ghana can be considered a relative success story principally because of the peaceful state of the country (Moss, 2009).

According to Uganda Oil and Gas Info (2015), exploration work undertaken in the Albertine Graben Rift confirmed the existence of reserves of oil in commercial quantities in Uganda during 2006. Turek (2013) speculates that with the discovery of crude oil reserves, Uganda is set to establish itself as an oil producer in the coming decade. Total oil reserves are believed to be two billion barrels, with recoverable reserves estimated at 0.8-1.2 billion barrels. This is comparable to the level of oil reserves in African countries such as Chad (0.9 billion barrels), Republic of

Congo (1.9 billion barrels), and Equatorial Guinea (1.7 billion barrels) but far short of Angola (13.5 billion) and Nigeria (36.2 billion). Using a reserve scenario of 800 million barrels, peak production, likely to be reached by 2017, is estimated by the World Bank to range from 120,000-140,000 barrels per day, with a production period spanning 30 years. A more optimistic scenario in this study is based on 1.2 billion barrels and sets peak production at 210,000 barrels per day (World Bank 2010).

Odyek (2016) reports that notwithstanding the fact that final requisites of the revenue sharing agreements with oil producers are not yet known, government revenue from oil is expected to be substantial. One estimate, based on an average oil price of US\$75 per barrel, puts revenues in the region of 10-15 per cent of Gross Domestic Product at peak production (World Bank, 2010). The discovery of crude oil consequently has the potential to provide significant impetus to the Ugandan economy and to enable it to better address its Sustainable Development Objectives, provided oil revenues are managed aptly.

1.2.2 Theoretical Background: The Permanent Income Hypothesis (PIH)

The PIH is based upon a theory by Milton Friedman (1957), a Nobel Laureate for Economics, which states that an economic actor will aim to smooth their consumption and expenditure out between income peaks and troughs, and essentially expend the average of their expected total lifetime income. Meghir (2004) suggested that when applied to a country's oil or gas wealth, the PIH implies that a government will spend only the equivalent to the interest of their country's total oil and gas wealth. Meghir adds that this is typically achieved through investing all oil and gas revenue externally in a sovereign wealth fund, which then generates interest. Similarly,

Apostolou (2011) posits that this has the advantage of avoiding the instability of the spend-as-you-go-approach, while also preserving the wealth for future generations to benefit from, and it also makes greater sums available for expenditure than the Bird in the Hand approach, while still preserving wealth for the future. However, Meghir claims that there is an argument to be made that this approach, by allowing the government to spend an even amount of wealth during and after the resources' production, both overlooks current generation's poverty, and the greater economic utility which capital expenditure may have in a capital scarce environment.

Segura (2006) reported that São Tomé and Príncipe was the first country in Africa to adopt a rule, based on Milton Friedman's permanent income hypothesis (PIH), drawing from the successes of Norway, which was anticipated to guarantee sustainable government consumption and give pivotal consideration to intergenerational equity while giving the country a predictable stream of oil revenues to meet pressing development needs. Correspondingly, although the exact size of Uganda's oil wealth is still uncertain, even using very conservative assumptions similar to Sao Tome, it is projected to be significant; enough to allow for stable financing of development needs, in perpetuity, from the returns of the sustainability of the country's development (Kato, 2006). It is a possibility that the country's oil wealth will end up being so large relative to the size of the country, that absorptive capacity constraints could prevent full and efficient use of the annual funding dictated by the PIH rule.

Certainly, manifest from a Bank of Uganda submission to Parliament of 2011 about regularization of the oil sector, the authors put forward that oil and gas are finite resources and hence revenues from oil and gas represent temporary rather than permanent income flows for government. This suggests that the government revenue accruing from oil and gas will allow government expenditure to increase. However, the authors argue that this increase must take

place in a sustainable manner, bearing in mind the temporary nature of the oil revenues. It will be optimal to save a substantial share of the oil and gas revenues to allow the increased government expenditures to be smoothed out over a much longer period than the relatively short time period in which oil and gas will be produced in Uganda. Oddly, it is noteworthy that important discoveries have important implications for a broad range of issues and withstand the test of time. This is exactly the case with Friedman's PIH.

1.2.3 Conceptual Background

According to predictions of International Energy Agency (2015), oil and gas will meet around 50% of the world's energy needs in 2035. Likewise, the contribution of oil and gas towards social development by improving education and public health is immense as it has been instrumental in ensuring the economic growth of many societies by creating a major source of income, tax revenues and jobs (Turek, 2013). Turek however, posits that the oil and gas industry's new challenge is to find fuels that are environmentally and socially responsible for sustainable development; a development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

In Norway, responsibility for management of the oil sector is split between a national oil company, a petroleum authority and government institutions (Kato, 2006). It is the model that Uganda seems set to follow and has set out to build capacity nationally. However, Kato argues that while the checks and balances built into such a system are positive, the complexity of setting up such an institutionally heavy system risks confusion over roles, and expense. Jaen (2010) advises that there is a need to put in place the institutional framework required to manage and regulate this new sector of development. This framework will necessitate the introduction of new

legislation and institutions, together with the enhancement of existing ones. Significant training and other capacity building efforts will have to be undertaken in order to enable the established institutions to effectively carry out their different mandates (Uganda and Gas Info, 2015 and World Bank, 2010). It will be important for Uganda to monitor the effectiveness of its systems carefully, to ensure that expert voices are not drowned out. It may equally be worth considering the example of Ghana and Chile, both of which have set up independent advisory bodies to help government with prudent investment of revenues (Gelb, 2010 and Shepherd, 2013) while also being guided by the National Oil and Gas Policy. This policy and other petroleum acts should contribute to budget transparency if aggressively implemented; with income and expenditures published regularly and publicly, and the due process mechanism introduced to ensure a competitive bidding process for government contracts besides ensuring an efficient set of statutes forming the basis for the oil and gas tax system (MEMD, 2008 and 2009).

Seeing as Uganda is in the advantageous position of being an established democracy, with enshrined legal and media freedoms, the fact that much decision-making remains relatively centralized and the population is spread across remote rural communities, means that the public may feel disconnected from a collective development goal (Kock, 2012). The National Development Plan and commitment to public consultation are indications that the government is committed to communicating its vision and for this reason the recently announced 'Vision 2040' is a further positive step. However, the risk remains that oil spending will be poorly understood and therefore subject to disagreement, rumour and possible division (Henstridge, 2012). Uganda can nevertheless learn from a number of initiatives from around the world to enhance popular citizens' buy-in. These include regular public consultation on oil in Trinidad and Tobago and

Liberia, to an enhanced role for parliament in approving spending in Botswana and East Timor, an annual public debate on oil policy as seen in São Tomé and Príncipe, or the management of the oil Heritage Fund by a committee of the State Assembly of the province of Alberta in Canada. Many parliaments around the world, including those in Azerbaijan, Egypt and Sierra Leone, also have the right to ratify all new oil-related contracts and ensure proper oil revenue accountability (Kato, 2006; Duran, 2015 and Shepherd, 2013). Similarly, the 2016 Uganda general elections should present an opportunity for the citizens to voice their repugnance at or support for the Movement government with regard to future oil and gas revenue management in the country (Musisi, 2016).

1.2.4 Contextual Background

Uganda has hydrocarbon resources, read oil. However, oil under the ground is worthless unless it can be extracted and transformed usefully (Starling, 2004). Despite the fact that producing oil for sale involves dwindling geological, manufacturing, and logistical bottlenecks (Moss, 2009; Basdevant, 2008 and Gelb, 2010), this project focused on the more important commercial challenge. Since at some stage oil will run out, sustainable development depends on the rents from resource extraction being converted into other sources of income (Boheene, 2011). The challenge, then, is what to do with the anticipated revenue from efficacious production of oil, and sustaining such an opportunity. To address that challenge, this project proposes the need to have a clearer idea of how much revenue is expected. That, in turn, pivots on three closely linked choices: transparency and principle-based environment, sound tax administration and contracts' negotiation capacity, and the involvement of Ugandans. It also depends on the price of oil, which is notoriously difficult to forecast. Each of those decisions has an impact on the timing and scale of revenue flows, and of new or contingent liabilities on the public finances. To give two

examples: if transparency and principles are unsound, then the anticipated revenue will be swindled; if tax administration and contract negotiation capacity are unsound, these failures will significantly lower returns to investment in production, and further delay any flow of revenue to government (Sykes, 2008).

Uganda has the right vision about what to do with its newly found oil wealth: invest in infrastructure and other types of domestic capital to accelerate convergence to middle-income country levels (Barbier, 2003). To realize this worthy vision, three major and not improbable underlying risks should be prevented. Foremost, the country needs to avoid massive mismanagement and eventual 'oil curse', through strengthening political accountability and oversight on the executive branch of the government (Kock, 2012). Subsequently, there is need to avoid excessive real exchange rate overvaluation and the ensuing inefficient sectoral specialization, through first investing in the capacity to effectively manage investment before launching the envisaged investment programme (Longlong, 2012). Finally, the NRM government should avoid isolating Ugandans and also embrace private sector-led growth. Thus, getting the policies, sequencing and alignment wrong, and ignoring issues of absorptive capacity and good governance; international experience indicates that a 'boom' in oil revenues can become a 'curse', depressing economic growth, worsening poverty and increasing political instability (Shepherd, 2013). Therefore, the researcher believes that Oil in Uganda is not primarily a challenge for geologists, engineers or for commercial people in the oil business but an economic challenge for Uganda's policy-makers.

1.3 Statement of the research problem

The study sought to supplement Uganda's preparations for the anticipated inflow of oil and gas revenue by way of empirically collating perceptions of selected Ugandans about the desirable revenue management practices for a sustainable oil and gas industry.

The discovery of commercial quantities of oil presents Uganda with both opportunities and challenges. Using reasonable estimates, the country possesses at least \$75 billion in assets in the form of oil which was five times Uganda's 2010 national GDP (Tadwong, 2016). This suggests that there is great potential for Uganda to leverage this newly discovered wealth for the betterment of its people and to bring a generation out of poverty (Johnston, 2014). At the same time, policy-makers must be aware that the African continent has too many examples of countries (Nigeria, Sudan, Chad and Angola) that missed their opportunity to apply oil wealth wisely (Uganda and Gas Info, 2015).

Initially there was a lot of exuberance over the big oil and gas finds in East Africa, but now the reality is setting in, along with the challenges of how to get from discovery to production to export to developmental impact (Choudhury, 2012). In fact, many workers in aid organizations have noted that oil operations, instead of improving conditions in the host countries have led to a most regrettable deterioration in these conditions. And in Uganda, the prospect of future oil revenues has been fronted by the government to incur excessive increases in public debt, in order to front load the increase in expenditures, yet actual future oil revenues may not be large enough to enable Government to service its debt (Bank of Uganda, 2011).

In that respect, Choudhury (2012), Kato (2006), Shepherd (2013) and Gelb (2010) believe that dependence on petroleum revenues can undermine a country's competitiveness in other sectors, leaving it vulnerable to the inevitable decline in production once the resource is exhausted.

1.4 Purpose of the Study

The purpose of the study was to examine the desirable revenue management practices for a sustainable oil and gas industry in Uganda.

1.4.1 Objectives of the study

This study was guided by the following specific objectives:

- i) To find out the effect of having in place a transparency and principle based environment on the desired sustainability of the oil and gas industry in Uganda
- ii) To find out the effect of having in place sound tax administration and contracts' negotiation capacity on the desired sustainability of the oil and gas industry in Uganda
- iii) To find out the role of Ugandans in guaranteeing a sustainable oil and gas industry in Uganda.

1.5 Research questions

The study sought to answer the following questions;

- i) To what extent will having a transparent and principle based environment affect the sustainability of the oil and gas industry in Uganda?
- ii) To what extent will having sound tax administration and contracts' negotiation capacity affect sustainability of the oil and gas industry in Uganda?
- iii) What role should the citizens of Uganda play in guaranteeing a sustainable oil and gas industry in Uganda?

1.6 Research Hypotheses

This study tested the following hypotheses;

- i) Having a transparent and principle based environment in place will significantly affect the sustainability of the oil and gas industry in Uganda
- ii) Having sound tax administration and contracts' negotiation capacity in place will significantly affect the sustainability of the oil and gas industry in Uganda
- iii) Involving the citizens in the management of the anticipated Oil and Gas Revenue will have a significant effect on the sustainability of the oil and gas industry in Uganda.

1.7 Conceptual framework

The study was guided by the conceptual framework provided below. It introduces the independent, dependent variable and any intervening variable (though absent from this study) (Amin, 2005; Kothari, 2004; Neumann, 2005 and Berg, 2004). In this conceptual model exposition, the independent variable are the desirable oil and gas revenue management practices while the dependent variable is use of the oil and gas revenues to augment sustainable development in Uganda.

Figure 1: Conceptual Framework

Electoral and Democratic reforms

Independent Variable Dependent Variable Desirable oil and gas revenue **Sustainable Development** management practices Balancing social, economic and **Transparent and Principle based** environmental capital environment Compliance to rules and regulations/principles Prevention, detection and combating corruption/transparency **Institutional Capacity** Contract negotiation capacity Tax administration capacity Citizens' Responsibility Citizen's demand for public financial accountability

Source: Hedger, 2008 and modified by researcher

In this cause-effect assumptive charted model, it is imagined that, compliance to rules and regulations/ transparency, sound contract negotiation and tax administration structures for oil resources and involving citizens will have an effect on the sustainable development of Uganda.

1.8 Significance of the study

The findings from the study are expected to empower the Gas Station Owners, Offshore Drillers and Research Scientists in enhancing oil recovery, assessing environmental impact and risks, and improving the output of refineries or gas plants to evaluate some of the industrial policies governing the Oil and Gas Industry and gauge whether they are generating the expected results. This in the long term will provide such users a base on which to modify these policies to suit the demands of the different stakeholders hence foster sustainability in the Oil Industry on the whole.

Findings from the study will also help the Central Government via the Ministries of Finance and Trade, the Central Bank and the Uganda Revenue Authority to body out the different avenues it can take up as a measure to monitor and evaluate the Oil Industry; hence streamline processes and guidelines aimed at making sure every Ugandan benefits from the resource.

In addition other findings from the study will also be of great significance to those who purpose to do further research on this topic. This research is also expected to add to the current literature.

1.9 Justification of the study

The Oil and Gas industry everywhere faces problems and challenges. However, in the developing countries, these difficulties and challenges are present alongside a general situation of socio-economic stress, chronic resource shortages, institutional weaknesses and a general inability to deal with the key issues. There is also evidence that the problems have become greater in extent and severity in recent years. Similarly, with the price of a barrel for Brent oil (the main international benchmark for crude), which was more than \$100 (about Shs 335,000=)

earlier in 2014, staggering down from \$90 to \$36 at the end of 2015 places the sector at a further disadvantage. It has since gone further to \$31 per barrel. Some commentators are predicting it will even fall further to \$20, while the optimistic ones occasionally forecast prices picking up but the situation keeps deteriorating which underscores the need for proper management of the anticipated revenue, especially with the prevailing low oil prices (AFP, 2016 and Musisi, 2016).

Many topical issues which have implications for the Oil and Gas industry have, so far, only been discussed to a significant extent in the general context of what has been or what happened in Oil cursed nations like Nigeria and Chad rather than what should have been done differently. All the same, to a small extent, the 'what should be done differently' question has been discussed in the context of Uganda's Oil Industry but this has been done only at policy level while there has been minimal research about what the people; the direct beneficiaries of the Oil resources perceive as the right course of action for Oil Revenue Management. This study will therefore empirically study the formal and informal viewpoints of Ugandans as to the desirable revenue management practices for a sustainable oil and gas industry in Uganda, while also citing international lessons of success and inadequacies in the petroleum sector.

1.10 Scope of the study

1.10.1 Geographical Scope

The Republic of Uganda is located in East Africa and lies astride the equator. It is a landlocked country that borders Kenya to the east, Tanzania to the south, Rwanda to the southwest, the Democratic Republic of Congo to the west, and South Sudan to the north. The country has an area of 241,039 square kilometers and is administratively divided into 112 districts (CIA, 2014). Uganda has a decentralized system of governance and several functions have been ceded to the

local governments. However, the central government retains the role of formulating policy, setting and supervising standards, and providing national security (Uganda Bureau of Statistics and ICF International Inc, 2012). Large-scale Ugandan oil deposits, described as Africa's biggest on-shore oil discovery in 20 years, were announced in 2006 and subsequently proven by the drilling of numerous successful test wells (Shepherd, 2013). These wells are positioned in the Albertine Graben which is located in the western part of the country, mainly in Masindi, Kibale and Hoima districts around Lake Albert which forms the northernmost part of the western arm of the East African Rift Valley (Uganda Oil and Gas Info, 2015).

1.10.2 Context scope

National interest in the oil discovery had expanded considerably, owing partly to the steep increase in international oil prices during the second half of the 2000s and also because Ugandans woke up not only to future opportunities, but also to the political and socio-economic challenges associated with oil wealth. Media discussion and coverage of what oil and mineral wealth have meant for other African countries, including poor governance and even civil war, the so called "oil curse", have found resonance in a country which has experienced social and political adversity of its own in the past. This study therefore explored the perceptions of Ugandans about the management of the anticipated Oil and Gas Revenue for Sustainable Development of Uganda.

1.10.3 Time scope

The study investigated production preparations, derailments and successes as well as revenue management processes that have been put in place from 2006 (year of oil discovery in Uganda) to 2015 and into the future.

1.11 Operational definitions

Revenue Management is the collection, allocation and management of petroleum revenue in a responsible, transparent, accountable and sustainable manner for the benefit of the citizens of Uganda.

Transparency as used in science, engineering, business, the humanities and in other social contexts, implies openness, communication, and accountability. Transparency is operating in such a way that it is easy for others to see what actions are performed.

Corruption refers to dishonest or fraudulent conduct by those in power, typically involving bribery.

Institutional Capacity is the capability of institutions to facilitate the changes essential to deploying resources to increase productivity with greater efficiency and this is achieved through improving the skill sets of key personnel, developing strategies to effect change and facilitation of discussions to achieve buy-in.

Citizens' Responsibility is stressed as a socially good behavior to perform. It includes voting in elections, signing up for the military, and standing up for what is right, volunteering in the community, participating in government politics, and holding public office.

Sustainable Development is development that meets the needs of the present, without compromising the ability of future generations to meet their own needs.

Tax Administration includes assessment, collection, enforcement, litigation, publication, and statistical gathering functions under such laws, statutes, or conventions.

CHAPTER TWO LITERATURE REVIEW

2.1 Introduction

This chapter reviews appropriate literature from previous studies related to this study. It examines how transparency, institutional capacity for tax administration and contract negotiation for oil and gas together with citizens' responsibility and civic duty in the management of oil revenues contribute to sustainable development. This chapter is arranged under sub-sections that include the conceptual review, the theoretical review and ends with the contextual review coined from the objectives.

2.2 The Case for Oil and Sustainable Development: A Conceptual Review

The effort to establish Uganda's oil and gas potential has been successful and it has now been established that the country has commercial reserves of oil. These developments have necessitated the need to address the entire spectrum of exploration, development and production of the country's oil and gas resources more comprehensively to ensure that Uganda sustainably gains from this discovery (MEMD, 2008). Henstridge (2012) recommends that the broad objective of the country's authorities with regard to the petroleum sub-sector should be to promote the petroleum potential of the country with a view of attracting investment in the subsector and monitor exploration programmes. Duran (2015) instead proposes that emphasis needs to be put on capacity building for petroleum exploration; acquisition of geo-scientific data and information; attraction of investments for more expensive petroleum exploration operations like seismic surveys and drilling; contract negotiations; and monitoring of exploration operations. Additionally, Shepherd (2013) counsels that the country now needs to focus beyond the oil discovery stage and plan for sustainable oil and gas production, processing and utilization, hence

the need for a more transparent and principle-based environment with robust opportunities for the citizens of Uganda, both career-wise and for critiquing purposes.

2.2.1 Transparency in Oil Revenue Management and Sustainable development

According to Emelu (2005) openness and access to information are fundamental rights in activities that may positively or negatively impact individuals, communities and states. Emelu adds that it is important that information that will enable stakeholders to assess how their interests are being affected is disclosed. There is thus a continuous need to recognize the important roles that different stakeholders have to play in order to guarantee transparency and proper accountability in the oil and gas dealings as the sector starts being productive (Garcia, 2002).

Moss (2009) proposed that the compliance to postulated guidelines and laws or policies governing the oil and gas industry should ensure high standards of transparency and accountability in licensing, procurement, exploration, development and production operations as well as management of revenues from oil and gas. Likewise, Shepherd (2013) in connection with the Regulatory Best Practice that has been in practice in the country for over 15 years and based on the principle that a regulatory agency should be separate and independent from the entities being regulated, in this case oil companies advise that a policy-making body should be separate from the regulatory agency and the competing producers and suppliers of the goods and services. And as such the National Oil and Gas policy was formulated based on this model (Odyek, 2016). This model led to the setting up of the following three separate institutions; an oil and gas policy making and monitoring body (a Directorate of Petroleum in the Ministry responsible for oil and

gas), a regulatory agency (Petroleum Authority of Uganda) and a separate commercial entity (the Uganda National Oil Company) incorporated for the chief reason of fostering transparency and accountability in all oil and gas transactions while simultaneously ensuring compliance to oil and gas laws of the land. It is also worth mentioning that strict observance of clauses that support disclosure of payments and revenues from oil and gas using simple and easily understood principles in line with accepted national and international financial reporting standards will largely contribute to the sustainability of gains anticipated from the oil industry (MEMD, 2008 and Odyek, 2016).

2.2.2 Institutional Capacity Building for Oil and Gas governance

Continuity in nationwide institutional capacity building, the development of the necessary regulatory framework, infrastructure and manpower, is widely believed to be an essential ingredient in enabling the country to participate in, and benefit from, oil and gas activities (Boohene, 2011; Longlong, 2012 and Johnston, 2014). For this reason the oil and gas sector is anticipated to contribute to the development of sustainability, endurance and prosperity. Therefore, Tadwong (2016) opines that capacity building for both the authorities and national entrepreneurs should be promoted and the oil companies operating in the country should ideally be at the forefront of this effort and in the transfer of technology.

Likewise, Kock (2012) believes that the oil and gas authorities, in recognizing the need to enhance the current institutional framework will contribute to the promotion and exploration of oil and gas in the country. This is built on the requisite to enhance this framework with a view of enabling it to handle the continuing exploration effort together with the development and

production of oil and gas. Henstridge (2012) posits that there is an additional need to put in place an institutional framework that will handle the refining of oil, conversion of gas to valuable products like ammonia, together with the transportation and storage of oil, gas and their byproducts.

In effect, although the volatility in oil and gas revenues cannot be avoided, it is still possible to avoid the adverse impact on macroeconomic stability by de-linking Government spending from oil revenues inter-temporally (i.e. in each individual time period). Bank of Uganda (2011) proposes that this can be achieved by establishing a fiscal rule which determines the size of the fiscal deficit independently of short term oil revenues but on a sustainable long term basis. An example of such a rule is a non-oil fiscal deficit rule. Basically, the Government should aim to have a reasonably smooth path of expenditures, relative to non-oil revenues (e.g. VAT, personal income tax). During periods of large oil revenue inflows, the budget would accrue surpluses, while deficits would be incurred during periods in which oil revenues are unusually low. However, it is crucially important that the fiscal rule followed by Government is consistent with a sustainable path of expenditures and public borrowing over the long term. Certainly, Kock (2012) and Henstridge (2012) accept as true that establishment of an appropriate framework should as a must take into consideration the different roles of the state and those of the oil companies in the implementation of oil and gas activities.

2.2.3 The Citizens' part in the Management of the anticipated Oil and Gas revenues

Because the relationships between government, oil companies, and the people should be conducted and maintained in a spirit of mutual respect, co-operation and trust, mutual understanding should be promoted and this system of co-operation can therefore be viewed by all Ugandans especially those within the communities situated in the oil and gas producing regions and any pipeline corridors (Emielu, 2005; Kato, 2006 and Shepherd, 2013). Emielu believes that the interests of local communities in areas where oil and gas production is undertaken should categorically be taken into account by, among other things, sharing of royalties in line with the Constitution and any relevant laws passed by Parliament. All these efforts are important as they could significantly contribute to the diffusion of conflicts and emphasize peaceful resolution of disputes. Similarly, where oil and gas activities or their impacts extend to neighbouring countries, this spirit should be exercised in accordance with the principles grounded in the country's foreign policy (Duran, 2015).

Additionally, there is a pressing need to recognize the role Local Governments, Civil Society Organizations (CSOs) and Cultural Institutions can play through advocacy, mobilization and dialogue with the people. These institutions are largely accepted as crucial to holding the different players accountable with regard to oil and gas issues and are always major players in getting the voices of the poor into designing, monitoring and implementation of government programmes The oil and gas government programme should therefore not be any different since the CSOs may also be contracted in the delivery of various services, especially in the communities where oil and gas activities will be undertaken. It goes without saying that factoring in the perceptions of residents, as voiced in particular discourses on oil developments, are instructive as to the realities residents perceive. Such discursive realities in turn shape social and political behaviour, in this case, the oil and gas anticipated socio-economic gains (Kock, 2012).

2.3 Theoretical review

In this study, the researcher sought to explore the perceptions of Ugandans about the management of the anticipated Oil and Gas Revenue for Sustainable Development of Uganda. The Permanent Income Hypothesis by Friedman (1957) as cited in the text below rather closely abstracts the desired sustainability objective from a wide variety of the PIH theoretical perspectives.

2.3.1 The Permanent Income Hypothesis (PIH)

The PIH is based upon a theory by Milton Friedman, a Nobel Laureate for Economics, which states that an economic actor will aim to smooth their consumption and expenditure out between income peaks and troughs, and essentially expend the average of their expected total lifetime income. When applied to a country's oil or gas wealth, the PIH implies that a government will spend only the equivalent to the interest of their country's total oil and gas wealth. The magnitudes termed "permanent income" and "permanent consumption" that play such a critical role in the theoretical analysis cannot be observed directly for any individual consumer unit. The most that can be observed are actual receipts and expenditures during some finite period, supplemented, perhaps, by some verbal statements about expectations for the future. The theoretical constructs are ex ante magnitudes; the empirical data are ex post. Yet in order to use the theoretical analysis to interpret empirical data, a correspondence must be established between the theoretical constructs and the observed magnitudes (Friedman, 1957)

São Tomé and Príncipe was the first country in Africa to adopt a rule, based on Milton Friedman's permanent income hypothesis (PIH), drawing from the successes of Norway, which was anticipated to guarantee sustainable government consumption and give pivotal consideration

to intergenerational equity while giving the country a predictable stream of oil revenues to meet pressing development needs. This was achieved through investing all oil and gas revenue externally in a sovereign wealth fund, which then generates interest (Segura, 2006).

In Uganda, ordinarily, the oil and gas revenues should, like all other Government revenues, be deposited in the revenue account of the Consolidated Fund, and allocated in accordance with normal budgetary process, but to help crystallize public support in building a resource buffer for the future; also given the complexity of accountability for multiple petroleum revenue streams and to provide an easy and transparent way to present and manage the stocks and flows of oil revenues and the anticipated challenges that management of these revenues pose, the resources must be managed under a transparent and segregated arrangement distinct from the Consolidated Fund, into which all revenues directly attributed to petroleum activities are deposited (MEMD, 2008 & 2009). As such a Petroleum Fund was established in Bank of Uganda, which will be under the control of the Ministry of Finance, Planning and Economic Development on behalf of Government. The Fund will be a "financing fund" for aiding budget financing and providing for savings for future generations and making certain that the sustainability goal is met (Sanya, 2016).

Meghir (2004) proposed that the above model has the advantage of avoiding the instability of the spend-as-you-go-approach, while also preserving the wealth for future generations to benefit from, and it also makes greater sums available for expenditure than the Bird in the Hand approach, while still preserving wealth for the future. However, Basdevant (2008) argues that this approach, by allowing the government to spend an even amount of wealth during and after

the resources' production, and saving for future generations both overlooks current generation's poverty, and the greater economic utility which capital expenditure may have in a capital-scarce environment. But according to MEMD (2009), Uganda included an option that allows resolving present budgetary needs with the budget financing objective integrated within the Fund's operational objectives. Therefore, while the exact size of Uganda's oil wealth is still uncertain, even using very conservative assumptions similar to Sao Tome, it is projected to be significant; enough to allow for stable financing of development needs, in perpetuity, from the returns of the sustainability of the country's development. It is a possibility that the country's oil wealth will end up being so large relative to the size of the country, that absorptive capacity constraints could prevent full and efficient use of the annual funding dictated by the PIH rule. Milton Friedman's permanent income hypothesis (PIH) guarantees sustainable government consumption and gives pivotal consideration to intergenerational equity while giving the country a predictable stream of oil revenues to meet pressing development needs (Basdevant, 2008; Meghir, 2004 and Segura, 2006).

2.4 Contextual review

The oil bonanza in Uganda sparked off all sorts of hopes and expectations, jobs, development, liquid-like flowing cash in form of handouts, among others. Not everything has gone as planned, at least so far, in fact the oil industry, with its history of highs and lows, had a rather very terrifying 2015 with tumbling prices for crude oil. Not just oil-producing countries saw their economies ground to halt or small/average oil companies struggling to keep their heads above troubled waters, but the world's majort oil companies felt the pinch too (Musisi, 2016). Consequently, since global oil prices are very volatile, how much oil and gas revenue will

actually accrue to Government is highly uncertain. This uncertainty implies that Government must be very cautious about increasing expenditures to avoid the danger that future oil revenues turn out to be lower than expected and are insufficient to fund the increased expenditures, leaving Government with a much larger fiscal deficit which must be financed through borrowing (Bank of Uganda, 2011). Against that background, in this section, the researcher sought to contextually review literature on the anticipated oil revenue management challenges and their effect on sustainable development.

2.4.1 Anticipated Transparency and Accountability challenges in the management of the Oil Revenue

It has been perceived for a while now that because of weak states, bad governance, impotent policies and laws on the management of oil and other resources, the rich and more organized warlords benefit the most from the resources as opposed to the citizens. This has been witnessed in countries like Nigeria, Chad and Niger with the likes of Sao Tome yet countries like Norway, Trinidad and Tobago as well as Saudi Arabia are flourishing in the oil industry (Kato, 2006 and Barbier, 2003). It is highly likely that the reason for the latter's success in the oil business is because they have put in place functional systems to diminish corruption and enforce proper financial accountability of their oil revenues with a particular focus on development sustainability (Tadwong, 2016). It is therefore noteworthy that because discussions on fiscal rules for many of these oil-rich countries gravitate heavily to these considerations and the trade-offs they entail, particularly gauged against the need to ensure fiscal sustainability, there is need for profound fiscal deliberation in the legislative and executive government arms (Abjorensen, 2014).

Sykes (2008) advanced that the objective of fiscal rules is to guide fiscal policy, usually through constraints on policy design. In fact he conveyed that the effectiveness of policy implementation can be further measured against indicators of fiscal performance. Starling (2004) believes that usually, though in some cases not specifically, the goal of such rules is to guarantee fiscal sustainability. He adds that in the case of oil-rich countries, recent literature shows, monitoring the non-oil balance is a good benchmark for evaluating the fiscal stance. Therefore, in designing fiscal rules, countries must also think about absorptive capacity constraints; at technical, institutional and infrastructure levels and the need to ensure an effective tracking system to minimize wasteful public spending. Ultimately, Segura (2006) vetoes that the decision on which fiscal rule to adopt is to some degree country-specific and that there is no single optimal rule for this or for guaranteeing fiscal sustainability. Segura's argument suggests that even with the so many preparations that have been done so far, being fiscally astute alone won't cut it. Uganda still needs to fill all existent corruption-inducing ambiguities in order to guarantee meaningful gain from the anticipated oil revenue.

In contrast, when we study how the president and his team have handled the selection of firms for the refinery building tender, there is evidence to suggest that it has been stained by bits of corruption. Musisi of the *Daily Monitor* discovered that when requests for qualification documents were put out and several firms, applied, only four firms made it to the last round; Russia's RT Global Resources, Japan's Maruben Corporation, China's Petroleum Pipeline Bureau (CPPB), and South Korea's SK Engineering and Construction Co. Ltd. Musisi intimated that the idea that CPPB was knocked out over what was believed to be political connections to former Prime Minister Amama Mbabazi, whose relationship with the powers that be had collapsed was clear indication that CPPB was on the list in part because of Amama Mbabazi

rather than on merit. But also its disqualification was skewed because of Amama's manumission from the ruling party. Similarly, the government's announcement that RT Global Resources was the preferred bidder to develop the Greenfield refinery, which is a subsidiary of Rostec, a defense and technology corporation, picked fresh on the heels of sanctions by the US and European Union slapped on Sergei Chemezov, Rostec's chief executive, a former officer in the Russian spy agency-KGB, begs the question why the government would risk handing over such huge contracts to internationally sanctioned firms (Musisi, 2016). It is evident that the principles of transparency seemingly in place are already flawed which spells doom for the oil industry if the status quo is upheld. The much desired sustainability of development programmes aided by oil revenues is then dealt a huge blow.

2.4.2 Anticipated Institutional Capacity bottlenecks for Oil and Gas Revenue Management

Looking at the situation in São Tomé and Príncipe, for the five years preceding 2006, the country had created a number of institutions to ensure sound regulation of the hydrocarbons sector. The policy objective had been to address the "curse" of oil that has been identified in many resource-rich countries. Against this background, São Tomé and Príncipe drafted a number of laws to make management of oil revenues balanced, transparent, and accountable. Crafting the laws and enabling regulations was an open democratic process in which representatives from all political factions and social segments participated, in consultation with international experts (Segura, 2006). In 2007, however, widespread criticism by major domestic and international stakeholders of possible economic and financial losses to the country under the original institutional framework for oil extraction and production terms broke out and while they were later amended, and indeed secured better terms generally, in several cases imbalances in profit distribution were

not fully redressed in São Tomé and Príncipe's favour.

The situation in Uganda is quite similar to Sao Tome's predicament. Although many reports suggest that major strides have been taken to finalize institutional capacity development for oil production, media discoveries suggest otherwise. For instance, after feasibility studies had been done and dusted, as expected, in August 2015, President Museveni and President Uhuru Kenyatta signed an MoU to seal the deal on the Lamu route. However, barely an hour later after the announcement had been made; Kenyatta's technocrats expressed discomfort at some of the conditions that Uganda had set. As the Kenyan team went back to consult, Total also kicked up the storm by opposing a pipeline to Northern Kenya, citing security concerns there. Much as Uganda seemed in favour of the Lamu route, which connects to the LAPSETT corridor, Total with its financial muscle stood ground, and immediately the Ugandan technocrats started-off discussions with their Tanzanian technocrats. In summary, Uganda finds itself in a very difficult position, a position that requires the country to charm both Total and Kenya together with other partners rather than stick to terms that will be commercially viable for Uganda (Musisi, 2016 and Odyek, 2016).

More media reports in 2015 indicated that the government and RT, the tendered firm for building the refinery had been conducting negotiations in connection with the construction of the oil refinery but as 2015 drew closer, no conclusions had been reached on all deliverables besides the commencement and completion dates much as technocrats in government told the country negotiations would be closed by December, 2015. Moreover, RT's representatives further disclosed to the media that they still needed more time for more feasibility studies on the project,

studying the quality of crude oil and also to beat the thick bureaucracy on tax exemptions in additional to securing permits. Correspondingly, for production to start, huge investments were required in the sector for development of a refinery, pipeline and development of oil fields including massive investments in central processing facilities in which oil is stabilized. To date, no firm has been awarded the tender for the CPFs (Musisi, 2016). Respectively, contracting and awarding tenders still faces the unfortunate depreciation of the shilling. This means that awarding contracts in foreign currency causes shilling depreciation which culminates into supplementary budgetary expenditure and yet the Ministry of Finance has still not resolved the fundamental issue of hedging, against the exchange rate risk (Sanya, 2016).

In the same way, while higher institutions of learning have been promoting oil and gas courses for graduates, 2015 started off with the three IOCs trimming and merging staff positions owing to the need to reduce operational costs hinged on the plummeting oil prices. Tullow kicked up the storm by laying off at least 120 employees. Total followed suit, laying-off 30 workers and more later. The reasons the two firms gave was that the completion of the exploration phase meant that all drilling operations and related activities had been completed, therefore, as they prepare for the production phase, there was need for substantial reduction of operations and related activities (Musisi, 2016; Odyek, 2016 and Tadwong, 2016). All these challenges point to the fact that Institutional Capacity development in Uganda's oil Industry has been significantly weighed down yet more still needs to be done.

2.4.3 Anticipated motivations behind citizens' imminent discontentment with the management of the oil revenue

Oil and gas activities should be most efficient and effective so as to maximize their returns thus effective revenue management must be promoted by striving to ensure that petroleum revenues are used to boost balanced growth and sustainable development to directly benefit the people of the country. The discovery and rapid development of Uganda's oil sector presents the country with unique economic opportunity to address a myriad developmental challenges. However, in as much as oil revenues stands to bolster the national economy, several local-level social challenges in the oil-producing region have to be addressed if government wants to avoid the formation of grievance politics. Tadwong (2016) found that villages along LakeAlbert and those located in an area earmarked for the construction of an oil refinery are confronted with severe uncertainty and fear. These fears and uncertainties stem from tensions (such as access to land, fish in the lake and other subsistence resources) that precede oil exploration and infrastructure development operations. However, as oil exploration and production operations expand, these existing tensions have been compounded and given more political significance, owing to oil-related developments that put more pressure on communities (Henstridge, 2012 and Shepherd, 2013).

Likewise, resource extraction operations are notorious for alienating residents and blatantly ignoring the plight of people while super profits accrue in offshore bank accounts from the sale of the resource. What emerges from such friction is grievance politics and the likelihood of the societal nexus becoming hostile to both corporate and state actors that champion an extractive operation (IEA, 2015). It is therefore important to understand that 'the societal nexus wherein states and corporations operate is a politicized space where the experiences of displacement,

poverty, and alienation give rise to actions that challenge reigning orders. By identifying discourses regarding oil developments on Lake Albert, Uganda will identify the existential frustrations that may, if not addressed by state or corporate interventions, form the foundation for social actors in the region to challenge 'reigning orders'; in this case the Ugandan state and Tullow Oil. The China National Offshore Oil Company (CNOOC) and Total have signed a deal with Tullow Oil for production of the resource, and will therefore also be scrutinized by communities eager to follow developments in the oil sector. (Kock 2012)

According to Odyek (2016), fair and equitable distribution of the Petroleum Fund investment activities and infrastructural projects nationwide is key to ensuring sustainable economic development in Uganda. Odyek believes that communities in the catchment area of the crude oil activities need additional compensation in the form of massive job creation. Abjoresnsen (2014) on the other hand suggests that the development of a well-planned and designed modern economic city for at least 2 million habitants in the Western region with a vibrant petrochemical industry would be adequatecompensation for the Western region. The upcoming crude oil boom in the same region should provide the platform for a turnaround in the development of the region so as to eliminate any possible strife among the people of the region (Hobenu, 2010).

2.4.4 Empirical studies

Globally, according to Abjorensen (2014), a classic example of economic crisis due to over investment in oil can be found in Mexico's 1982 sovereign default of public debt. Following the 1973 Oil Crisis which drastically increased the value of oil, Mexico discovered large oil deposits. During the same period Mexico took advantage of low interest rates to invest heavily in oil

projects. Simultaneously, Mexico increased its politically popular subsidization of staple goods such as food. This increase in spending drove up inflation rates to damaging levels, and crowded out investment in other economic sectors. The greatest damage came, however, in 1982 when rapidly falling oil prices, combined with increasing international interest rates, meant that the Mexican state was unable to pay its large debts. Decades later, Mexico is still left with high public debt, weakened industrial base and precarious government revenue as a result of overreliance on oil revenues, and over-expectations on its profitability.

In Africa, Chad's example paints what has mostly been viewed by commentators as a dark picture of the oil industry on the continent. In 1988, the first contract was signed between the Esso, Chevron and PETRONAS Consortium and the government, but due to the structural political instability in Chad, until the end of the 1990s the possibility of exploiting the Doba reserves was not seriously considered. The World Bank played a crucial role, without which the project would never have gone ahead. Apart from limited financial support, the Bank acted as a 'moral guarantor' and in 1999 it forced approval in the Chad parliament of Loi 001/PR/99, establishing that 85% of direct revenue (royalties and dividends) should be applied to sectors seen as a priority in reducing poverty. In June 2000 the World Bank gave the project the green light and construction on the oil pipeline and the rest of infrastructure began. Finally, months ahead of schedule, in October 2003 operations came on stream. Another of the model's specific characteristics is that the World Bank also forced through the creation of an expenditure supervision body called Collège de Contrôle et Surveillance des Ressources Pétrolieres, which would manage this 85% of revenue. Members of the Collège were appointed not only by the government, but also by civilian society, which via NGOs would have a say in the management of resources. This institutional device that aimed to avoid the 'resource curse' overlooked some aspects which later proved to be crucial in explaining the project's failure, such as external factors, initial institutional weakness and structural political instability in the country, but it was nevertheless considered to be sufficient and appropriate (Jaen, 2010).

Disparately, Uganda now faces similar challenges of using the new resources to advance its development agenda, while avoiding the corrosive effects oil often has on governance. According to Gelb (2011), the Ugandan authorities favour using the oil revenues to build much-needed infrastructure; while this could have very large benefits, evidence of Uganda's already deteriorating governance and mounting corruption raise questions about its capacity to wisely invest the oil revenues.

2.4.5 Synthesis of the literature review

Some lessons can be drawn from the case of Chad and Mexico which may certainly help in future debates concerning the design of institutional mechanisms for managing external revenue in Uganda. Hedger (2008) observed that good governance was difficult to export and apply successfully by the over-imposing developed countries. He also put forward that one of the specific aspects of good governance in Chad were the policies of transparency in managing revenue. And in general there was indeed plenty of transparency. Information regarding revenue inflows, allocation of resources from these inflows, extractive activity and the socio-economic impacts was plentiful and relatively easy to access. However, he concluded that although informative transparency is desirable in itself, it does not automatically pre-empt the problems highlighted in the literature concerning the resource curse. Admirable initiatives such as Publish

What You Pay and the Extractive Industries Transparency Initiative (EITI) are necessary, but not sufficient.

In both Mexico and Chad, Abjorensen (2014) and Jaen (2010) observed that the scheduling of projects was not appropriate. The speed of development of institutional capacities at all levels (cash, revenue management and control bodies, territorial administration, ministries in the priority sectors, etc.) was overtaken by the arrival of revenue a few months earlier than scheduled, and high oil prices from 2006, which caused major bottlenecks and administrative headaches. In this regard, it might be worth considering the application of a kind of Hotelling rule in Uganda, whereby the resources must be left underground until it has been verified that there is an institutional apparatus in place able to guarantee that the current net value of their exploitation in terms of development is positive.

In conclusion, whether Uganda's crude oil find is a curse or blessing depends on the policies and practices put in place to protect and guide the management of Uganda's crude oil proceeds and revenue. The onus lies on Ugandans. Ugandans must be willing to put this double-edged sword of oil wealth to good use. Lessons from neighbouring countries have shown that the oil find could hurt rather than heal the economy and make Uganda even poorer in the long run if not properly managed. The lesson most applicable for Uganda is the importance of effective long-term economic policies needed to stabilize volatile oil and gas income. Different from the studies cited above, this research will empirically collate perspectives of Ugandans, both informally and formally, in a bid to shape the future of Uganda's Oil and Gas Industry for sustainability.

CHAPTER THREE METHODOLOGY

3.1 Introduction

This chapter presents the methodology for the study which includes the research design, study population, sample size and selection, sampling techniques and procedure, data collection instruments, data quality control (validity and reliability), procedure of data collection, data analysis and measurement of research variables.

3.2 Research design

A research design can be defined as the plan that is used to produce answers to research problems. Additionally, the research design can also be defined as an arrangement of conditions for collection and analysis of data in a way that combines significance with the study's main objective (Mugenda and Mugenda, 2003). A descriptive survey research design was adopted in this study. This is because respondent's perceptions about the research problem were desired in order for the researcher to empirically study these opinions with regard to Oil revenue management and its expected contribution to sustainable development.

3.3 Study population

Respondents were drawn from the Oil Governance and Management class of UTAMU, Bank of Uganda and the Ministry of Energy and Mineral Development. The students were targeted because they were considerably informed about the sector with regard to its governance, international successes and failure. The key informants were therefore drawn from the Directorate of Petroleum, Ministry of Energy and Mineral Development (MEMD) because the

directorate can reliably quantify oil and gas resources, while Bank of Uganda which under the mandate of the Bank of Uganda Act 2000 section 4(2) (d), BOU is the banker to the Government. Therefore these institutions are at the forefront of the industrialization of the oil and gas sector in Uganda.

3.4 Determination of sample size and selection

The sample size was determined from statistical tables of Krejcie and Morgan (1970), as cited by Amin (2005) and by stratification as in the Table below:

Table 1: Research respondents by category and sample

Agency	Population Size	Stratified Sample size	Sampling Technique
Banking Department,	23	=(23/107)*86	Convenience
Bank of Uganda		= 18	Sampling
Directorate of Petroleum	31	=(31/107)*86	Convenience
department, Ministry of		= 25	Sampling
Energy and Mineral			
Development			
UTAMU, Oil Governance	53	=(53/107)*86	Simple Random
Students		= 43	Sampling
Total	107	86	Krejcie and Morgan

Sources: UTAMU Registry (2016), BOU (2015), National Budget Framework 2015/16 and Recommended Sample Size (Krejcie & Morgan, 1970)

3.5 Sampling Techniques and Procedure

Convenience sampling involves identifying and selecting individuals or groups of individuals that have been selected from the target population on the basis of their accessibility or convenience to the researcher. This sampling technique was used because of the improbability of availability of the BOU and the Petroleum Directorate's staff for interviews. The researcher sought to make use of this technique to interview respondents of convenient accessibility and proximity to the researcher (Smeeton, 2003).

Stratified Random Sampling involves identifying factors which divide up the population into sub-populations (strata) when selecting a sample from the population in order that we obtain a sample that is representative of the population. A stratified sample is obtained by taking samples from each stratum or sub-group of a population (Biddix, 2010). The proportions (stratum population/entire study population) of each stratum in the sample were computed to be the same as in the population. Stratified random sampling was used it ensures each subgroup within the population receives proper representation within the sample.

Simple random sampling is the basic sampling technique where we select a group of subjects (a sample) for study from a population. Each individual is chosen entirely by chance and each member of the population has an equal chance of being included in the sample. Every possible sample of a given size has the same chance of selection (Biddix, 2010 and Patton, 2001). After stratifying; the constituent units for each category were selected randomly using this method. The researcher employed this sampling technique in order to minimise one-sidedness in selecting sampling units for the sample.

3.6 Data Collection methods and instruments

This study used both quantitative and qualitative data collection methods. Quantitative data were collected using questionnaires that were filled by the target respondents.

3.6.1 Questionnaire Method

A questionnaire is a data collection instrument used to gather data over a large sample or number of respondents (Patton, 2001). This structured questionnaire was developed with the aid of suggested guidelines by Sekaran & Bougie (2010) and Saunders (2009). The first section of the instrument probed for background and demographic data, while the subsequent section probed for respondent's views about the study questions. In each section, the respondents were given clear instructions on how to complete the instrument. The questionnaire was refined once the instrument further after the pilot. This method was adopted to allow each respondent to receive an identical set of questions, with closed-form questions, standardized responses, which simplified interpretation of findings.

3.6.2 Interview Method

An interview guide is a set of questions that the researcher asks during the interview (Vogt, 2007). The researcher designed an interview guide that was used during the interview of the key informants at BOU and the Petroleum directorate. Questions that were asked in this section were technical and specifically intended to get methodical responses about the research questions which would otherwise not have been properly comprehended by the other respondents. A structured interview guide was used to drive key informants into articulating issues rather comprehensively. Structured interviews are useful not only because they show excellent validity

in meta-analytic research (Bryman, 2003), but also because structured interviews provide a chance to the key informants to detail their responses to the research questions. Interviewing is a very useful approach for data collection because it allows the researcher to have control over the construction of the data and it has the flexibility to allow issues that emerge during dialogue and discussion to be pursued (Agresti, 2009).

3.7 Validity and reliability of Instruments

The validity and reliability section was intended to address usability issues or the ease with which an instrument can be administered, interpreted by the participant, and scored/interpreted by the researcher (Bidix, 2010).

3.7.1 Validity of instruments

Refers to the appropriateness of the instrument to measure what it intends to measure (Amin, 2005 and Mugenda and Mugenda (2003). To ensure validity, 3 key informants who are not part of the respondents were engaged to do a pretest of the instruments. To ensure greater chances of data validity, questionnaire and interview guide were reviewed with the research supervisors for expert input. Content validity ratio was used to calculate the Content Validity Index, using the formula below;

CVI = Total Number of items rated by all respondents (average non-neutral response per instrument item)/Total number of items in the instrument (total number of expected responses per instrument item)

 $\mathbf{CVI} = \mathbf{44/48} = \mathbf{0.92}$. Since a content validity index of 0.7 and above according to Amin, (2005) qualifies the instrument, the instrument was considered adequate.

3.7.2 Reliability of instruments

Reliability is defined by Vogt (2007) as the consistency of either measurement or design to give the same conclusions if used at different times. Internal consistency was measured through internal consistency reliability (Sekaran, 2009) as well as split-half reliability using Cronbach's alpha which ranges between 0 and 1. George and Mallery (2003) provide the following rules of thumb as to reliability: "1 >0 .9 – Excellent, _ >0.8 – Good, _ > 0.7 – Acceptable, _ > 0.6 – Questionable, _ > 0.5 – Poor, and _ < 0.5 – Unacceptable" (p. 231). If the (Cronbach alpha) value had been computed to be 0.7 and above, then the instrument was considered satisfactory (Cronbach, 1951 as cited by Sekaran & Bougie, 2010), using results from the pretested questionnaire. As advanced byZaiontz (2015), Cronbach's alpha, was computed by running Excel's Anova: Two Factor without Replication data analysis tool and computing;

$$\alpha = 1 - \frac{MS_E}{MS_E}$$

Where MSE is Mean square/MS Error while MS B is Mean square/MS Rows

ANOVA	/A						
	Source of Variation	SS	df	MS	$\boldsymbol{\mathit{F}}$	P-value	F crit
Rows	1	93.597	27	4.11909	4.03047	4.89422E-18	1.36757
Columns	ns 1	370.39	47	29.1572	28.5299	6.2544E-191	1.36757
Error	2	257.57	2209	1.02199			
Total	3	821.56	2303				
Rows Columns Error	1 ns 1 2	93.597 370.39 257.57	27 47 2209	4.11909 29.1572		4.89422E-18	1.36

From the above table: = 1 - (1.02199/4.11909) = 0.7519. Thus since > 0.7, the instrument was reliable.

3.8 Procedures of data collection

The researcher sought approval from the School of Business and Management of Uganda Technology and Management University (UTAMU) to enable the researcher easy accessibility to the respondents. Consent from the respondents' places of work was sought prior to conducting any interview with them. The respondents were further assured of confidentiality of the information collected and why the study was being carried out.

3.9 Data Analysis

Data analysis involves drawing inductive inferences from data and distinguishing the phenomenon of interest from the statistical fluctuations present in the data. The researcher employed both quantitative and qualitative data analysis.

3.9.1 Qualitative data analysis

Data collected using qualitative methods was edited and coded in MS Excel which is less complicated. The data was then exported into Number Analytics (an online software) and analyzed using the same software. In presenting the findings, tables and figures were used. The frequency distribution tables were used to tabulate data to show percentages calculated. Interpretations were supported by narratives from the interviews.

3.9.2 Quantitative data analysis

Quantitative data collected using questionnaires was analyzed using descriptive statistics, where frequencies and percentages were obtained. Descriptive analysis was used to establish the distributions of the sample on demographic variables of age, sex, level of education, and occupation. Descriptive analysis was employed as it best works where research seeks

information concerning the current status or 'what exists' (Bidix, 2010). The Pearson Rank Correlation in the MS Excel programme was used to measure the degree of association between the two variables. The Pearson Rank Correlation test does not make any assumptions about the distribution of the data and is the appropriate correlation analysis when the variables are measured on a scale that is at least ordinal like the Likert scale (Staufer, 2001). Regression analysis was also run using number analytics software to determine the strength of the model. Correlation analysis was essentially used to measure the direction, strength and significance of the variable relationships.

3.10 Measurement of variables

The variables were measured using nominal and ordinal types of measurements. The questionnaires specifically for respondents were measured on a five-interval Likert Scale. The level of agreement was ranked as strongly agree, which reflected more agreement than just agreement or strongly disagree compared to just disagree. **Strongly agree and agree** responses were **merged** into one category called **in accord**, while **strongly disagree and disagree** responses will be **merged** into another category called **in dispute**. Ordinal Scale as measurement of variables not only categorized the elements being measured but also ranked them into some order. Therefore, the numbers in the ordinal scale represented relative position or order among the variables (Mugenda & Mugenda, 2003) and (Sekeran, 2010). The nominal scale of measurement was applied to cases which had common characteristics such as age and sex, among others. In nominal measurement of variables, numbers were assigned only for the purposes of identification but did not allow for comparison of the variables to be measured. On the other hand, interval scales of measurement were used to capture personal data of respondents.

3. 11 Ethical Considerations

The goal of ethics in research is to ensure that the study has no corresponding negatives in due research course or after dissemination of the research findings. Additionally, respondents should be allowed to expressively respond to the chosen line of questioning by the research (Bryman, 2003). In view of the above, the researcher undertook to protect the rights of the respondents through the following ways;

- A letter of formal authorization to conduct this research was obtained from Uganda Technology and Management University which is the sponsoring institution. This was intended to obtain authorization for officially conducting the study and further explained the nature and purpose of this study to the participants.
- Research assistants were trained in the nitty-gritty of data collection and quality assurance so
 as to increase data quality during its capture processes.
- Confidentiality and anonymity of information supplied by the respondents and key informants during this study's data gathering process were espoused and respected.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS

4.1 Introduction

In this chapter, a presentation of the study findings, analysis of the findings and interpretation of the findings is made. The chapter particularly presents background findings of the respondents, descriptive and inferential analysis of the core findings based on the research questions.

4.2 Response rate

The response rate of a survey is a measure of how many people approached (i.e. 'sampled') actually completed the survey, expressed as a percentage from 0% to 100% (Data Analysis Australia, 2016). Richardson (2005), cited Babbie (1973, 165) and Kidder (1981: 150–151) when stating that 50% is regarded as an acceptable response rate. This measure was computed as below;

Number of responses
= _____ x 100

Number of targeted respondents

For this study, this was computed as;

=48/86*100=55.8%

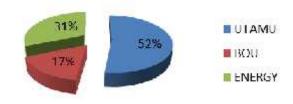
= since 55.8% > 50%, the sample size of 48 respondents was considered a good and representative sample size for the study.

4.3 Study findings

4.3.1 Background information (Primary data)

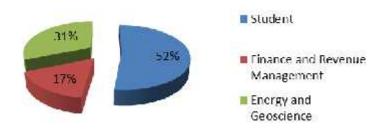
4.3.1.1 Name of Organization

Name of organization	Frequency
UTAMU	25
BOU	8
ENERGY	15



As shown above, more respondents from UTAMU were studied compared to the other organizations and these made up 52% (25) of those that responded to the study. Specialists from the petroleum directorate of the Ministry of Energy at 31% (15), and Bank of Uganda 17% (8) were also interviewed and these were targeted for their expertise with regard to the research problem.

4.3.1.2 Occupation of Respondents



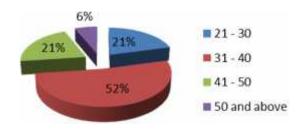
Occupation	Frequency
Student	25
Finance and	8
Revenue	
Management	
Energy and	15
Geoscience	

With reference to section 4.2.1.3, the distribution was the same for this section. Twenty five (25) (52%) students from UTAMU were interviewed for the study and these were the majority.

However, energy specialists and revenue management specialists were interviewed as well. These made up less than 50% of the sample size, established at 48% (31% and 17% respectively).

4.3.1.3 Age of respondents

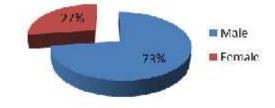
Age	Frequency
21 - 30	10
31 - 40	25
41 - 50	10
50 and above	3



According to our findings, the majority (73%) of the respondents were aged between 21 and 40, of whom 52% were aged between 31 and 40 while 21% were aged between 21 and 30. These were mainly oil and gas students at the Uganda Technology and Management University of both undergraduate and postgraduate levels. The age bracket of 41 and above was composed of mainly revenue management and energy specialists, from Bank of Uganda and the petroleum directorate of the Ministry of Energy of Uganda, targeted for their expertise and experience with regard to the research problem.

4.3.1.4 Respondents' Gender

Sex	Frequency	
Male	35	
Female	13	



The table and graph above indicate that 46% more males than females were studied by the researcher which gave an indication that females have not been as keen as the males on joining the Oil and gas profession altogether.

4.3.2 Descriptive Analysis of the Core findings based on merged responses (Primary data)

4.3.2.1 Transparency and Accountability

Assertions

	TRANSPARENCY AND ACCOUNTABILITY						
Q1	All revenue streams and transactions should be clearly traceable and accounted for in the state budget, independently audited and there should be regular public disclosure of revenues						
Q2	BOU may support the Government management of oil and gas revenue, as a custodian of the government revenue						
Q3	Annual audited account on oil revenue accrued to the state, including the portion used in financing budgetary items, should be published in the newspapers with national circulation						
Q4	Parliament should on a yearly basis call the body mandated to manage the oil revenue to report to it how revenues were used and earnings from the capital investment						
Q5	The country should use only some percentage of the oil revenue to be determined by Parliament to finance its annual budget						
Q6	All information on oil revenue management should be made publicly available on the website of the body mandated to manage the same resource						
Q7	A system of audit and reporting regularly fastened to mitigate corruption						

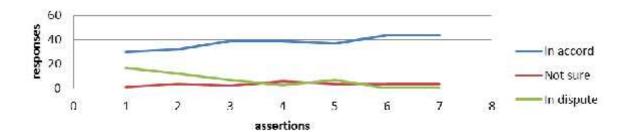
Unmerged responses

	TRANSPARENCY AND ACCOUNTABILITY						
	Responses						
	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total	
Q1	20	10	1	10	7	48	
Q2	14	18	4	8	4	48	
Q3	11	28	2	6	1	48	
Q4	20	19	6	3	O	48	
Q5	22	15	4	6	1	48	
Q6	30	14	4	О	O	48	
Q7	29	15	4	О	О	48	

Merged Responses

	TRANSPARENCY AND ACCOUNTABILITY In accord Not sure In dispute								
		%age		%age		age			
Q1	30	63%	1	2%	17	35%			
Q2	32	67%	4	8%	12	25%			
Q1 Q2 Q3	39	81%	2	4%	7	15%			
Q4	39	81%	6	13%	3	6%			
Q4 Q5	37	77%	4	8%	7	15%			
Q6	44	92%	4	8%	О	0%			
Q 7	44	92%	4	8%	O	0%			

Graph based on merged responses



The findings above suggest that respondents were overwhelmingly in accord with the assertions that a system of audit and reporting should be regularly fastened to mitigate corruption and that all information on oil revenue management should be made publicly available on the website of the body mandated to manage the resource. The number of respondents for the former on average made up 92% of the total respondents interviewed. Similarly, responses in favour of the assertions that parliament should on a yearly basis engage the body mandated to manage the oil revenue on issues pertaining to how revenues and earnings from the capital investment are invested and that annual audited account on oil revenue accrued to the state, including the portion used in financing budgetary items, should be published in the newspapers with national circulation were significant, with 81% of the respondents seemingly in agreement. Differently, on average, 30% disputed the assertions that all revenue streams and transactions should be clearly traceable and accounted for in the state budget, independently audited and there should be regular public disclosure of revenues and that the Bank of Uganda may support the Government management of oil and gas revenue, as a custodian of the government revenue.

Correspondingly, key respondents from Bank of Uganda admitted, "in the absence of such transparency, governments and companies may behave in ways that will enhance the wealth of the few elite and yield no benefit to the many citizens and that when companies and the government are fully transparent, citizens, journalists, civil society, researchers and investigators can track revenue flows, holding public officials accountable and discouraging corruption". Similarly, Robert Lugolobi, the executive director of Transparency International-Uganda Chapter (TI), in a New Vision interview by Kasita (2008) advised that the Constitution grants Ugandans ownership of the country's natural resources and access to information.

4.3.2.2 Tax Administration and Contract Negotiation

Assertions

	TAX ADMINISTRATION AND CONTRACT NEGOTIATION							
Q8	Holders of petroleum exploration licenses must pay an annual fee in respect of the licenses							
Q9	Failure to pay annual fees should lead to cancellation of the licenses							
Q10	The licensee must pay a royalty to the government on petroleum extracted in the form of crude oil and natural gas as well							
Q11	Mandatory disclosure of cooperation agreements by several applicants should be provided to MEMD							
Q12	Mandatory disclosure of cooperation agreements helps in ascertaining the taxable amounts for each of the licensees							
Q13	The state's share of benefits should be increased as oil projects' profitability increases							
Q14	Competitive bidding for contracts, rather than direct application to the Minister							
Q15	Competitive bidding for contracts will minimise opportunity for corruption							

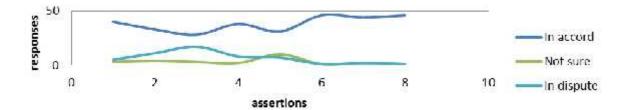
Unmerged responses

	TAX ADMINISTRATION AND CONTRACT NEGOTIATION						
		Responses					
	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total	
Q8	24	16	3	4	1	48	
Q9	15	18	4	6	5	48	
Q10	11	17	3	12	5	48	
Q11	18	20	2	6	2	48	
Q12	8	23	10	5	2	48	
Q13	31	15	1	1	О	48	
Q14	31	13	2	2	О	48	
Q15	25	21	1	1	О	48	

Merged responses

TAX ADMINISTRATION AND CONTRACT NEGOTIATION								
	In accord		Not s	Not sure		pute		
		%age		%age		%age		
Q8	40	83%	3	6%	5	10%		
Q9	33	69%	4	8%	11	23%		
Q10	28	58%	3	6%	17	35%		
Q11	38	79%	2	4%	8	17%		
Q12	31	65%	10	21%	7	15%		
Q13	46	96%	1	2%	1	2%		
Q14	44	92%	2	4%	2	4%		
Q15	46	96%	1	2%	1	2%		

Graph based on merged responses



The findings above suggest that respondents were overwhelmingly in accord with the assertions that the state's share of benefits (tax revenue) should be increased as oil projects' profitability increases and that competitive bidding for contracts will minimize opportunity for corruption. The number of respondents for the former on average made up 96% of the total respondents interviewed. Similarly, responses in favour of the assertions that competitive bidding for contracts, rather than direct application to the Minister and that those holders of petroleum exploration licenses must pay an annual fee in respect of the licenses were significant, with an average of 88% of the respondents seemingly in agreement. Contrarily, on average, 29% disputed the assertions that the licensees must pay a royalty to the government on petroleum extracted in the form of crude oil and that failure to pay annual fees should lead to cancellation of the licenses citing the poor performance of the global oil industry as a probable deterrent to payment of the said fees.

Respectively, key respondents from the energy ministry attributed "the cause of the recent decline in oil prices and poor performance of the industry to the Greek financial crisis, Iran's potential nuclear deal, and broad weakness in the China economy which have a negative impact on demand". And according to Marcellus minerals (2016), all of these factors together coupled with the already deflated demand for oil due to economic pressures have traders concerned that oil may stay lower for years. But BOU experts reaffirm that "the competitive bidding policy should as a matter of principle bring out clear terms of developing the resources so that they can be expeditiously exploited in the interest of energy security of the country and improving the investment

4.3.2.2 Citizens' Involvement

Assertions

	INVOLVEMENT OF UGANDAN CITIZENS						
Q16	The government needs not distribute some of the oil revenues to all citizens in the form of cash transfers						
Q17	The government should create a (special) fund dedicated to the development of the region where the country's oil resource is located.						
Q18	Pursuing development on the basis of natural resource endowments of regions widens the development gap among regions						
Q19	The government should use a portion of the oil revenue to finance few projects with huge social and economic benefits to citizens						
Q20	Employment opportunities in the sector for the local people should be prioritized over foreigners						

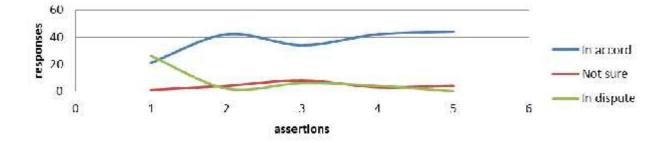
Unmerged responses

	INVOLVEMENT OF UGANDAN CITIZENS							
	Responses							
	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total		
Q16	16	5	1	16	10	48		
Q17	9	33	4	1	1	48		
Q18	8	26	8	5	1	48		
Q19	41	1	3	3	1	49		
Q20	29	15	4	0	0	48		

Merged responses

INVOLVEMENT OF UGANDAN CITIZENS							
	In accord	In dispute					
		%age		%age		%age	
Q16	21	44%	1	2%	26	54%	
Q17	42	88%	4	8%	2	4%	
Q18	34	71%	8	17%	6	13%	
Q19	42	88%	3	6%	4	8%	
Q20	44	92%	4	8%	0	0%	

Graph based on merged responses



The findings above suggest that respondents were tremendously in accord with the assertion that employment opportunities in the oil sector for the local people should be prioritized over foreigners. The number of respondents for the former made up 92% of the total respondents interviewed. Similarly, responses in favour of the assertions that the government should use a portion of the oil revenue to finance few projects with huge social and economic benefits to citizens and that the government should create a (special) fund dedicated to the development of the region where the country's oil resource is located, with an average of 88% of the respondents ostensibly in agreement. Inversely, a massive 54% disputed the assertions the government needs not distribute some of the oil revenues to all citizens in the form of cash transfers for the reason that, "oil, gas and minerals or the extractive industries generate a lot of wealth which ultimately end up in the hands of a few rather than ameliorating services and infrastructure that are in dire need of support".

In turn, key respondents argued that "while prioritizing employment opportunities in the oil sector for the local people was a step in the direction for the country's labor force, for national content ambitions in the petroleum industry to become a success, capacity building and industrial diversity should be considered prerequisites". Thus, it was crucial for Uganda to pursue long-term political commitment for capacity building to reap the benefits of national participation. In fact, in realization of the petroleum industry's potential, the Energy ministry through its Oil and Gas policy seeks to optimize wealth creation from the industry to enhance the welfare of the citizens and documentation to that effect has been drawn (Byaruhanga, 2011).

4.3.2.2 Sustainability of the Oil Sector and Uganda's Development

Assertions

	SUSTAINABILITY OF THE OIL SECTOR AND UGANDA'S DEVELOPMENT							
Q21	Oil is Essential for Sustainable Development							
Q22	The country should save part of its oil revenue in a special account for future generations							
Q23	The government should use the revenue from oil to fund the development agenda proposed in the national development plan							
Q24	The percentage of oil revenue to be used to support the annual budget should be spent dedicated to financing education, water, sanitation, electricity, and health care.							
Q25	I second the use of oil revenue to improve social services and infrastructure							
Q26	I second the use of oil revenue on few projects with huge sustainable benefits							
Q27	The government should not give the country's oil revenue to public enterprises or private sector entities as loans							
Q28	The percentage of oil revenue for supporting the annual budget should be used to finance current consumption items such as food and other consumable imports.							

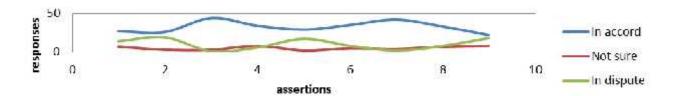
Unmerged responses

	Responses								
	Strongly agree	Agree	Not sure	Disagree	Strongly disagree	Total			
Q21	21	6	7	9	5	4			
Q22	11	15	3	12	7	4			
Q23	10	34	3	1	О	4			
Q24	12	22	8	6	О	4			
Q25	28	1	2	10	7	4			
Q26	11	24	5	5	3	4			
Q27	11	31	4	1	1	4			
Q28	24	9	7	7	1	4			

Merged responses

SUSTAINABILITY OF THE OIL SECTOR AND UGANDA'S DEVELOPMENT							
	In accord		Not s	ure	In dispute		
		%age		%age		%age	
Q21	27	56%	7	15%	14	29%	
Q22	26	54%	3	6%	19	40%	
Q23	44	92%	3	6%	1	2%	
Q24	34	71%	8	17%	6	13%	
Q25	29	60%	2	4%	17	35%	
Q26	35	73%	5	10%	8	17%	
Q27	42	88%	4	8%	2	4%	
Q28	33	69%	7	15%	8	17%	

Graph based on merged responses



The findings above suggest that respondents were incredibly in accord with the assertions that the government should use the revenue from oil to fund the development agenda proposed in the National Development Plan and that the government should not give the country's oil revenue to public enterprises or private sector entities as loans. The number of respondents for on average made up 90% of the total respondents interviewed. Similarly, responses in favour of the use of oil revenue on few projects with huge sustainable benefits and that the percentage of oil revenue to be used to support the annual budget should be dedicated to financing education, water, sanitation, electricity, and health care were substantial, with 72% of the respondents outwardly in agreement. Otherwise, 29% disputed the assertions that Oil is Essential for Sustainable Development. In fact, a considerable 40% rejected the proclamation that the country should save part of its oil revenue in a special account for future generations.

Interviews with respondents from Bank of Uganda revealed that "the use of the revenue from oil to fund the foundation of the national development plans should lead to a better quality of life for all citizens". In fact, a UK-based Effective States and Inclusive Development Research Centre established in October 2015 that there were signs Uganda might manage its oil better than Ghana, where rapid production "was not only unproductive in fiscal terms, but also took place in an unregulated environment. This is according to an article by Mwesigwa (2016) that appeared in the *Guardian* on January 13th, 2016. However, the rejection by 40% of the respondents of the proclamation that the country should save part of its oil revenue in a special account for future generations is rightly so according to Mwesigwa. He submits that government oil agreements have largely been shrouded in secrecy, keeping millions of Ugandans in the dark about events in the sector and that any goal of sustenance of the sector may not be achieved as hoped.

4.4Inferential analysis of the core findings

In this section, correlation analysis was aided by the calculation of the Pearson Rank correlation coefficient whereas the ordinary least squares regression method was employed to do regression analysis. These were completely suitable methods for establishing a link between the proper revenue management and sustainability of the oil industry in Uganda as seen below.

Below are the hypotheses tested and the consequent results;

- i) "Having a transparent and principle based environment in place will significantly affect the sustainability of the oil and gas industry in Uganda"
- ii) "Having sound tax administration and contracts' negotiation capacity in place will significantly affect the sustainability of the oil and gas industry in Uganda"
- "Involving the citizens in the management of the anticipated Oil and Gas Revenue will have a significant effect on the sustainability of the oil and gas industry in Uganda"

4.4.1 Correlation analysis between the independent variables based on MS Excel's Pearson Rank Correlation Coefficient

Below are the results of the Pearson Rank Correlation Coefficients for the relationships therein and the corresponding interpretation of the results:

MS Excel's Pearson Rank Correlation Coefficient								
	Transparency and Tax Administration and Citizens							
Column1:Row1	Accountability	Contract Negotiation	Involvement	Sustainability				
Transparency and								
Accountability	1							
Tax Administration and								
Contract Negotiation	0.4905	1						
Citizens								
Involvement	0.3714	0.2157	1					
Sustainability	0.5340	0.6403	0.3031	1				

Pearson's correlation coefficient (r) is a measure of the strength of the association between the two variables and the nearer r is to +1, the higher the strength of association between the variables (Sekeran, 2010). The above correlation analysis revealed a positive correlation between tax administration and contract negotiation, transparency and accountability, citizens' involvement and sustainability of the Oil industry in Uganda. The Pearson coefficients between tax administration and contract negotiation, transparency and accountability, citizens' involvement and sustainability of the Oil industry in Uganda were 0.6403, 0.5340 and 0.3031 respectively. These results point to a positive correlation between the dependent and independent variables. It is important to note that all of them affect sustainability differently with tax administration and contract negotiation the major contributor, followed by transparency and accountability and least by citizens' involvement. Conclusions can be drawn on the basis of these results that attempts to streamline and augment tax administration and contract negotiation would improve sustainability of the Oil sector more compared to enhancing transparency and accountability and the citizens' involvement.

4.4.2Regression analysis based on Number Analytics Software output

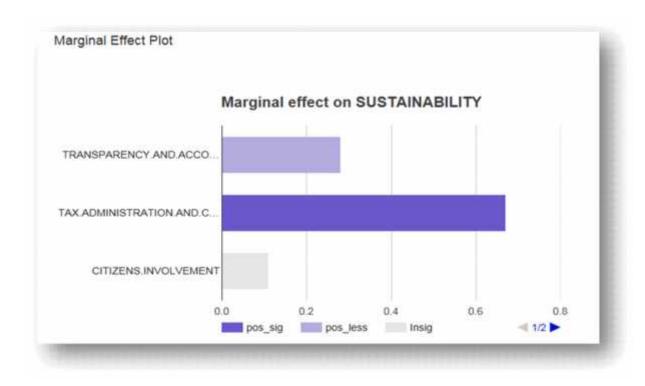
In this section the divergence or connection between the independent and dependent variables was analyzed. Results are detailed below;

	R	R ²		Adjusted I	R ² Std. Err Estimat	or of the le		
	0.695	0.483		0.447	0.3299			
ANOVA								
		Sum of Squares	df	Mean Square	F	Sig		
		4.469	3	1.49	13,686	0		
Regression								
Regression Residuals		4.790	44	0.109				
Residuals Total		4.790 9.259	44	0.109				
Residuals					ized Coefficients	Standardized Coefficients	ı	Sig
Residuals Total					lized Coefficients Std. Error		i	Sig
Residuals Total				Unstandard		Coefficients	I -0.81	Sig 0.423
Residuals Total Coefficients	AND ACCOUNTA	9.259		Unstandard B	Std. Error	Coefficients		
Residuals Total Coefficients (Intercept) TRANSPARENCY		9.259	47	Unstandard B -0.572	Std. Error 0.706	Coefficients	-0.81	0.423

The above results show the model summary of the prediction of sustainability of the Oil sector by tax administration and contract negotiation, transparency and accountability, as well as citizens' involvement. According to the Pennsylvania State University (2016), on STAT 501, social scientists who are often trying to learn something about the huge variation in human perceptions and behaviour (comparable to this study) will tend to find it very hard to get R-squared values much above, say 25% or 30%. We can say that 48.3% of the variation in the

sustainability in the oil sector is reduced by taking into account proper desirable revenue management and this is a significant figure. We can also say that 48.3% of the variation in sustainability of the oil sector is due to or is explained by proper desirable revenue management practices of tax administration and contract negotiation, transparency and accountability, as well as citizens' involvement.

In the associated ANOVA test used to verify if regression analysis is a better way of verifying the linear relationship between tax administration and contract negotiation, transparency and accountability, as well as citizens' involvement and sustainability of the Oil sector. This test is done at 5% significance level. From the table, the test is significant, F=13.686, p<.05. This result makes way for interpreting the coefficients in the subsequent table and the marginal effect plot below.



Regression model: (see coefficients section)

Sustainability = 0.28 (transparency and accountability) + 0.669 (tax administration and contract negotiation) + 0.114 (citizens' involvement) - 0.572 + error term

The model above shows that adjusting the degree of enforcement of policies related to transparency and accountability, tax administration and contract negotiation as well as citizens' involvement in the Oil sector by a unit, the eventual sustainability of the sector will be changed by 0.28, 0.669 and 0.114 respectively. It is apparent from the above equation that the coefficients of transparency and accountability, tax administration and contract negotiation as well as citizens' involvement in the Oil sector are positive. This is indicative of the fact that improved sustainability as perceived by the respondents is because of an increase in the degree with which the desired revenue management practices are perceived as important by the masses and vice versa. It is however noteworthy that the marginal effect of instituting proper tax administration and contract negotiation processes will have a more positively significant effect to the sustainability of the oil resource while citizens' involvement may not have a significant effect. Relatedly, tax administration and contract negotiation stand out as the most desirable practices based on the fact that a predictor that has a low p-value is likely to be a meaningful addition to the model, since changes in the predictor's value are related to changes in the response variable. In this case, tax administration and contract negotiation has a p-value of 0. Conversely, a larger (insignificant) p-value suggests that changes in the predictor are not associated with changes in the response. This is observed for p-values associated with transparency and accountability as well as citizens' involvement in the Oil sector.

CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this chapter, the researcher further explicates the findings with an aim of drawing conclusions and making recommendations with regard to achieving sustainability of the oil sector in Uganda.

5.2 Summary

A total of 48 respondents of whom 25 (52%) were students from UTAMU, while energy specialists from the energy ministry and revenue management specialists from BOU made up 48% (31% and 17% respectively) were interviewed for the study. Respondents were overwhelmingly in accord with the assertions that a system of audit and reporting should be regularly fastened to mitigate corruption and that all information on oil revenue management should be made publicly available on the website of the body mandated to manage the resource. Similarly, respondents seemed to agree outrightly that the state's share of benefits should be increased as oil projects' profitability increases and that competitive bidding for contracts will minimize opportunity for corruption, with 96% of the respondents holding these views. On the other hand, respondents were tremendously in accord with the assertion that employment opportunities in the oil sector for the local people should be prioritized over foreigners. This was supported by 92% of the respondents while the majority of the respondents (90%) seemed to believe that the government should use the revenue from oil to fund the development agenda proposed in the national development plan and that the government should not give the country's

oil revenue to public enterprises or private sector entities as loans. In effect, the study established that the marginal effect of instituting proper tax administration and contract negotiation processes will have a more positively significant effect to the sustainability of the oil resource while citizens' involvement may not have a significant effect.

5.3 Discussion

5.3.1 Effect of transparency and accountability on the sustainability of Uganda's oil sector and development

The assertions that a system of audit and reporting should be regularly fastened to mitigate corruption and that all information on oil revenue management should be made publicly available on the website of the body mandated to manage the resource was the widely held view of the respondents, with key respondents from Bank of Uganda admitting that in the absence of such transparency, governments and companies may behave in ways that will enhance the wealth of the few elite and yield no benefit to the many citizens and that when companies and the government are fully transparent, citizens, journalists, civil society, researchers and investigators can track revenue flows, holding public officials accountable and discouraging corruption.

The Global Witness (2014) similarly advances that natural resources are the property of all citizens, and governments are only the custodians of those assets. The contracts that govern them should be available to the public. They say that making contracts publicly available not only builds trust in government but, more importantly, it empowers citizens to check how their interests are safeguarded and governed which ultimately enhances transparency. The Global Witness incidentally adds that there is now a wide recognition that greater transparency in the extractive sector is key to good resource management and that publishing revenue information

would be enhanced by an understanding of the contracts that underpin those revenues since the International Monetary Fund and the World Bank have also endorsed contract transparency.

5.3.2 Effect of tax administration and contract negotiation on the sustainability of Uganda's oil sector and development

The study established that increasing the state's share of benefits (tax revenue) as oil projects' profitability increases and fostering of competitive bidding for contracts will minimize opportunities for corruption and swell the Consolidated Fund. This supposition is buoyed by BOU experts who reaffirmed that the competitive bidding policy should as a matter of principle bring out clear terms of developing the resources so that they can be expeditiously exploited in the interest of energy security of the country and improving the investment climate. The study also determined that the marginal effect of instituting proper tax administration and contract negotiation processes will have a more positively significant effect to the sustainability of the oil resource while citizens' involvement may not have a significant effect.

According to International Alert (2011), Oil, gas and mining contracts, such as production sharing agreements (PSAs), set out the terms which govern the relationship between host governments and extractive companies. They dictate the amount of money the government will get, any special dispensations like tax breaks, the key obligations for companies and government, the protections for people and environment and what information will be kept secret. On this background, the researcher recognizes that these documents are fundamental to any meaningful understanding of the deal between a state and big international oil companies trying to profit from countries' natural resources and therefore intense scrutiny by the government is mandatory to ascertain whether the country is getting a good financial deal for its natural resources or

whether the resources should be extracted at all as this has been branded highly significant to sustainability of the oil sector.

5.3.3Effect of citizens' involvement in the oil matters on the sustainability of Uganda's oil sector and development

The researcher found out that the view that employment opportunities in the oil sector should be prioritized for the local people over foreigners was the widely held view by the majority of respondents. In addition, key respondents intimated that capacity building and industrial diversity should be considered prerequisites. Thus, it is crucial for Uganda to pursue long-term political commitment for capacity building to reap the benefits of national participation. Similarly, responses in favour of the assertions that the government should use a portion of the oil revenue to finance few projects with huge social and economic benefits to citizens were common. Correspondingly, according to Byaruhanga (2011), the current phase of oil exploration in Uganda offers a unique and exciting chance to alleviate poverty and create broad-based development and improved standards of living across the country yet at the same time, many Ugandans are well aware that much has been written and discussed about the "resource curse" which underscores the importance of preparing adequately to utilize positively the benefits that will accrue from oil wealth.

5.4 Conclusions

5.4.1 Effect of transparency and accountability on the sustainability of Uganda's oil sector and development

The study recognized the fact that regularly fastening a system of audit and reporting will go a long way in mitigating corruption and that all information on oil revenue management should be

made publicly available on the website of the body mandated to manage the resource. This conclusion was supported by key respondents from Bank of Uganda who acknowledged that in the absence of such transparency, governments and companies may behave in ways that will enhance the wealth of the few elite and yield no benefit to the many citizens and that when companies and the government are fully transparent, citizens, journalists, civil society, researchers and investigators can track revenue flows, holding public officials accountable and discouraging corruption. The study however established that while transparency and accountability are major contributors to sustainability development of the oil sector, they have a less positive marginal effect compared to tax administration and contract negotiation, yet a better determinant of sustainability than citizens' involvement.

5.4.2Effect of tax administration and contract negotiation on the sustainability of Uganda's oil sector and development

On the basis of the findings, the study accepted as sufficient that the state's share of benefits (tax revenue) should be increased as oil projects' profitability increases and that competitive bidding for contracts will minimize opportunity for corruption. This conclusion was supported by BOU experts who confirmed that the competitive bidding policy should as a matter of principle bring out clear terms of developing the resources so that they can be expeditiously exploited in the interest of energy security of the country and improving the investment climate. In effect, deeper analysis (inferential analysis) revealed that although transparency and accountability together with citizens' involvement in the oil matters may have a positive effect on sustainably developing the oil sector in the country it is apt tax administration and contract negotiation that

will have a more positively significant marginal effect on the sustainability of the oil industry in Uganda.

5.4.3Effect of citizens' involvement in the oil matters on the sustainability of Uganda's oil sector and development

The study determined that although citizens' involvement in the oil sector has a less than positive significant marginal effect on sustainably developing the oil resources, the view that employment opportunities in the oil sector should be prioritized for the local people over foreigners should not be shelved. Additionally, the use of a portion of the oil revenue to finance few projects with huge social and economic benefits to citizens underscores the importance of adequately preparing to positively utilize the benefits that will accrue from oil wealth.

5.5 Recommendations

5.5.1Effect of transparency and accountability on the sustainability of Uganda's oil sector and development

Globally, there is increasing recognition of the benefits of transparency in public data and evergreater momentum towards reform. It is essential that citizens are able to access and understand extractive contracts agreed by their governments in their names, in order to ensure that the public obtains the fullest benefit possible from exploitation of their nation's natural resource wealth. It is also important to ensure that current requirements on politicians and public officials to declare any business interests are met and agree a process to investigate and address potential conflicts of interest. This is particularly true of the extractive sector, with civil society groups, governments and parliamentarians contributing to a growing movement against opacity and towards improved governance.

5.5.2Effect of tax administration and contract negotiation on the sustainability of Uganda's oil sector and development

In recognition of the fact that apt tax administration and contract negotiation will have a more positively significant marginal effect on the sustainability of the oil industry in Uganda compared to other factors, there is need for a regulatory environment that fosters transparency concerning all revenues and in negotiation and award of contracts. All future contracts should be published immediately upon signature, including details of the ultimate beneficial ownership of contracting companies or shareholders. Furthermore, negotiating with companies and publishing all existing extractives contracts and licenses along with appendices and supplementary material including Environmental Impact Assessments and Development Plans, in hard and soft copy, with local translations where appropriate will be critical. As such, the government needs to adopt the Extractive Industries Transparency Initiative (EITI) because it provides avenues for addressing the general failure to account, transform resource wealth into sustainable development i.e. the resource curse and the associated governance problems in the extractive sector.

5.5.3Effect of citizens' involvement in the oil matters on the sustainability of Uganda's oil sector and development

As established earlier, employment opportunities in the oil sector should be prioritized for the local people over foreigners in order to build public participation and capacity to understand the

new sector. Moreover, ensuring that the anticipation of wealth from Uganda's oil does not intensify land insecurity, sectarian competition and other conflicts should be at the back of policy makers' minds at all times because the government should be treated merely as a custodian of assets owned collectively by the citizens they represent

5.6 Contributions of the study

The study presupposes that the marginal effect of instituting proper tax administration and contract negotiation processes will have a more positively significant effect on the sustainability of the oil resource while citizens' involvement may not have a significant effect. This implies that the government should go through with adopting the Extractive Industries Transparency Initiative (EITI) because it provides avenues for addressing the general failure to account, transform resource wealth into sustainable development, i.e. the resource curse and the associated governance problems in the extractive sector.

5.7 Recommendations for further research

- Contract transparency and the effect on the sustainability of the oil and gas industry in Uganda
- The effect of Confidentiality in oil, gas and mining contracts on the sustainability of the oil and gas industry in Uganda

5.8 Limitations of the study

The study was mainly limited by non-response from several targeted respondents. This was particularly a problem because the sample size was reduced. While this is a problem, the researcher believes that it did not lead to wrong conclusions. However, due to the smaller sample

size, the precision of estimators were expected to have been smaller while the margins of error were expected to be larger.

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APPENDIX

Appendix 1: Questionnaire

My name is Twinamatsiko Ambrose, an Executive Masters of Business Administration (Oil and Gas Management) student at Uganda Technology and Management University. I am doing a study on the desirable revenue management practices for a sustainable oil and gas industry in Uganda. Please answer objectively the questions below about your experiences on the research problem. The information provided will be treated with the highest degree of confidence, and at no point should you respond to a question you do not feel comfortable answering. When the questionnaire is completed, it should be submitted to the researcher. Thank you very much.

Researcher's	s Signature	Date
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Section A: General information of the company (Tick against appropriate item)

- 1. Name of organization
 - a) UTAMU
 - b) BOU
 - c) ENERGY MINISTRY
- 2. Occupation
 - a) Student
 - b) Finance and Revenue Management
 - c) Energy and Geoscience
- 3. Age
 - a) 21 30
 - b) 31 40
 - c) 41 50
 - d) 50 and above
- 4. Sex
 - a) Male
 - b) Female

SECTION B: (To be attempted by All)

The following questions relate to the study objectives. Please state if you agree or disagree to the following statements by ticking the appropriate box below. [Scale: Strongly agree (5), Agree (4), Not sure (3), Disagree (2), strongly disagree (1)]

All revenue streams and transactions should be clearly traceable and accounted for in the state budget, independently audited and there should be regular public disclosure of revenues BOU may support the Government management of oil and gas revenue, as a custodian of the government revenue Annual audited account on oil revenue accrued to the state, including the portion used in financing budgetary items, should be published in the newspapers with national circulation Parliament should on a yearly basis call the body mandated to manage the oil revenue to report to it how revenues were used and earnings from the capital investment The country should use only some percentage of the oil revenue to be determined by Parliament to finance its annual budget All information on oil revenue management should be made publicly available on the website of the body mandated to manage the same resource A system of audit and reporting regularly fastened to mitigate corruption TAX ADMINISTRATION AND CONTRACT NEGOTIATION TAX administration and fees should lead to cancellation of the licenses The licensee must pay a royalty to the government on petroleum extracted in the form of crude oil and natural gas as well Mandatory disclosure of cooperation agreements by several applicants should be provided to MEMD Mandatory disclosure of cooperation agreements helps in ascertaining the taxable amounts for each of the licensees	TD A NCD A DENCY A ND A CCOUNT A DILLITY					
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the taxable amounts for each of the licensees						
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The state's share of benefits should be increased as oil projects'	The state's share of benefits should be increased as oil projects'					
± ¥	profitability increases					
	Competitive bidding for contracts, rather than direct application to the					
	Minister					
	Competitive bidding for contracts will minimise opportunity for	1				

corruption			

INVOLVEMENT OF UGANDAN CITIZENS					
INVOLVENIENT OF UGANDAN CITIZENS	5	4	3	2	1
The government needs not distribute some of the oil		-			
revenues to all citizens in the form of cash transfers					
The government should create a (special) fund dedicated to					
the development of the region where the country's oil					
resource is located.					
Pursuing development on the basis of natural resource					
endowments of regions widens the development gap					
among regions					
The government should use a portion of the oil revenue to					
finance few projects with huge social and economic					
benefits to citizens					
Employment opportunities in the sector for the local people					
should be prioritized over foreigners					
SUSTAINABILITY OF THE OIL SECTOR AND UGA	NDA'S	DEVEI	LOPMI 3	ENT 2	1
Oil is Essential for Sustainable Development					
The country should save part of its oil revenue in a special					
account for future generations					
The government should use the revenue from oil to fund					
the development agenda proposed in the national					
development plan					
The percentage of oil revenue to be used to support the					
annual budget should be spent dedicated to financing					
education, water, sanitation, electricity, and health care.					
I second the use of oil revenue to improve social services					
and infrastructure					
I second the use of oil revenue on few projects with huge					
sustainable benefits					
The government should not give the country's oil revenue					
to public enterprises or private sector entities as loans					
The percentage of oil revenue for supporting the annual					
	1		1	1	ı
budget should be used to finance current consumption items such as food and other consumable imports.					

Section C: Interview Guide (To be attempted by a Revenue Management Specialist)

This section is intended to collect methodical data about the research problem. I kindly request you to provide elaborate responses to the queries below;

It is desirable by Uganda that revenues should be managed in the context of an overarching macro-fiscal framework that recognizes the volatility, uncertainty and cyclical nature of their prices, and over time the exhaustibility of oil, gas and mining resources, and ensuring they are linked to national budget processes. In the context of transparency and accountability, tax administration and contract negotiation, can you please elaborate more, citing relevant examples, how the country can attain sustainability of the oil sector as a result of cultivating a culture of
transparency and professionalism in oil revenue management.

Section D: Interview Guide (To be attempted by a Geoscience Specialist)

This section is intended to collect methodical data about the research problem. I kindly request you to provide elaborate responses to the queries below;

Integration of oil exploration environmental concerns in overall national planning through
coordination with the relevant ministries, departments and government agencies, promoting
public awareness through formal, non-formal and informal education about environmental issues
are essential for achieving sustainability in Uganda's oil sector. Against that background, how
best should the government ensure maximum involvement of the people of Uganda in the
development of policies, plans and processes for the management of the environment and the oil
sector?

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23 September 2016

CERTIFICATE OF PROOF THAT DISSERTATION HAS BEEN EDITED

This is to certify that the Master's Degree dissertation entitled, **Desirable Revenue Management Practices for a Sustainable Oil and Gas Industry in Uganda by Ambrose Twinamatsiko**, has been reviewed and corrected in order to ensure clarity of expression and consistency regarding key style aspects like general grammar, sentence structure to ensure logical flow and effectiveness of meaning, all-round punctuation, use of informal style, need to adhere to academic tradition, citation and referencing.

grundo

Mukotani Rugyendo

Professional Editor