

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

By

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APPROVAL

I **Twinamatsiko Ambrose** to the best of my knowledge declare that this is my original work and that it has not been submitted for the award of any degree or any other award in any University or institution.

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

This study is aimed at determining 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 therein 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 to 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 percent 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's 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. Oddly, it is noteworthy that important discoveries and insights are simple, economical, 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 the 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, rumor and possible division (Henstridge, 2012).Uganda can nevertheless learn from a number of initiatives from around the world to enhance popular citizen’s 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

According to Starling (2004), the discovery of hydrocarbon resources in countries across the globe is viewed with mixed responses and reaction. Thus, whilst its exploitation has translated into an improvement in quality of life of people in some countries, it is yet to become a blessing in many other countries in the world today (Boheene, 2011). Crude oil accounts for over 90% of global energy consumption. In China, India and Russia, increased economic growth and improvement in welfare has led to increased energy consumption. Unfortunately however, while there exists a strong link between rising economic growth/improvement in the welfare and increased energy consumption, the same cannot be said about increased hydrocarbon discovery and improvement in quality of life of citizens in oil and gas producing countries (Gelb, 2010). Environmental degradation which inter alia follows the commercial exploitation of hydrocarbons, threatens the lives of people who live around fields that produce these resources. In oil rich African countries like Sudan and Nigeria, the majority of poor citizens of these countries are yet to notice the importance of hydrocarbons in positively transforming their lives (Moss, 2009 and Basdevant, 2008). Indeed, the choice of petroleum revenue model being adopted by various countries remains a fundamental denominator between resource blessed nations and resource cursed ones in light of the deterministic role it plays in defining the ownership structure of the hydrocarbons (Sykes, 2008).

Uganda has built up considerable technical knowledge in the preliminary phases of oil development, notably in the Petroleum Exploration and Production Department of the Ministry of Energy. But the management of the oil sector is set to change with oil-related legislation currently before parliament or just passed. These changes bring risks that the role of Uganda's technocrats will be confused, overshadowed by the involvement of political actors or subverted (Shepherd, 2013 and Boohene, 2011). Additionally, while the National Resistance Movement has achieved a transformation of the country, including economic and social stability unparalleled in Uganda's post-independence history, challenges still remain, not least the need for confident and well-respected social voices to emerge that are able to rise above the short-term political imperatives that are normal in any democracy, and instead offer a longer-term, nuanced view (Barbier, 2003). Besides, the power of the military, and the influence it still exerts on political developments in the country, should be considered a potential danger as the country heads for oil production (Kock, 2012). Similarly, agriculture, along with all export-led business, is very sensitive to currency appreciation, one of the possible results of large-scale oil-related spending – the so-called 'Dutch Disease'. Moreover, allegations of high-level corruption in the oil sector abound. Such cases contribute to a palpable sense of marginalisation felt by communities directly affected by oil activities. Corruption therefore poses not only a governance challenge, but has to be addressed in order to prevent grievance politics and local-level conflict from emerging (Longlong, 2012). It is for this reason that some form of mechanism to regulate spending is extremely important. Such mechanisms take many forms around the world, from sovereign wealth funds of the type instituted in Norway to fiscal rules limiting the percentage of revenues governments are able to spend. (Shepherd, 2013)

1.3 Statement of the research problem

Paradoxically, natural resource rich countries believe that they would use proceeds from extracting their natural resources to develop their economy (Choudhury, 2012). In fact there have been a number of successes, including Australia, Canada, some of the Scandinavian countries-Norway, as well as a few developing countries, like Botswana, but poor outcomes in many natural resource-rich countries show that the outcome varies widely (Gelb, 2010)). Moreover, when the cash inflows start these same countries realise that managing the natural resource proceeds for sustainable economic development is not as easy as anticipated (Choudhury, 2012).

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 is 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, policymakers 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). In that respect, Choudhury (2012), Kato (2006), Shepherd (2013) and Gelb (2010) believes 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. The study therefore seeks to supplement Uganda's preparations for the anticipated influx of oil and gas revenue by way of empirically collating the informal and formal viewpoints of selected Ugandans.

1.4 Purpose of the Study

The purpose of the study is to find out 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 therein the petroleum sector.

1.4.1 Objectives of the study

This study will be guided by the following specific objectives:

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

1.5 Research questions

The study seeks 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 will test 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 will be 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

Independent Variable

**Desirable oil and gas revenue
management practices**

**Transparent and Principle based
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
- Electoral and Democratic reforms

Dependent Variable

Sustainable Development

- Balancing social, economic and environmental capital

Source: Hedger, 2008 and modified by researcher

In this cause-effect assumptive charted model, it's 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 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 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 therein 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 district 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 had woken 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's scope will therefore explore the perceptions of Ugandans about the Management of the anticipated Oil and Gas Revenue for Sustainable Development of Uganda, while also citing international lessons of success and inadequacies therein the petroleum sector.

1.10.3 Time scope

The analysis in the study will study 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 sub-sector 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 recognise 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 advises 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, Tadvong (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. 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 Organisations (CSO's) 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 programmes in government programmes. The oil and gas government programme should therefore not be any different since the CSO's 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 behavior, in this case, the oil and gas anticipated socio-economic gains. (Kock 2012)

2.3 Theoretical review

In this study, the researcher seeks to explore the perceptions of Ugandans about the Management of the anticipated Oil and Gas Revenue for Sustainable Development of Uganda, while also citing international lessons of success and inadequacies therein the petroleum sector. 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).

While 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's 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. Oddly, it is noteworthy that important discoveries and insights are simple, economical, have vital implications for a broad range of issues and withstand the test of time. This is exactly the case with Friedman's PIH (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 super major/biggest oil companies felt the pinch too (Musisi, 2016). Against that background, in this section, the researcher seeks 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 organised 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, as such 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 further be 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 Marubeni 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 defence 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 favor.

The situation in Uganda is quite similar to Sao Tome’s predicament. Although many reports suggest that major strides have been taken to finalise 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 a 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 addition 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 suite, 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 Tadvong, 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 in 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 myriad developmental challenges. However, in as much as oil revenues stand 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. Tadvong (2016) found that villages along Lake Albert 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 emerge 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 politicised 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 adequate compensation 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, a 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 Pétrolières, which would manage this 85% of revenue. Members of the Collègewere appointed 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,¹ 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 favor 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 edge 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 paper 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 will be adopted in this study. This is because respondent's viewpoints about the research problem are desired so that the researcher can draw a pattern about their opinions with regard to Oil revenue management and its expected contribution to sustainable development.

3.3 Study population

The study will be carried out across Kampala district with a particular focus on exploring the views and opinions of the people about the research problem. Kampala was particularly selected for the study because it is host to strata of Ugandans, with all tribes more or less represented. As of 2014, the Central Intelligence Agency estimated Uganda's population at 35,918,915 people while that of Kampala was at 1,659,000 people (CIA, 2014). In order to factor in diversity,

random samples of Kampala will be drawn from Kansanga and Nalukolongo market vendors for the fairly informal perceptions and UMI Graduate students for the rather formal perceptions. The key informants will be drawn from the Directorate of Petroleum of the Ministry of Energy and Mineral Development mainly because; a Petroleum Revenue Management Course was conducted in 2015 as part of efforts to develop expertise in the oil and gas sector.

3.4 Determination of sample size and selection

The sample size will be 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

| Location | Population Size | Stratified Sample size | Sampling Technique |
|-------------------------------------|-----------------|------------------------|---------------------------|
| Kansanga Market Vendors | 150 | $(150/942)*274 = 44$ | Simple Random Sampling |
| Nalukolongo Market Vendors | 427 | $(427/942)*274 = 124$ | Simple Random Sampling |
| UMI graduate Students | 334 | $(334/942)*274 = 97$ | Convenience Sampling |
| Directorate of Petroleum department | 31 | $(31/942)*274 = 9$ | Convenience Sampling |
| Total | 942 | 274 | Krejcie and Morgan |

Sources: Development Initiatives International (2016), Education Budget Framework Paper (2015), Recommended Sample Size (Krejcie& Morgan, 1970) and National Budget Framework 2015/16

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 will be used because of the improbability of availability of the Petroleum Directorate's staff for interviews. The researcher seeks 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 will be computed to be the same as in the population.

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 will be selected randomly using this method. The researcher will employ 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 will use both quantitative and qualitative data collection methods. Quantitative data will be collected using questionnaires that will be filled by the market vendors and UMI graduate students and qualitative data will be obtained from key informant interviews with the selected staff at the Petroleum directorate of the Ministry of Energy.

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 will be developed with the aid of suggested guidelines by Sekaran & Bougie (2010) and Saunders (2009). The first section of the instrument will probe for background and demographic data, while the subsequent section will probe for respondent's viewpoints about the study questions. In each section, the respondents will be given clear instructions on how to complete the item. The questionnaire will be refined once the instrument has been piloted.

3.6.2 Interview Method

An interview guide is a set of questions that the researcher asks during the interview (Vogt, 2007). The researcher will design an interview guide that will be used during the interview of the key informants at the Petroleum directorate of the Ministry of Energy. Questions that will be asked in this section will be 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 will be 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 is 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 will be used to do a pretest of the instruments. To ensure greater chances of data validity, questionnaire and interview guide will be reviewed with the research supervisors for expert input. Content validity ratio will be used to calculate the Content Validity Index, using the formula below;

$$CVI = \text{Total Number of items rated by all respondents} / \text{Total Number of items in the Instrument}$$

A content validity index of 0.7 and above according to Amin, (2005) qualifies the instrument for the study.

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. The first step in ensuring reliability is by providing clear operational definitions of the variables under study. Thereafter, internal consistency will be measured through internal consistency reliability (Sekaran & Bougie, 2010) as well as split-half reliability using Cronbach's alpha. If the Square of R (Alpha) value is 0.7 and above, then the instrument will be considered satisfactory (Cronbach, 1951 as cited by Sekaran & Bougie, 2010), using results from the pretested questionnaire.

3.8 Procedures of data collection

The researcher will seek approval and a letter of introduction from the School of Business and Management of Uganda Technology and Management University (UTAMU) to enable the researcher easy accessibility to the respondents. Permission from the respondents' places of work will be sought prior to conducting any interview with them. The respondents will further be assured of confidentiality of the information collected and why the study is being carried out.

3.9 Data Analysis

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

3.9.1 Qualitative data analysis

Data collected using qualitative methods will be edited and coded in MS Excel which is less complicated. The data will then be exported into Statistical Package for Social Scientists (SPSS) and analyzed using the same software. In presenting the findings, tables and figures will be used. The frequency distribution tables will be used to tabulate data to show percentages calculated. Interpretations will be supported by narratives from the interviews.

3.9.2 Quantitative data analysis

Quantitative data collected using questionnaires will be analyzed using descriptive statistics, where frequencies and percentages will be obtained. Descriptive analysis will be used to establish the distributions of the sample on demographic variables of age, sex, level of education, marital status and occupation. Descriptive analysis will be employed as it best works where research seeks information concerning the current status or 'what exists' (Bidix, 2010). The Pearson's correlation coefficient in the SPSS program will be used to establish the relationship between the two variables. Regression analysis will also be run to determine the strength of the model. Correlation analysis will be essentially used to measure the direction, strength and significance of the variable relationships.

3.10 Measurement of variables

The variables will be measured using nominal and ordinal types of measurements. The questionnaires specifically for respondents will be measured on a five interval Likert Scale, the level of agreement will be ranked as strongly agree, which will reflect more agreement than just

agreement or strongly disagree compared to just disagree. Ordinal Scale as measurement of variables will not only categorize the elements being measured but also rank them into some order.

Therefore, the numbers in the ordinal scale represents relative position or order among the variables (Mugenda & Mugenda, 2003) and (Sekeran, 2010). The nominal scale of measurement will be applied to cases which will have some common characteristics such as sex, marital status, and employment status among others. In nominal measurement of variables, numbers will be assigned only for the purposes of identification but will not allow for comparison of the variables to be measured. On the other hand, interval scales of measurement will be 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). The researcher will undertake to protect the rights of the respondents by:

- A letter of formal authorization to conduct this research will be obtained from Uganda Technology and Management University which is the sponsoring institution. This will seek permission to officially conduct this study and will explain the nature and purpose of this study to the participants.
- Research assistants will be 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 will be espoused and respected.
- All preliminaries of data collection and analysis of editing, coding, questionnaire debugging and, pilot-testing using a checklist will be done to ensure data quality and elimination of response errors prior to entry.

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