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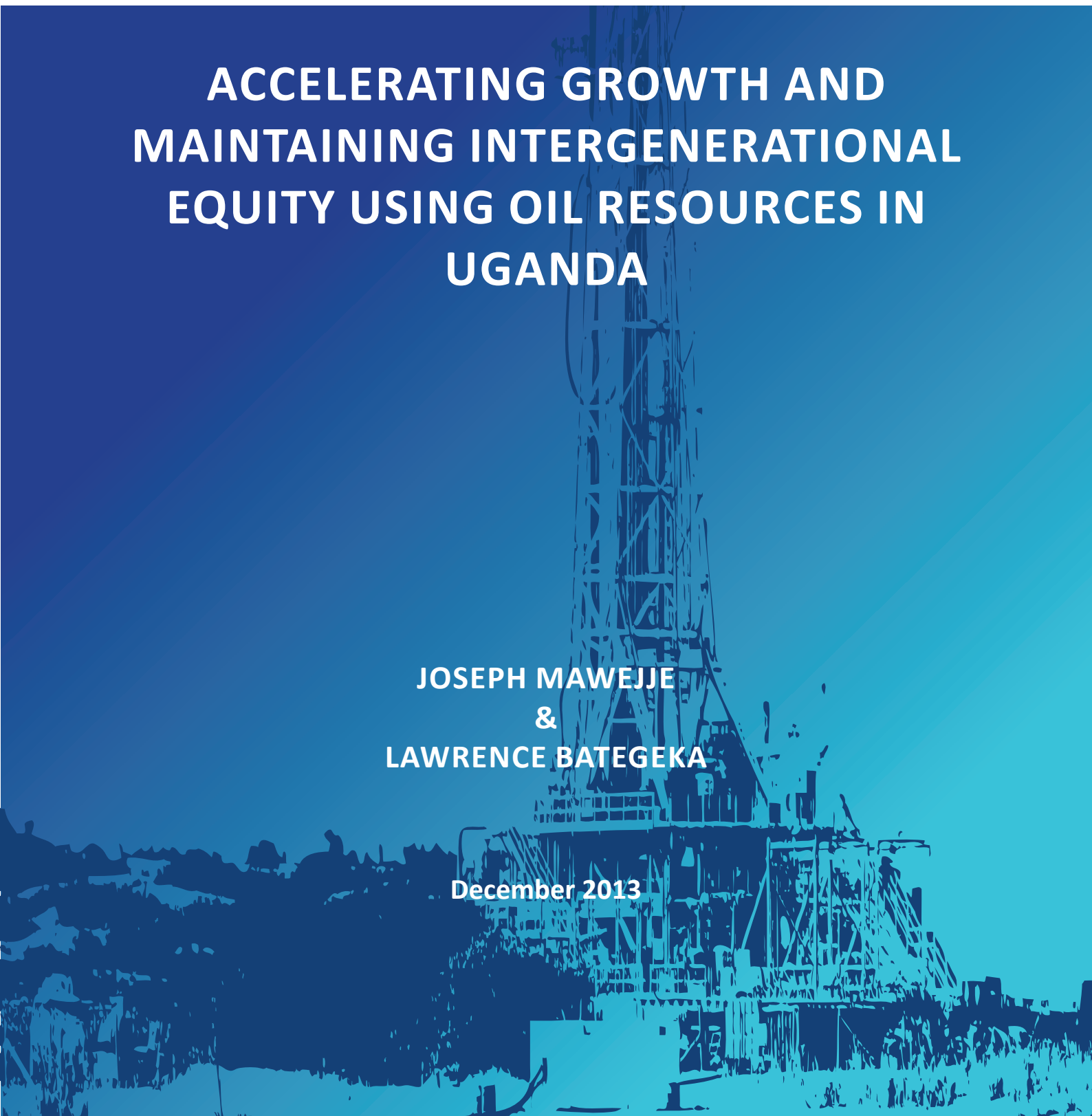
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**RESEARCH SERIES No. 111**

# ACCELERATING GROWTH AND MAINTAINING INTERGENERATIONAL EQUITY USING OIL RESOURCES IN UGANDA

JOSEPH MAWEJJE  
&  
LAWRENCE BATEGEKA

December 2013







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## **EXECUTIVE SUMMARY**

Uganda discovered commercially viable oil deposits in 2006. Estimated oil reserves as of September 2012 stood at 3.5 billion barrels. Since the discoveries, there has been much public debate on the types of public policies that the Government of Uganda (GoU) can implement in order to avoid or minimize the economic, social and political dislocations that have usually accompanied the exploitation of oil and gas in other African countries. It is important to note that the discovery and eventual exploitation of natural resources, such as gas and oil, are necessary but not sufficient conditions for the upheavals that are collectively referred to as “the curse of natural resources.” The reason why many African countries that have significant endowments of commercially viable oil and gas reserves often end up with the curse is that they do not have institutional arrangements that guarantee the rule of law. Without appropriate legal and judicial systems—that is, those that adequately constrain civil servants and politicians—the latter are likely to engage in corruption and other forms of political opportunism, and fail to implement policies to allocate resources efficiently and equitably and hence, enhance human development. It is hoped that Uganda will use its newly-discovered oil and gas resources to promote genuine economic growth and human development. This study employs a perception analysis of the views of key stakeholders on the suitability and impacts of available spending options.

Exploitation and sale of Uganda’s oil reserves brings up three major issues that require consideration by Uganda and its citizens. First, is the need to make sure that the revenues obtained from these resources are managed in way that maximizes benefits to both present and future generations. Second, the country’s public finance system must be made robust enough so that the current generation does not squander the benefits accruing from oil revenues at the expense of future generations. Third, oil production activities must not be allowed to unnecessarily degrade the environment and hence, bequeath to future generations an ecosystem that is incapable of adequately supporting their development activities. All these three issues which concern intergenerational equity are the subject of this paper.

We argue that with a legal regime that guarantees the rule of law, strong independent institutions, transparency in government operations, prudent public finance management, and responsible environmental management practices, intergenerational equity is achievable. First, the government has to ensure efficiency in oil extraction by providing the economy with institutional arrangements that strengthen and guarantee the security of property rights and hence, encourage entrepreneurs to invest in the oil and gas industry. Second, public financial management systems need to be strengthened to ensure that any revenue leakages are blocked. In addition, all public expenditures should be made in line with the strategic development needs of the country, as stipulated in the National Development Plan (NDP). Third, the institutional capacity of the relevant bodies tasked with managing the oil and gas value chain should be enhanced. In particular, the National Environment Management Authority should be provided with the legal authority to perform its functions fully and effectively. However,

like all government agencies, these institutions should also be adequately constrained by the law so that those who serve in them cannot abuse their mandates and engage in behaviors (e.g., corruption) that inhibit efficient and equitable management of the oil and gas value chain.

**Key words:** growth, oil resources, intergenerational equity, oil and gas value chain, Uganda

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## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY</b>	<b>i</b>
<b>ACKNOWLEDGEMENTS</b>	<b>III</b>
<b>1. INTRODUCTION</b>	<b>1</b>
<b>2. OVERVIEW OF UGANDA’S OIL AND GAS SECTOR</b>	<b>3</b>
2.1 The Geographical Context of Uganda’s Oil Graben	4
2.2 Expectations Arising from Oil Exploration in Uganda	5
2.3 The Legal and Regulatory Framework	5
<b>3. METHODOLOGY</b>	<b>7</b>
<b>4. LITERATURE REVIEW</b>	<b>8</b>
4.1 Resource Management	8
4.2 Revenue Management	8
4.2.1 Sovereign Wealth Funds	10
4.2.2 The Resource Curse and Dutch Disease Effects	12
4.3 Environmental Management	13
<b>5. UGANDA’S READINESS</b>	<b>15</b>
5.1 Resource Management	15
5.1.1 Geological capacity for oil exploration and extraction	15
5.1.2 The principal agent problem	17
5.1.3 The National Oil Company	18
5.1.4 The National Oil Refinery	19
5.1.5 Transparency in procurement processes	21
5.1.6 Land rights and social equity	21
5.1.7 Adequacy of existing legislation on resource management	22
5.2 Revenue Management	25
5.2.1 Oil and gas revenue management policy	25
5.2.2 Public financial management	26
5.2.3 Transparency in oil activities	28
5.2.4 Fiscal policy management	28
5.2.5 Monetary policy management	28
5.2.6 Broaden the revenue base	29
5.2.7 Reducing foreign debt	29
5.2.8 The Petroleum Fund	30
5.2.9 Revenue expenditure options	30
5.2.10 Adequacy of the existing legislation on revenue management	35
5.4 Environmental Management	36
5.4.1 Impact on the environment	36
5.4.2 Impact on biodiversity	37
5.4.3 Institutional capacity for environmental protection	37
5.4.4 Adequacy of existing legislation on environmental management	40
<b>6. CONCLUSION</b>	<b>42</b>
<b>REFERENCES</b>	<b>44</b>
<b>APPENDICES</b>	<b>52</b>
<b>EPRC RESEARCH SERIES</b>	<b>53</b>

## 1. INTRODUCTION

It has been argued that discoveries of significant oil resources are usually associated with the various phenomena generally referred to as “natural resource curse” and “Dutch Disease” (see, e.g., Sachs and Warner 2001; Trevino 2011; Frynas 2004). The so-called Dutch Disease manifests itself through appreciation of the local currency, a process that effectively makes the nation’s exports relatively more expensive in the global marketplace. This can lead to an overdependence of the local economy on natural resource exports as the tradable sector continues to decline. Such export concentration and increasing poverty of people originally employed in the now declining tradable sector can create a lot of challenges for the government.

The natural resource curse refers to a situation in which, exploitation of newly-discovered natural resources does not lead to a reduction in poverty and improvements in human development, but instead, exacerbates poverty and negatively affects the people’s living standards. While Dutch Disease effects are usually considered the reasons for the increased poverty and economic stagnation that accompany the exploitation of natural resources, it is important to note that there are other reasons. These other variables may include, but are not limited to, the failure of the government to provide institutional arrangements that allow for efficient and equitable distribution of the benefits of the natural resources. For example, where existing laws and institutions do not adequately constrain the state, civil servants and politicians may use revenues accruing to the government from the exploitation of natural resources corruptly for their

own personal benefit and not for poverty alleviation efforts or to provide the necessary infrastructure (e.g., public health centers, farm-to-market roads, electricity, and schools) for the creation of wealth.

The various interest groups that are likely to compete for access to the revenues derived from the exploitation and sale of oil and gas include (i) foreign oil companies, which are the primary entities involved in extracting, refining, and selling the oil globally; (ii) high-level government officials, who control the management of the oil and gas value chain; and (iii) politicians, who govern the country and hence, may use their public offices to pursue their self-interests. The interaction between these groups, unless governed by appropriate laws and made fully open and transparent, could create significant problems for Uganda and its citizens. For one thing, unless the oil companies are forced by law to operate openly and in a transparent manner, it would be difficult for the GoU to make sure that the country receives its appropriate share of oil and gas royalties. Second, if the law does not adequately constrain them, high-ranking civil servants, as well as the country’s political elites, are likely to engage in corrupt deals to maximize their personal interests at the expense of their fellow citizens. Hence, the laws and institutions governing the management of the oil and gas value chain are quite critical in Uganda’s efforts to avoid and/or mitigate the resource curse.

This paper seeks to interrogate three major aspects of oil extraction and revenue management that relate to issues around

intergenerational equity in the Ugandan context. The first aspect concerns the management of the process of extracting the oil, refining it, transporting it to export markets, and dealing with the environmental problems associated with such activities; that is, managing the entire oil and gas value chain. The goal is to undertake these activities in such a way that benefits to both current and future generations of Ugandans are maximized. The second aspect concerns public financial management in Uganda. Where a country's public financial management system is open and transparent, there is a greater chance of achieving efficient and equitable allocation, as well as sustainability—that is, it is more likely that the government will be able to manage the revenues efficiently and in such a way as to provide for the present generation and still invest in enough capacity to enhance the ability of future generations to meet their own needs. The third aspect concerns maintaining the country's environmental health and minimizing any harm to the ecosystem from oil extraction activities. Efforts must also be made to restore the ecosystem in case of degradation.

We argue that with a legal regime that guarantees the rule of law, strong independent institutions, transparency in government operations and communication, prudent public financial management, and responsible environmental management practices, intergenerational equity is achievable. First, the GoU has to ensure efficiency in oil extraction by providing entrepreneurs with an incentive system that enhances investment in the oil and gas value chain. Second, the country's public financial management system needs to be strengthened to ensure that all revenue

leakages are blocked. In addition, all expenditures should be made in line with the strategic development needs of the country, as determined by an economic plan enacted by the country's legislature. Third, the institutional capacity of all entities associated with the management of the oil and gas chain should be enhanced. In particular, the National Environment Management Authority (NEMA) should be strengthened and provided the legal authority to perform its functions fully and efficiently. However, to make sure that those who serve in this critical agency do not engage in behaviors that interfere with the efficient management of the environment, they should be adequately constrained by the law.

The rest of the paper is structured as follows: Section 2 provides an overview of Uganda's oil and gas sector and the existing legal and regulatory framework for the sector. Section 3 presents the study approach and the methods used to achieve the objectives of the paper. Critical review of existing literature on inter-generational equity with respect to oil extraction, revenue management, and environmental management, is presented in Section 4. Section 5 discusses Uganda's readiness to accelerate economic growth and achieve inter-generational equity in the use of oil resources. Conclusions and policy recommendations are presented in Section 6.

## 2. OVERVIEW OF UGANDA'S OIL AND GAS SECTOR

The discovery of oil in Uganda dates back to the colonial period when John Wayland, a geologist, explored the Lake Albert area in 1919 (Kiiza et al. 2011). Nevertheless, Uganda's interest in oil exploration remained weak until 1986 when the Department of Petroleum Exploration in the then Ministry of Energy and Mineral Development took an active part in developing the oil sector. Initial lack of interest in the sector resulted in inadequate funding from the central government (Rubondo, September 2012).

The period from 1986 to 2006, when oil was finally discovered in the Albertine Graben, saw more efforts being devoted to the sector and these were focused mainly on attracting foreign oil exploration firms. In addition, the GoU stepped up its efforts to develop local human capital capable of effectively leading the country's efforts to search for commercially viable deposits of oil and gas. The first cohort of scientists was sent abroad for specialized training in oil and gas sciences between 1986 and 1987 (Kashambuzi and Mugisha 2003).

International interest in Uganda's oil potential was initially very low, owing to the lack of reliable data. As such, Uganda could not attract big oil exploration companies during the early years of exploration. Only relatively small and little-known oil exploration companies were initially interested in searching for oil and gas reserves in Uganda. The GoU licensed these companies to prospect for oil in specific geographic areas of the country. The first of these firms, Petrofina, was licensed to explore in the entire Albertine Graben. However, the exploration license expired before any

oil was found. That made it possible for the GoU to subdivide the exploration area into smaller units and reach out to more foreign explorers. By 2006, when commercially viable oil deposits were confirmed in the Albertine Graben, several foreign oil companies had participated in the search for oil in Uganda, including (i) Hardman Resources Ltd., (ii) Dominion Petroleum Ltd., (iii) Heritage Oil, (iv) Tullow Oil, (v) Neptune (Tower Resources), and (vi) Energy Africa.

Many of the oil companies that were involved in exploration at the early stages of the search for oil in Uganda were quite small and not particularly viable. Some of them were eventually taken-over by more robust ones. In 2004, for example, Tullow Oil bought the Ugandan licenses of Energy Africa, and in 2007 it acquired Hardman Resources. Then, in 2010, Tullow became the sole license holder in the areas where oil had been discovered, when it bought the interests of Heritage Oil.

Finally, in 2012, Tullow sold a third of its Ugandan interests to the Chinese National Oil Company and another third to the French company, Total, because Tullow lacked the field development experience and the investment capital to proceed alone in such an environmentally challenging area in a landlocked country. These three foreign oil companies are now proceeding to the oil production stage, as equal partners, with the agreement to share costs and profits equally. The decision to cooperate at this stage was based on the desire of the companies to pool their resources, minimize exposure to risk, and benefit from technological economies of scale.

## **2.1 The Geographical Context of Uganda's Oil Graben**

The oil discoveries in Uganda occurred in the expansive Albertine Rift Valley that spans the three districts of Hoima, Buliisa, and Amuru. These districts fall under two traditional kingdoms: Acholi (Amuru district) and Bunyoro (Hoima and Buliisa districts). Land ownership in the Albertine area is predominantly communal and users usually do not have access to long-term tenure rights.

The GoU believes that further oil discoveries are possible further North in the districts of Nwoya and Nebbi. The climate in the Albertine Rift is predominantly hot and arid, making it unattractive for rain-fed agriculture, although local farmers are known to plant a few drought resistant crops such as cotton. The greater part of the rift valley has been demarcated by the GoU as a wildlife reserve and therefore, is not available for regular use by the locals. The rest of the land is communally-owned and only a handful of households have freehold title to their lands.

The Banyoro are the predominant ethnic group, especially in areas above the Albertine Rift Valley where oil was discovered. The Bagungu occupy the areas closer and within the rift valley. The area is also home to the Alur who arrived across the Nile River many generations ago in search of opportunities to sell their labour services. Over the years, given their entrepreneurial skills and hardwork, the Alur have been able to gain greater control of the region's economy and today, constitute about 75 percent of the population around the rift valley.

Human settlements in the region are sparse due to the harsh environment. Fishing in Lake Albert, trading in fish and cattle grazing are the major economic activities in the Albertine region. Before the discovery of oil, access to the area was difficult due to the poor road infrastructure. Other social infrastructures were virtually non-existent. The evolving oil industry has helped boost infrastructural developments in the region, particularly roads, health and education facilities. Road construction has been led by the GoU in a bid to open up the area, not just for oil exploitation but also for other commercial activities associated with the management of the oil and gas value chain—hotels, restaurants, retail shops, commercial food stores, etc.

The construction of the 92-kilometer Hoima-Kaiso-Tonya road was on-going at the time of the research team's visit. Interventions in education, health, community development and livelihoods enhancement have resulted from the private oil companies' corporate social responsibility initiatives.

The Albertine rift has several fishing villages including Butiaba, Kyehoro and Wanseko, among others. The people in these villages have, for long, depended on Lake Albert for activities that provide them with the resources to meet their basic needs. They believe that the lake will continue to support their livelihoods perpetually. However, due to the adoption of poor and unsustainable fishing methods, the fish stocks in the lake are dwindling at an alarming rate, thus, threatening the survival of these communities. Many fishermen have abandoned fishing to take up opportunities on land.

## 2.2 Expectations Arising from Oil Exploration in Uganda

Uganda's oil sector remains in its infancy, with the first commercially viable prospects having been discovered only in 2006. Most activities in the sector are still at the exploration stage. Recent estimates show that the country's total oil assets, including oil deposits, amount to some \$75 billion (Choudhury *et al* 2012).

Oil discovery in Uganda has raised expectations for rapid human development, not just in the oil-rich areas of the country but also throughout all of Uganda. The hope is that the revenues generated from the exploitation of oil and gas will be used to confront poverty and provide the wherewithal for the significant improvement of levels of living, especially among historically marginalized groups, such as women, rural inhabitants, the urban poor, and religious and ethnic minorities. Specifically, oil revenues can help the GoU put the country on a path to sustainable development (GoU 2013). However, should these resources and the revenues generated from them be managed opportunistically (e.g., corruptly by a bureaucracy that is not adequately constrained by the law), Uganda will not be able to achieve the levels of human development that its citizens currently expect would be the dividend from the newly-discovered oil and gas reserves. Of course, poor management of the country's oil reserves can severely damage the environment and leave Ugandans, especially those who reside in the Albertine Graben worse off than they were before oil operations began. In fact, several civil society organizations are already pressuring the GoU to ensure best environmental management practices as the country embarks on the

development of its oil and gas reserves. But is the GoU paying attention to these pleadings from civil society? How the government deals with environmental and ecosystem issues associated with the exploitation of oil and gas will determine the extent to which the country can achieve intergenerational equity in the use of national oil and gas resources from the perspective of environmental health.

Uganda has the opportunity to learn and benefit from the experiences of other resource rich countries, some of which have used their natural resource wealth well and laid the foundation for development across generations, as well as from those which have managed their resources opportunistically and hence, have fallen into and have been trapped by the dreaded resource curse. If Uganda's oil reserves, currently estimated at about 3.5 billion barrels, are to be used to spur rapid economic growth and development, the country's laws and institutions must be strengthened so that they can adequately address all the various issues, such as corruption and public financial malfeasance, which are likely to be present with and accompany the exploitation of oil (Rubondo, September 2012).

## 2.3 The Legal and Regulatory Framework

In 1985, more than 20 years before the discovery of commercially viable oil reserves in Uganda, the Petroleum (Exploration and Production) Act was passed to regulate upstream oil exploration and extraction. In 2003, Uganda enacted a new Mining Act, which effectively repealed earlier legislation and provided legal guidance on all matters

related to mining and mineral development. The discovery of commercially viable oil reserves in Uganda necessitated the drafting of a new policy framework to guide the development of the sector. A National Oil and Gas Policy (NOGP), which was designed to position the sector in such a way that it can effectively contribute to poverty reduction and create lasting value to society, was approved by the GoU in 2008. Specifically, the policy seeks to ensure that oil resources are used to provide for intergenerational equity by creating lasting benefits to society—that is, by making certain that the Government of Uganda invests oil revenues in ways that create benefits for both present and future generations. This, it is envisaged, will be achieved through developing durable and competitive competencies through the prioritization of interventions in physical, human, financial and social capital accumulation that are useful beyond the life of the oil sector.

The 2008 NOGP required that an appropriate framework be put in place to aid the sustainable management of oil and gas revenues. This led to the development of the Oil and Gas Revenue Management Policy (OGRMP) 2012 that details how the anticipated revenues shall be managed and integrated into existing the Government of Uganda budgeting system, with a view to mitigating the overall impact of these revenues on the economy. The policy outlines how the anticipated revenues from the sale of the country's oil and gas reserves shall be managed and integrated into the existing government systems. In order to operationalise this policy, the 2012 Public Finance Management Bill (PFMB) was amended to include provisions for oil revenue management.

In order to enhance national participation in the oil and gas sector, the National Oil and Gas Policy (NOGP) proposed the creation of three separate institutions, namely, (a) the Directorate of Petroleum in the Ministry of Energy and Mineral Development, to provide monitoring and policy direction; (b) an independent regulatory body, the Petroleum Authority; and (c) a national oil company to manage the commercial aspects of petroleum activities on behalf of the state.

In February 2012, in order to operationalize the NOGP, the Government of Uganda tabled two bills in parliament. These are the Petroleum (Exploration, Development and Production Bill (2012) and the Petroleum (Refining, Gas Processing and Conversion, Transportation and Storage Bill (2012). These bills were passed into law in February 2013.

### 3. METHODOLOGY

This study builds on earlier research that has explored potential Dutch disease and resource curse effects of the oil sector in Uganda (see for example Bategeka and Matovu 2011; Wielbelt *et al* 2011). Such studies have employed dynamic general equilibrium models to assess the implications on growth and poverty reduction of the spending reallocation options arising out of oil revenues. A study by Kiiza *et al.* (2011) used *perception analysis* to examine the management of popular expectations arising out of oil discovery in Uganda.

The analysis in this paper is informed by studies of how windfall revenues are used to ensure sustainability and intergenerational equity with particular focus on resource revenue, and environmental management. The study then uses perception analysis to examine key stakeholder views on what could be done to ensure that Uganda's oil resources benefit the current as well as future generations. The analysis in this paper benefited from interviews of selected stakeholders, interactions with the communities in the oil-rich areas and their leaders at the village and district levels. In addition, the study considered views from (a) various agencies of the Ugandan government; and (b) members of the Diplomatic Corps resident in Uganda and whose governments are considered key players in the country's oil sector. Government of Uganda agencies and institutions whose views were examined as part of this study include (i) Ministry of Energy and Mineral Development; (ii) Ministry of Finance, Planning and Economic Development (MFPED); (iii) Auditor General's Office; (iv) Bank of Uganda; (vi) National Environment

Management Authority; and (vii) Parliament of the Republic of Uganda. In addition, the views of several of Uganda's "development partners" (i.e., countries, such as the United Kingdom and the European Union, as well as multilateral organizations, such as the World Bank, that have traditionally aided Uganda's poverty alleviation and development efforts) were also analysed.

## 4. LITERATURE REVIEW

The issue of “intergenerational equity” arises partly because of the nature of the resource at hand, which is finite in nature, and hence, is depletable, suggesting that, depending on how it is exploited, the benefits accruing from it could serve the current generations without providing for the needs of future generations (Solow 1986; Dasgupta and Mitra 1983; Hartwick 1977; Solow 1974; Hotelling 1931). The *intergenerational equity* concept, as it relates to the exploitation of natural resources, is closely related to that of *sustainability*, which states that exploitation of exhaustible natural resources should be undertaken in such a manner that maximizes the benefits for both present and future generations. Specifically, sustainability in the management of natural resources can be described as “the ability of an agro-ecological system to maintain productivity in the face of ‘natural’ and structural hazards, such as drought or farmer indebtedness” (Redclift 1986: 93). One can also view sustainability as the ability of a country to use existing resources to improve the welfare of the present generation and in doing so, does not compromise the ability of future generations to do similarly (Chapman and Barker, 1991). In the case of a natural resource boom sustainability entails the adoption of fiscal rules that can ensure optimal consumption that maximizes social welfare while at the same time ensuring that important development needs are prioritized. In Africa, São Tomé and Príncipe was the first country to adopt such fiscal rules (see, e.g., Segura 2006).

With respect to the analysis presented in this paper, intergenerational equity deals

with the efficiency and speed of resource extraction on the one hand (in this case, oil and gas), and use of the revenues accruing from them on the other. The concept is further extended to cover the possible damage to the environment arising from the exploitation of Uganda’s oil and gas reserves.

### 4.1 Resource Management

Natural resource management concerns actions undertaken to maximize, first, the amount of the resource that can be recovered, and second, the revenues that can be obtained from selling the recovered resource. Venables (2011) shows that a faster depletion of a resource, such as oil, results in less than proportional increases in output due to loss of recoverable reserves, perhaps because rapid exploitation reduces the capacity of the field. The debate on the necessary steps required to ensure that the harvesting of oil resources is maximized was started by, among others, Hotelling (1931). In his seminal paper on the economics of exhaustible resources, he sought to explore how welfare from oil discoveries can be maximized. He noted that the suddenness of an oil discovery and development can easily produce “wild rushes” that lead to immense wastefulness of the resource. He, therefore, suggested that this wastefulness could be avoided or minimized by the implementation of special public policies, which include fiscal and monetary policies.

The debate on mitigating the wastefulness due to rushed extraction was furthered by Collier and Venables (2008) who suggested that such losses can be minimized by controlling the

rate at which extraction rights are sold. This would in turn determine the rate at which natural assets are depleted. According to the Hotelling Rule, social returns are optimized when the depletion rate equals the world interest rate. However, for many developing countries, the world interest rate is less than the return on capital (Collier and Venables 2008), creating an incentive to extract natural resources, including oil, as quickly as possible. This creates challenges for these relatively poor countries as they struggle to absorb the revenues accruing to them from the sale of natural resources without causing distortions to their economies. It is for this reason that Collier and Venables (2008:16) suggest that the desirable extraction rate of a country's resources should be determined by "the absorption rate at which the marginal return on depletion equals the world interest rate." Using Collier and Venables' (2008) arguments as a point of departure, Muramira and Manyindo (2008) proposed that the Government of Uganda should demand that private oil companies engaged in oil exploration in Uganda should follow extraction paths that are consistent with expected government expenditures. This, they argue, would partly solve the absorptive capacity challenge.

Using a multiple real option approach, Aleksandrov and Espinoza (2011) studied the optimal extraction strategy in Brazil and the United Arab Emirates and showed that in theory, the value of a country's oil reserves is optimized if production decisions are based on oil prices. Governments often have to strike a balance between maximizing natural resource-related rents, attracting competent firms and maintaining incentives for such firms to exploit the resources in the wider

interests of the country. However, as noted by Collier and Venables (2008), governments usually do not have enough information about the available resource and the actions of the companies. Cramton (2007) suggests that a competitive bidding process is the best way to deal with the problem of asymmetric information and ensure that exploration and production rights go to competent companies that offer the most value to governments.

## **4.2 Revenue Management**

With regard to revenue management, policy makers face two dilemmas. The first has to do with the finite nature of such revenue streams; the challenge lies in determining how much revenue to spend now and how much to save and invest for future generations. This is the intergenerational equity concern. The second has to do with the fiscal rules to cushion the domestic economy from the sharp variations associated with resource prices.

The extent to which proceeds from natural resource exploitation can be used to ensure that the needs of the current and future generations are taken care of is critical in the debate about intergenerational equity. The debate embraces issues such as public finance management, the resource curse and Dutch disease considerations and the optimal expenditure options that would ensure intergenerational equity. Viewed from this angle, intergenerational equity is the ethical obligation of the current generation to use proceeds from the exploitation of an exhaustible natural resource in such a manner as to ensure that future generations also benefit from the revenues or other benefits accruing from the resource. It is derived from the permanent income hypothesis.

The argument has always hinged around identifying a constant consumption level that would be maintained through the generations (Solow 1986). Proponents of this concept, such as Hartwick (1978), have suggested the adoption of an investment policy that would make sure that rents from an exhaustible resource are invested in productive assets and technological innovations.

One debate concerns whether such productive assets should be domestic or foreign. Van der Ploeg and Venables (2011) argue that the choice between domestic and foreign assets should be guided by the development needs that prevail in low-income and capital-scarce countries such as Uganda. What is appropriate for a high-income and capital-abundant country is unlikely to be appropriate for a country with low income, scarcity of capital, and a limited tax base, such as Uganda. Therefore, developing countries should prioritize and make well-informed tradeoffs between capital accumulation, debt reduction and increased consumption (Van der Ploeg and Venables 2011).

Collier (2011) also emphasizes this point—he argued that Uganda, being a developing country with huge infrastructural and human capital deficits, should invest in infrastructure and skills development that would unlock the productive potential of the economy. In addition, the country should establish a special fund that can be used to smooth spending over time.

In addition, small economies such as Uganda, have the option of substantially increasing domestic investment, a process that significantly improves economic growth

and wealth creation and hence, reduces the country's dependence on foreign aid. This is consistent with Van der Ploeg and Venables' (2011) assertion that domestic spending to stimulate private sector investments is desirable. Such investments include human capital skills enhancement, energy development, and the construction of transport infrastructure.

Some scholars have argued, however, that countries such as Uganda should utilize their oil revenues to create a Sovereign Wealth Fund so that any increased consumption is supported by interest earnings accumulated from foreign assets. In addition, macroeconomists such as Fasano (2000), have argued that the spending of oil revenues without restrictions or fiscal rules will likely result in distortions because oil resources are usually volatile and unpredictable in their price and volume.

#### **4.2.1 Sovereign Wealth Funds**

Sovereign wealth funds (SWFs) have been in use since the mid-1950s and have become increasingly popular as a way to help resource-dependent countries deal with the uncertainties created by unpredictable movements in international commodity prices, including, of course, oil. SWFs can serve as a mechanism to accumulate funds for future generations. In 1956, the Pacific island of Kiribati, for example, established a revenue equalization fund as a trust for future generations in anticipation of depletion of its phosphate deposits (Fasano 2000). Many resource exporting countries and states such as Kuwait (1960), Alaska (1976), Chile (1985), Norway (1990), Colombia (1993), Nigeria (1995), Venezuela (1998), among others,

have set up funds dedicated to specific national needs, both in the present and the future. Even resource poor countries such as Singapore, Hong Kong SAR and Estonia, have established reserve funds financed by budgetary surpluses and other public savings (Fasano 2000).

Until recently, sovereign wealth funds have been used primarily for fiscal policy purposes, particularly to enhance expenditure smoothing. The motives for setting up such funds have been varied, depending on the strategic objectives of each country. Norway, for example, set up a state petroleum fund in anticipation of increasing pension outlays and a decline in oil output. Norwegian policy makers also expected that the fund would deal with the pertinent issue of intergenerational equity, as well as allow the country to strengthen demand management and maintain economic competitiveness (Fasano 2000).

There is a growing empirical literature on the applicability of sovereign funds for macroeconomic management. For example, Shabsign and Ilahi (2007) used panel econometric methods to estimate the macroeconomic effects of oil funds in 15 countries. They showed that oil funds are associated with reduced volatility of broad money, prices and lower inflation. However, the relationship between the presence of an oil fund and volatility of the real exchange rate was statistically weak and negative. Mitchell *et al.* (2008) reviewed previous studies on ways to better secure prudent and economically sound public fund management practices. First, they suggested that the funds achieve different outcomes largely depending on the country specific strategic

objectives and characteristics. Second, they showed that the success of such funds in meeting their intended objectives is hugely dependent on strong fiscal discipline, sound macroeconomic management, and a strong institutional set up that ensures transparency and accountability in government operations and communication.

The success of sovereign wealth funds as a strategic policy tool, depends in part, on prudent fiscal, as well as, macroeconomic policies. For instance, Larsen (2005) explains that Norway's success was premised on, first, strict expenditure rules on the petroleum fund, limiting withdrawals to only 4 percent of the fund's investment returns; second, ensuring the long term survival of domestic industry through a number of targeted subsidies, transfers and tariffs; and third, investing heavily in skills enhancement and education and implementing relevant labour market reforms, including wage controls.

Likewise, authorities in Botswana developed a set of rules that ensured fiscal sustainability in anticipation of a future without diamond exports (Kojo 2010). In particular, the introduction of a sustainable budget index ensured that resource revenues were spent productively and not just for consumption. In addition, a number of caps were placed on government expenditure, total domestic debt and the stock of foreign debt. Despite the documented success of sovereign funds in Botswana and Norway, however, many researchers (e.g., Collier *et al* 2009) have expressed reservations about their general applicability to developing countries. They argue that policy rules, which are rooted in the permanent income hypothesis, and thus favour investments in sovereign wealth funds,

are not appropriate for developing countries. The reasoning is that low-income countries are usually capital-scarce economies with glaring infrastructural deficits and thus domestic investments generate higher returns compared to investments abroad.

#### 4.2.2 The Resource Curse and Dutch Disease Effects

The resource curse debate that started in the late 1980s has, over the years, attracted much interest among scholars, researchers and policy makers alike. There is a voluminous literature on the causes and effects of the curse. The debate was fuelled by the observation that *resource-rich* countries tend to record lower growth patterns compared to relatively *resource-poor* countries. Earlier research had pointed to a crowding-out effect that affects the growth of such resource-abundant countries. Sachs and Warner (2001), building on the work of Auty (1990) and Gelb (1988), showed that resource-rich countries, indeed, tend to grow slowly, even when geographical and climate biases are corrected for. They posit that such observations could be due to the crowding-out effect of the tradable goods sectors. This follows a similar finding that natural resource-abundant economies tend to have high price and wage levels akin to the Dutch Disease effects that will be discussed later in this paper.

The crowding out argument was furthered by Papyrakis and Gerlagh (2004) who show that natural resource abundance crowds out innovation and entrepreneurial ability.. This is due to the resource movement effect, whereby high wages in the booming resource sector discourage innovation in the non-

resource sectors. Moreover, natural resource rents can encourage corruption and rent-seeking behaviour at the expense of pro-growth activities.

The extent to which resource booms encourage corruption is influenced in no small measure by the quality of institutions in a country and political-economy dynamics. Low quality institutions, as demonstrated by Robinson *et al* (2006) encourage non-productive policy choices (that is, policies that inhibit the engagement of entrepreneurs in productive activities) by allowing politicians to plunder and engage in inefficient transfers of resources for purposes of buying votes and tightening their grip on power. Arguing along similar lines, Mehlum *et al.* (2006) conclude that the quality of institutions determines whether countries avoid the resource curse or not.

Studies of the effects of the natural resource curse and the Dutch Disease on African economies have often featured Nigeria as a country that has suffered greatly from both effects. The latter include de-industrialization (Olusi and Olagunju 2005); decline in agricultural production (Ammani 2011); and a deterioration of institutions that has led to massive plundering of public resources by civil servants and political elites (Sala-i-Martin and Subramanian 2003).

However, not all resource-abundant countries have succumbed to these adverse effects. At the global level, Norway is usually pointed out as an example of a country that has successfully harnessed its natural resource wealth for development and intergenerational equity (Larsen 2005). In Africa, Botswana has done relatively well in utilizing its mineral

wealth to put the country on a path to sustainable economic growth and human development. Botswana was able to achieve such success because of its relatively robust institutions and sound macroeconomic policy choices—the latter include the maintenance of significant foreign reserves (Kojo 2010). In addition, the Government of Botswana (GoB) successfully resisted the temptation to indulge in conspicuous and wasteful consumption. Instead, the GoB invested heavily in human capital accumulation and made certain that all mining ventures were undertaken in collaboration with the private sector.

In Uganda, studies that have explored the potential impact of oil on the economy, have largely concentrated on the Dutch Disease. Bategeka and Matovu (2011) used a dynamic computable general equilibrium model to investigate how different targeted spending options would affect the competitiveness of traded goods in Uganda. They showed that oil revenue expenditure on non-productive activities could indeed hurt the economy. Specifically, they determined that real exchange rate appreciation could result in the crowding out of traditional exports. On the other hand, infrastructural investments could lead to higher economic growth, provided public policy is directed at addressing binding constraints in the productive sectors. At the macro level, they argue that monetary policy would have to consider the possibility of holding down the exchange rate through build up of foreign reserves in order to avoid macroeconomic distortions.

Kiiza et al. (2011), using a perception analysis, examined the options available for the Government of Uganda to manage popular

expectations arising out of the discovery of oil. They argue that a culture of equitable or shared growth needs to be developed. For this to be achieved, they call for the building of new institutions, as well as developing regulatory capacity for the oil and gas sector in Uganda.

### 4.3 Environmental Management

Environmental sustainability has been at the forefront of intergenerational equity debates in the use of exhaustible resources for many years. Such debates have considered intergenerational equity as an ethical obligation imposed on the present generation to conserve environmental diversity, quality, access and utility (D'Amato 1990; Weitzman 1998). However, these debates have been riddled with controversy. Some scholars, such as D'Amato (1990), have suggested that the current generation does not have a moral obligation to conserve the environment for future generations because the latter do not exist yet. Moreover, these scholars argue that decisions taken today could adversely affect both the composition and the possible existence of future generations.

The popular view, however, is that the current generation does, indeed, have a moral obligation to preserve the environment and to ensure that actions taken today, do not alter, in an adverse way, the discounted value of environmental benefits (Buchanan 2011; Chaudhury *et al* 2012; Muramira and Manyindo 2008; Ruhanga *et al* 2009). In particular, Buchanan (2011) argues that it is possible for the current generations to ensure that benefits from the exploitation of natural resources can benefit future generations.

It is therefore prudent to conclude that the current generation has an obligation to use natural resources in such a manner as to conserve the environment and biodiversity, especially in resource-abundant regions. Uganda's oil resources are located in one of the most environmentally sensitive and ecologically fragile regions of the country. Therefore, oil and gas exploitation may disturb the habitat and ecology of both flora and fauna (Kityo 2011). The region's biodiversity could be negatively impacted, as could the livelihoods of the various groups of people that inhabit the area.

To deal with the environmental challenges associated with natural resource extraction, Choudhury *et al* (2012) recommended stronger mitigation and planning to deal with any possible environmental and ecosystem degradation. They also call for the creation of environmental safeguards and this should start by institutional reforms to transform current legal and judicial frameworks to provide incentive structures that would encourage and if necessary, force companies to conform to best industry practices. Ruhanga *et al* (2009) also call for measures to minimise environmental and ecosystem damage. Such measures include creating new wildlife corridors, restocking the protected areas that have suffered fauna and flora loss, and demarcating preservation zones. This, they say, could result in zero biodiversity loss. Beyond biodiversity, oil production could result in other disastrous consequences for the physical environment. One of the environmental challenges that is concurrent with or accompanies oil production is the handling, treatment and disposal of environmental waste. Unregulated waste management could result in the loss of

(i) scarce productive agricultural land; (ii) breeding areas for fish and other aquatic life; and (iii) even human life. Moreover, there is always the possibility of a catastrophic accident, for example, a major oil spill or a "blowout" that leads to uncontrolled fire. Unfortunately, a waste disposal plan for Uganda's oil sector does not yet exist. Choudhury *et al* (2012) have proposed that a plan to manage all oil and gas-related waste should be developed and widely circulated among citizens so that civil society organizations can monitor oil companies to make sure that the latter undertake appropriate cleaning activities. Choudhury *et al* (2012) also point to other concerns that need to be prioritized, including emergency response plans for oil spills or other accidents.

## 5. UGANDA'S READINESS

In this section, we assess Uganda's readiness to manage its oil and gas resources in a manner that will accelerate economic growth while at the same time, taking into consideration, the needs of current and future generations. Earlier, we had pointed out that our assessment of intergenerational equity in the use of oil resources entails three dimensions: (i) resource management; (ii) revenue management; and (iii) environmental management. The section on resource management looks at Uganda's capacity to efficiently extract its oil and use the revenues generated to benefit both current and future generations. The section on revenue management examines several issues, including, (i) Uganda's current public financial management system and its ability to efficiently and equitably manage the country's oil-related revenues; (ii) the capacity of the GoU to make the right choices in terms of allocating oil revenues between (a) savings for investment, and (b) spending; (iii) Uganda's Public Finance Management Bill (PFMB), which provides for the creation of an offshore petroleum fund, a petroleum authority, and a national oil company; and (iv) government capacity to allocate resources efficiently to increase productivity across all non-oil sectors.

The section on environmental management assesses the capacity of the National Environment Management Authority (NEMA) to regulate the activities of oil companies with a view to ensuring continued environmental health, which has a large bearing on peoples' livelihoods, wildlife, and aquatic life, especially in Lake Albert. Poor environmental management could affect other economic

activities, including tourism, fishing, and farming, all of which are of high significance to the Ugandan economy.

### 5.1 Resource Management

#### 5.1.1 Geological capacity for oil exploration and extraction

Exploration activities, so far covering an estimated 40 percent of the explorable areas in the Albertine Graben region, had, by September 2012, led to the discovery of about 3.5 billion barrels of crude oil deposits. However, only a proportion of the reported oil reserves can be profitably recovered. Depending on the technology employed, recovery rates can range between 5 percent and 60 percent of oil reserves. In Uganda's case, recoverable oil is estimated at 30 percent (Rubondo, September 2012).

Therefore, as Uganda continues to search for more oil deposits and make arrangements to begin commercial production, the overarching goal for the Government of Uganda is to provide incentives, which ensure that the greatest possible amount of the resource is recovered. Oil companies ordinarily work with a view to maximizing profit and, as such, they may not be willing to employ state of the art technologies that can maximize oil recovery and do so without unnecessarily damaging the environment. Firms may shy away from using such technologies in order to minimize their production costs and increase profits. The Government of Uganda needs to develop the capacity to regulate the operations of each company and make sure that they are being undertaken in the interests of the

country and the communities where the oil is located. While it is important that the GoU not interfere with each company's ability to operate profitably, the GoU, however, must not allow the companies to engage in activities (e.g., pollution) that damage the welfare of Ugandans.

Fortunately, Uganda started building capacity to monitor and effectively manage an oil-based economy long before oil was actually discovered in the Albertine Graben region. The GoU started sending citizens overseas for training in the various disciplines (e.g., economics, geology, environmental sciences, chemical engineering, management, law, finance, etc.) associated with exploring, exploiting and generally managing the oil and gas chain as far back as 1986 (Kashambuzi and Mugisha 2003). Over time, a significant number of Ugandans have been trained in the management of the oil and gas value chain. However, the capacity developed is primarily in oil exploration. On the other hand, the country needs to develop the necessary capacity to allow it to effectively regulate all aspects of an oil-based economy. Specifically, the GoU has to place itself in a position to make sure that the country's benefits from its oil and gas resources are maximized and the costs minimized. That objective can only be achieved if the country successfully develops enough capacity to negotiate effectively with the various private firms that are engaged in the oil and gas sector and is also able to enforce the various laws that regulate the industry. Although the Ministry of Energy and Mineral Development (MoEMD) reported that Uganda has embarked on capacity building for the management of its oil and gas sector, MoEMD officials, however, have not yet released any information on the number

of Ugandans trained in the various aspects of oil and gas management and subsequently retained by the Government.

Like other African countries that send citizens to foreign universities for training, Uganda is struggling with finding ways to make certain that (1) all trainees return home after completing their studies; and (2) take jobs with the government. At the moment, several of the individuals sent abroad for training have opted to take jobs with private companies either in Uganda or abroad, further exacerbating the human resource capacity dilemma for the Government of Uganda generally and the country's oil and gas sector, particularly.

The skills required in the management of the oil and gas value chain range from exploring to determine the location of commercially viable oil reserves, contracting for exploitation, refining the extracted oil and preparing it for transportation to export markets, and designing mechanisms to protect the environment and the ecosystem to efficiently and equitably allocating the revenues accruing to the government from all these activities. It remains unclear whether Uganda has developed sufficient capacity to regulate and/or manage the oil and gas sector in such a way as to maximize benefits accruing to the country and minimize costs, including environmental and ecosystem degradation.

The good news, of course, is that geologists in the Department of Petroleum Exploration of the MoEMD are very optimistic that the country is on the right track as far as petroleum exploration is concerned. They contend that the early phase of exploration was more of

a learning experience but that they have since acquired significant levels of capacity as regards the management of the oil sector. When Uganda discovered oil in 2006, the GoU placed a moratorium on further explorations by instructing its various departments not to issue any further exploration licenses. The Government of Uganda initiated this policy in order to consult with experts, carefully study the industry, and place the country in a position to extract maximum benefits from its oil and gas resources.

### **5.1.2 The principal agent problem**

Uganda, like any other country, wants to maximize the rents that it receives from the exploitation of its natural resources. Of course, Uganda, like many countries in Africa, does not have the capacity to carry out the various activities that are associated with exploiting oil, refining it, preparing the refined petroleum and exporting it to markets for sale. Hence, the GoU is compelled to contract with multinational oil companies, which have the appropriate expertise and are willing to risk the resources needed to carry out the necessary tasks.

In the management of the oil and gas value chain, the multinational oil companies (here, the “agent”) engaged by Uganda have more information about the industry than the Government of Uganda (the “principal”). This creates an agent-principal problem, which economists have described as a situation in which the agent pursues his own interests rather than those of the principal who hired the agent. In the management of natural resources, including oil and gas, this problem starts quite early, as early as during the negotiations leading to the signing of

the Production Sharing Agreements (PSAs). This is due, of course, to the fact that the oil companies have an information advantage and hence are able to craft PSAs that benefit them significantly but place the country on a severe disadvantage. For example, during the PSA negotiation, one of the most important issues to be discussed is “ecosystem restoration.” Oil production activities are likely to have a significantly negative impact on the surrounding ecosystem, requiring that it be restored after operations have ceased. Oil companies, which have global experience in oil production, will be able to more accurately determine the costs of such restoration, at least, much more so than the government of a developing country such as Uganda. The oil company can use such an information advantage to craft a PSA that seriously disadvantages the people of Uganda. A suggested way to minimize this opportunism by the agent is for the GoU to sell the “extractive rights” through a competitive auction (Collier and Vanables 2008). Such a competitive process would help the Ugandan government maximize national benefits and minimize the costs associated with oil exploitation, much more so than the present approach, which involves the GoU negotiating individual contracts with each oil company.

Oil companies, as private, profit-maximizing (or cost-minimizing) entities, do not have any incentive to voluntarily turn over critical information about oil operations, especially that which the companies have accumulated through significant expenditures, to national governments. In fact, companies are known to either intentionally conceal critical information about their activities from regulators or distort the information that they

provide the latter. For example, an Ernest and Young audit of Heritage Oil's exploration activities in Uganda found that Heritage Oil had inflated its recoverable expenditures by close to U.S. \$600,000 to include Corporate Social Responsibility (CSR) spending as recoverable (Platform 2010).

Many governments, especially those which, like the Government of Uganda, do not have the capacity to adequately monitor the activities the multinational companies operating within their borders, may not be able to accurately determine the true costs associated with each aspect of oil production and sale. Without accurate information, the government is not likely to negotiate an optimal royalty and tax rate. The Government of Uganda wants to maximize revenues flowing to the country from the exploitation of national oil and gas reserves, minimize the costs imposed on the country by these operations, enhance the ability of citizens to participate in and benefit from this emerging sector, while at the same time, creating an environment that would encourage and enhance private firms to invest in the sector.

An open and transparent auction process should safeguard against the agency problem, and leave little opportunity for the corruption that arises in individual negotiations (Cramton 2007). Auctions also improve efficiency by generally assigning exploration blocks to those firms best able to use them. A company with the highest value estimated for the blocks is more likely to offer higher bids, and therefore would be more likely to win the exploration rights. Note that the individual negotiation process has at least two major problems—one, the company has an information advantage, which it can

use to craft a contract that disadvantages the country; and two, government officials negotiating with the company are likely to be “captured” by the latter and hence, enticed to engage in corrupt activities. Such a corruption-infested process would not augur well for the country.

### **5.1.3 The National Oil Company**

The 2008 National Oil and Gas Policy (NOGP) for Uganda provides for the establishment of a national oil company that will be responsible for managing and looking out for the State's interests in the oil and gas industry. To this effect, the Petroleum (Exploration, Development and Production) Bill 2012 “Petroleum Development Bill”, Section 43 (1) was drafted to, among other things, provide for the creation of a National Oil Company (NOC). However, the Petroleum Development Bill is not explicit on issues of ownership of the NOC—whether it will be owned by the state or by the private sector. There are two variants to the National Oil Company model that Uganda could adopt. On the one hand, a NOC could be granted monopoly power, while on the other hand, it could be allowed to operate alongside and compete with, private entities. The state monopoly is preferred where there are overwhelming challenges to face in the design of an effective royalty tax regime.

A NOC can be fully operational or nonoperational. In effect, operational NOCs conduct actual extraction activities and manage their own revenues whilst non operational NOCs do not. The choice of type of NOC depends on local capacity and the goals for which it was formed. In practice, however, NOCs may evolve from non-

operational to fully operational companies.

International experiences indicate that NOCs have tended to succeed in countries with zero tolerance for corruption; that is, in countries whose institutional arrangements guarantee the rule of law and government operations and communication are characterized by transparency and accountability. National oil companies have succeeded in countries such as Norway and Ghana partly because of these countries' adherence to the Extractive Industries Transparency Initiative (see, e.g., Ghana Extractive Industries Transparency Initiative (GHEITI) at <http://www.geiti.gov.gh/site/>). In addition, governance generally in Ghana has improved significantly during the last several decades, including especially the country's ability to control corruption. Of course, Norway is considered one of the world's least corrupt countries. These countries have put in place checks and balances to ensure that the public's interests, especially when it comes to the management of natural resources, including gas and oil, are not abused or subverted.

Of course, in some countries, especially those which do not have institutional arrangements that guarantee the rule of law—that is, existing laws and institutions do not adequately constrain civil servants and political elites and hence, they are able to act with impunity—NOCs usually have many challenges. A national oil company, in existence in a country whose institutional arrangements do not guarantee the rule of law, could easily be mismanaged and the resources entrusted to it plundered for the benefit of corrupt civil servants and political elites. For example, in Angola, billions of dollars entrusted to the country's national

oil company were allegedly swindled by unscrupulous and opportunistic managers (IMF 2011).

Given Uganda's poor record with public financial management and its inability or unwillingness to deal effectively with bureaucratic corruption, there is no guarantee that a NOC, whether public or private, will operate efficiently and perform its assigned duties without its officials engaging in corrupt deals. Moreover, the move to have a private entity manage Uganda's oil resources might limit the oversight roles of institutions such as the Parliament of Uganda in the affairs of the NOC and this is likely to result in various abuses, including especially the possible embezzlement of the country's oil revenues (Legal and Policy Review 2012).

For a country like Uganda, with very limited local capacity and little experience in the management of large and complex oil and gas activities, we recommend that government consider the establishment of a national oil company initially for commercial and not operational purposes. Such an arrangement should be under the Public Private Partnership (PPP) framework, where the GoU is granted an ownership share, but not management duties. This is important in order to make the NOC accountable to the various government oversight committees and to minimize the possibilities of corruption and abuse.

#### 5.1.4 The National Oil Refinery

Following recommendations from the Uganda National Oil and Gas Policy for Uganda (2008) that emphasized the need for value addition in the oil and gas sector, the Government of Uganda decided to set

up a refinery that can be used to process the country's crude oil and add some value before it is sold. Plans for setting up the refinery are now in their final stages. The regulatory framework for the establishment and operation of the refinery is contained in the Petroleum (Refining, Gas Processing and Conversion, Transportation and Storage) Bill 2012 ("Petroleum Conversion Bill") that was passed by parliament in February 2013. To ensure that the right decision is arrived at, the GoU commissioned a feasibility study for the development of a refinery in the country. That study also evaluated the commercial viability of a pipeline that would help export crude oil as an alternative to the refinery.

Because of the waxy nature of the crude oil and its high pour point, results favoured the development of a refinery in the country as a more viable option than an export pipeline. In addition to the fact that the waxy properties of the crude oil would pose serious problems for transporting it through pipelines, the construction of a pipeline requires large capital investment. More importantly, the rate of return for a refinery, at 30 percent, is expected to be far higher than that of a pipeline which is estimated at 5 percent (Rubondo, September 2012).

Subsequently, the Government of Uganda finalised production contracts with Tullow Oil, a London based oil exploration and development company, that has hitherto been the major player in Uganda's oil and gas industry. These deals paved the way for investments in a refinery and crude oil export pipeline that could cost in excess of \$2 billion (see BBC news 2012).. The refinery is expected to not only lessen the bill for petroleum products imported into Uganda, but would

also serve the needs of regional markets, particularly in Democratic Republic of Congo, Rwanda, Burundi and South Sudan. Initially, the capacity of the refinery is expected to be 20,000 barrels per day, expanding over the years to reach a capacity of 120,000 barrels per day.

The development of a refinery in Uganda presents significant opportunities for the people of Uganda. First, oil production is an enclave activity, with minimal linkages with the rest of the economy. This implies that the oil industry alone on its part can only provide a handful of employment prospects. Jobs, however, can be created in other secondary industries that would benefit from the by-products of oil refining. Such industries include the petrochemical industry that could result in a number of products, from plastics and packaging materials to fertilizer production. Fertilizer production in particular would be a major gain that would help agricultural productivity and so work against 'Dutch disease' impacts on farming. Second, even taking into consideration regional advances in oil exploration and development, Uganda still has an advantage in positioning itself as a regional distribution hub for Rwanda, Burundi, Eastern Congo and South Sudan. In addition, Uganda's refinery would reduce the huge import bill for oil products and also reduce the long-standing dependency on the Kenyan port of Mombasa. Such dependency has, in the past, resulted in undesirable supply disruptions with severe consequences for the entire Ugandan economy.

The development of a petrochemical industry, which is expected to be a by-product of the oil refinery, will doubtless bring greater diversification and industrialization to the

Ugandan economy. However, the GoU must be mindful of the environmental implications of such industries. Therefore, capacity must be built for the National Environmental Management Authority (NEMA) so that it can efficiently and effectively monitor oil industry pollution and force all polluters internalize all their production-related activities, including pollution.

#### **5.1.5 Transparency in procurement processes**

Corruption is one of the most important constraints or obstacles to efficient allocation of natural resources generally and improvements in human development in particular. In Uganda, corruption in public procurement has been identified as one of the most important risks in the exploration and development of the country's oil resources (Kiiza, September 2012). Estimates indicate that the country loses well over 300 billion Ugandan shillings in procurement-related corruption (Global Witness 2010). Despite the fact that Uganda has been independent since 1962, it is still yet to provide itself with a set of institutional arrangements that are capable of effectively dealing with corruption and other forms of political opportunism (e.g., rent seeking). In fact, corruption-related scandals are rampant throughout the country as many civil servants and political elites continue to act with impunity. The Global Integrity Report (2011:36) has made the following observations about corruption in Uganda:

Oversight institutions exist, but they operate under considerable restrictions. The executive branch greatly inhibits their independence and often ignores or only

partially implements the recommendations in their reports. Oversight institutions, such as the Inspectorate of Government and the Office of the Auditor General, lack adequate staff to carry out their mandates.

The Government of Uganda, through the NOGP, has pledged to promote high standards of transparency and accountability in all public operations and communication. For example, public procurement in the oil and gas sector is to be undertaken only in accordance with procedures prescribed by the Public Procurement and Disposal of Public Assets (PPDA) Act, 2003 and any other relevant laws in Uganda. To this effect section 53 (4) of the Petroleum Development Act mandates that the bidding process be carried out in accordance with the PPDA regulations. Yet, section 54 of the same Act gives circumstances under which the minister may receive direct applications for an exploration licenses. Such "exceptional" circumstances include, among others (a) applications in respect of areas that are adjacent to an existing licensed reservoir; and (b) promotion of the national interest. We feel that these are significant loopholes in the law that may be abused, especially if civil servants and political elites are not well-constrained by the law, as they currently are in Uganda.

#### **5.1.6 Land rights and social equity**

Earlier researchers (e.g., Uganda Land Alliance 2011) have reported clashes arising out of a speculative rush and competition to control land that has the potential to harbour oil underneath. While these researchers assert that the motive behind the land speculation was a desire to benefit from the compensation that was expected to be paid by the GoU

and oil companies for damage done to the land as a result of oil-mining activities, there has not been any independent validation of these claims. Community discussions have revealed that the major clashes over land rights have nothing to do with oil discovery, but are due to long-standing or historical conflicts between the indigenous Bagungu and the nomadic Balalo over the control of grazing areas, the latter having arrived in the area while looking for healthier pastures. The inward migration of the Balalo, thus, created pressure on the common grazing areas resulting in conflicts. These arguments are consistent with research findings by Nkote (2008), Rugadya (2009), Bomuhangi and Doss (2012).

The communal land tenure system in the area does not confer perpetual land rights on the current users or possessors of the land. Therefore, the discovery of oil only exacerbated an already existing problem, whereby former “land lords” returned with the intention of respossessing the land, and hence, the conflict. The Bunyoro Kingdom has also laid claim to chunks of land in the Albertine rift valley, claiming that it was the Omukama’s (King’s) hunting ground. Such claims have been the basis for the Kingdom’s demand for a share of the oil revenues.

In addition to conflicts over land rights, there are concerns about the fairness of the compensation to be paid to individuals and households who are likely to be displaced due to the construction and operation of the oil refinery. The people of Kabale Sub-County are aware of the Government of Uganda’s plans to construct a refinery in their area and have expressed their concerns about what they believe are unfair compensation

practices by the authorities. For example, Isingoma (February, 2013), the Kabale Local Council I leader explains thus:

Very few people in my village have land titles. While Government is committed to compensate us for the land that will be taken up by the refinery project, we feel that the compensation plan is not fair. First, the Government surveyors seem to have documented less land surveyed than we expect, second, the financial compensation is not commensurate with what is required to take us through the transitional phase.

Moreover, the Kabale communities feel that oil exploration and development activities on their lands are carried out in a mode of high secrecy. The various peoples who are most likely to be affected by the oil refinery have not been provided the facilities by the government to participate fully and effectively in the decisions leading to the location of the refinery in their community. For example, residents of Buliisa and Butiaba claim that sometimes, especially at night, they see trucks carrying away unidentified materials from the exploration and drilling sites. This kind of secrecy and limited access to information with regard to the nascent oil industry makes them feel that they will possibly not fully benefit from the oil industry.

### **5.1.7 Adequacy of existing legislation on resource management**

The legal frameworks that regulate oil activities in Uganda are enshrined in two legislative acts. These are the Petroleum (Exploration, Development and Production) Act 2012 and the Petroleum (Refining, Gas Processing, Conversion, Transportation and

Storage) Act 2012. These two laws have been enacted to operationalise the National Oil and Gas Policy, 2008. However, below are some of the areas where the laws need improvement so that they can more effectively respond to the current and future needs of the oil and gas industry in Uganda.

(i) Policy predictability

The two legislative acts do not provide guidance as to how various discretionary powers will be exercised so as to give confidence and certainty to investors and other industry players. The private sector usually requires assurances of policy predictability before any long-term and sometimes, irreversible commitments can be made. Moreover, proper guidance and predictability significantly improve the efficiency of public agencies and their ability to provide services to the private sector. For example, Section 6 of the Petroleum (Exploration, Development and Production) Act, 2012 gives the minister significant discretion in decision-making. Throughout the bill, one can find expressions that speak to the minister's significant discretionary powers. For example, Section 59(1) empowers the minister to grant an exploration license on "such conditions as he or she may determine." Such clauses do not provide effective guidance and may be susceptible to abuse. In practice, the law should at least specify the minimum criteria against which the minister may exercise his or her powers.

(ii) Improving checks and balances

The Petroleum (Exploration, Development and Production) law fails to establish provisions to ensure checks and balances in the exercise of the decision-making powers conferred on the minister and other public

entities. Section 11 (2) lists the functions of the Petroleum Authority (PA), for example, in section 11 (2) (e), "the Authority shall advise the Minister in the negotiation of petroleum agreements and in the granting and revocation of licenses." In carrying out its functions, the PA is expected to be independent (section 15), yet it is also required to comply with directives from the minister (Section 14). Considering that the minister is a presidential political appointee, the PA may not be able to function independently; that is, without executive interference.

(iii) Separation of powers

In order to improve transparency and accountability, the functions of licensing, monitoring and enforcement must be structurally separated. For example, an entity that grants a license may find it difficult to revoke it at a later date, for fear of implying error in its initial judgment. For this reason, the duties of licensing, monitoring and enforcement must be carried out by totally different entities that are legally granted independence. These provisions are lacking in the present law.

(iv) Improving transparency

Section 33 of the Petroleum (Exploration, Development and Production) law imposes on the Petroleum Authority's board members and former board members a duty not to disclose information. This section neither encourages nor protects whistle blowers. Section 148 allows the minister to make information available to the public, but there is no legal requirement for this to occur. Moreover, section 149 creates a blanket requirement for confidentiality of all data submitted to the minister by a licensee. In effect, there is little scope for the public to

compel the minister to release information that can help them understand how their resources are being allocated. In order for the government to adequately evaluate the performance of licensees and, for the public to determine how well the government is monitoring the operations of licensees, both the government and the public must be provided necessary information—the government, information about each licensee and its operations, and the public, information about government regulatory activities.

(v) Promoting social equity

The Oil (Exploration, Development and Production) law 2012 reiterates that in accordance with article 244 of the Constitution, the entire property in, and the control of, petroleum in its natural condition in, on or under any land or waters in Uganda is vested in the Government on behalf of the Republic of Uganda. The Bill further emphasizes that the rightful owner of a plot of land upon which exploration and development activities are carried out retains the rights use the land in a manner that does not interfere with any activities related to oil and gas exploration or development or safety zones in the area.

Where oil is discovered, the Bill provides that land owners be compensated by the licensee companies for any disturbance of their rights regarding use of the land. Under the Bill, land owners have only the option of selling their land at a fair market value without taking into consideration the value of the petrocarbons in the ground. This practice seems to contradict, yet another law governing the exploitation of mineral resources. Specifically, Section 83 of the Mining Act

(2003) stipulates that “the owner or lawful occupier of any land subject to a mineral right is entitled to compensation . . . or to a share of royalties.” All this demonstrates two conflicting land management regimes with respect to mineral development in Uganda. Such contradictions in the laws governing mineral resource development in Uganda are likely to exacerbate land disputes in the exploration areas. What is required is a harmonisation of all legislations related to extraction of minerals in the country.

Moreover, the Oil (Exploration, Development and Production) law in its current state focuses on “compensating lawful land owners at a fair market value of the land” with little consideration for other land users such as the *bibanja* holders, leaseholders, bonafide occupants, and the like. In addition, the bill does not consider the costs of the various resettlement schemes that would be required to assist people displaced by oil production and other related activities. It is important, therefore, to review the compensation and resettlement processes with a view to maintaining social equity and allowing for the implementation of a fair and humane resettlement plan for lawful land owners.

(vi) Local government transfers

Uganda’s oil and gas management policy seeks to, among other things, promote equity in the distribution of royalty revenues. It, therefore, seeks to provide a mechanism for sharing oil revenues with the local governments in the oil-producing areas (GoU 2012). Specifically, the oil and gas management policy proposes to share 7 percent of revenues accruing to the government from oil activities with local governments and communities in the oil and gas production areas. This policy is based

on the principle of fairness across regions, taking into consideration the production levels and local revenue flow sustainability. The oil and gas management policy states that “once determined, the revenues shall be transferred to the local governments in the form of block grants through the budget” (OGRMP 2012:28). These grants will be arrived at on the basis of the actual population in each local government area and levels of production. While the principle to share revenue royalties with the community and local governments is well intentioned, district leaders feel that those districts that have lower populations and yet produce more oil will not be fairly compensated and this is thought to be unfair (Kalyesubula, February 2013). The other challenge cited by the district leadership is that the block grants may have conditionalities, which may force them to devote oil revenues to investments that are not in line with each district’s strategic development needs. In addition, the districts may not have the capacity to absorb the funds allocated to them, given their staffing deficiencies. For example, field discussions revealed that Buliisa district is only staffed up to 60 percent of the required level. The gaps in staffing have adverse impacts on the capacity of the districts to absorb any funds granted them by the central government. It is important, therefore, that the central government in Kampala move quickly to address the various issues associated with inadequate capacity at the local level and if necessary, provide the local governments with the wherewithal to effectively utilize the revenues granted them for development.

## **5.2 Revenue Management**

### **5.2.1 Oil and gas revenue management policy**

Uganda expects relatively modest oil revenues from its present fields. At current international prices for crude oil, it is expected that oil revenues will amount to about 5 percent of GDP at peak production (Henstridge and Page 2012). However, even modest inflows of revenues into the national treasury are known to create many challenges for the government. First, such revenues may distort the macroeconomic environment—the local currency may appreciate relative to other currencies with adverse implications for the nonoil export sector. Second, such revenues may pose fiscal challenges—such revenues are usually quite volatile and unpredictable, creating difficulties for forward looking planning and budgeting. Third, windfall resources are known to be highly fungible and appropriable. As such, they often stimulate rent seeking behaviour and corruption and thus reduce government effectiveness. Moreover, even without oil revenues, Uganda faces severe absorption challenges and there is risk that too much spending too fast can be disruptive (Henstridge and Page, 2012). The extent to which such challenges can be mitigated to achieve long-run growth and intergenerational equity largely depends on the quality of institutions and the country’s legal and regulatory environment.

The Oil and Gas Revenue Management Policy (OGRMP) recognizes the immense macroeconomic, fiscal and governance challenges associated with the management of windfall resource revenues. To this effect, the recommended policy is that a special

fund be set up in the Bank of Uganda with the objectives of financing the budget and saving for future generations. In addition, it states that all expenditures will be focused on key growth areas such as infrastructure, but financed through the budget. However, the OGRMP is also cognizant of the fiscal challenges of having to rely on oil revenues due to their volatility in volume and price. The OGRMP thus recommends a fiscal anchor the non-oil, non-grant budget deficit that will set out the amount of revenue to be integrated on an annual basis with a view of enhancing fiscal smoothing. The oil industry is an enclave activity that does not have much interconnectedness with the rest of the economy (Tumusiime-Mutebile, September 2012). Therefore, a modest oil boom might not in itself permanently increase people's incomes. The most important benefit from oil is the public revenues arising from its exploitation. Therefore, efficient management of oil revenues is very critical. Moreover, the availability of oil funds may lead some donors to reconsider their continued development assistance, so the net benefits to the national budget are likely to be less than the projected 5 percent of GDP.

Discussion about how Uganda can use oil revenues to effect intergenerational transfers of wealth has largely focused on the creation of a sovereign wealth fund by the MoFPED, under the management of the Bank of Uganda (BoU). Yet, according to top executives in the Bank of Uganda, intergenerational transfers do not exclusively refer to the creation and management of wealth funds (Tumusiime-Mutebile, September 2012; Mugume, September 2012). The argument is that Uganda is so poor a country that investments in infrastructure and specialized

skills are prudent mechanisms for effectively transferring present income to future generations. These arguments point to two possibilities for investing oil revenues: domestic investments and the acquisition foreign assets.

Deciding on the appropriate investment vehicle, or whether to invest domestically or in wealth funds abroad, would require comparing the expected rates of return and the risks involved in the two possibilities. Clearly, the arguments for investing domestically are stronger if investments are carefully identified and appraised, and decisions are based on purely economic criteria. The case for domestic investments is appealing, given the huge deficits in infrastructure and skills in an economy that has failed to structurally transform.

### **5.2.2 Public financial management**

The government is in the process of consolidating all public financial management legislation into the new Public Finance Bill, 2012. The proposed law will consolidate the Budget Act 2001 and the Public Finance and Accountability Act 2000 and establish a comprehensive framework for the management of oil revenues.

Although the Public Finance Bill will limit the potential for abuse and misuse of public funds, there are still some challenges with the efficiency of cash management. Government still holds many fragmented accounts in commercial banks. This contravenes one of the performance benchmarks agreed with the International Monetary Fund, requiring the government to operate a Single Treasury Account. The Bank of Uganda has rolled

out an electronic system that is meant to ease the process of payment settlements. However, this may be susceptible to abuse. First, there is no law to properly regulate and punish abuse. Second, to the extent that the Accountant General, for instance, has rights to open an account and transact on behalf of government, that leaves government resources prone to abuse. It is therefore important that the different Government accounts in commercial banks be consolidated into a single treasury account. This would bring about transparency in the management of and the interaction between fiscal and monetary policy.

Uganda does not have a very good record for managing public revenues. Unless there are significant improvements, the country's oil revenues could be in danger of being allocated corruptly and for purposes that are not likely to benefit the bulk of citizens. It is important that capacity for critical issues such as project selection and appraisal is built for public officers, especially in the MoFPED. It is equally important for Uganda to find ways to deal with its absorptive capacity problems so that projects can be completed on time. For instance, the 2009/2010 budget for roads could not be fully utilized because of capacity constraints in the sector (Wesonga 2012a). These kinds of capacity constraints will have to be addressed in order to achieve effective and timely investment of the oil revenues in productive projects.

The key to ensuring that Uganda's exhaustible oil and gas revenues are effectively converted into income-generating assets is to increase public expenditure on sectors that can create wealth. Henstridge and Page (2012) argue that this calls for two policy imperatives:

improving the quality of project appraisals and budgeting of recurrent costs of maintenance. But, the most important factors in public financial management are in the areas of governance and accountability. World Bank studies show that Uganda's capacity in ensuring that government expenditures translate into sustainable increases in living standards is still low. According to the World Bank's Country Policy and Institutional Assessment (CPIA) index for 2011, Uganda's score for economic management (including monetary and exchange rate policy), at 4.2 out of 6, is far higher than the average for all least developing countries (LDCs) which stands at 3.5. However, that is pretty much the end of the good story. Such good performance has not been replicated in other critical areas that would ensure value for money in the oil industry.

Uganda's rating for public sector management is only 3.2 out of 5, which is barely above average. Moreover, Uganda's rating for transparency, accountability and corruption in the public sector is very poor at 2.5. Yet, transparency and accountability are essential to ensuring that oil revenues are used in an efficient manner to create wealth, both for current and future generations. The transparency and accountability problem can be extended to the way public officers handle money. National media in Uganda have reported, for example, that officials in the Prime Minister's office have transferred project money into personal accounts, contrary to the public finance and accountability regulations (Wesonga 2012b). This speaks to the need for urgent institutional measures and frameworks for oil revenue management, with emphasis on transparency and preservation of the

integrity of the budget system.

### **5.2.3 Transparency in oil activities**

Closely related to public financial management is the important issue of transparency in all oil activities. Based on our field consultations, we have determined that ever since Uganda discovered commercially viable oil resources in 2006, oil deals have been shrouded in secrecy. Government has resisted pressure from parliament, civil society, and even the donor community, to make the Production Sharing Agreements (PSA) public. This, coupled with Uganda's perceived deterioration in governance generally and in public financial management in particular, as well as increased levels of corruption, have raised serious doubts about Uganda's ability to transform oil resources into wealth that will benefit both current and future generations.

Transparency can significantly enhance the government's ability to manage the expectations of the citizenry and civil society, as it enables them to monitor activities, as well as acquaint themselves with the expected benefits from the oil industry. Rising corruption levels and lack of transparency in government operations have already affected the flow of official development assistance (ODA) and foreign direct investment (FDI) into Uganda. However, improved transparency offers Uganda the opportunity to achieve long-term growth through improved ODA and FDI.

Through the NOGP, the Government committed to participate in the Extractive Industries and Transparency (EITI) initiative. Yet, the country is yet to operationalize

its participation in the EITI. Unfortunately, Uganda's leaders have indicated that they would not be hurried to join EITI (D'junga, September 2012). We, therefore, recommend that the GoU sign up and operationalise its participation in the EITI so that transparency can be entrenched at all levels of the oil and gas value chain.

### **5.2.4 Fiscal policy management**

Fiscal smoothing will be an important part of revenue management in Uganda. This is due to the volatility associated with the volume and prices of oil. According to the Oil and Gas Revenue Management Policy (2008), the Government is expected to formulate a long-term fiscal strategy that adequately addresses expenditure and savings options. It is crucial that controlled, smoothed expenditure patterns are strictly followed in order to avoid excessive public spending that would result in distortions in the form of Dutch disease effects and rent seeking. It is therefore imperative to strengthen the country's public financial management procedures to ensure that resources are not misappropriated by the accounting authorities. Given the state's poor budget discipline record, there are fears that the use of supplementary budgets may trigger inefficiencies in resource allocation and use.

### **5.2.5 Monetary policy management**

Uganda's impressive growth over the last two decades has been made possible in part by a robust macroeconomic policy framework. However, these gains could be eroded if the framework for macroeconomic management is not strengthened, particularly to counter any possible Dutch disease effects. The role

of monetary policy in this regard will be to avoid the exchange rate appreciation and to maintain the competitiveness of the nonoil tradable sectors such as tourism, agriculture and industry.

### 5.2.6 Broaden the revenue base

When states gain a large portion of their revenues from windfall sources, they may relax the effort to collect domestic taxes (Kiiza et al 2011). This argument may be linked to the resource curse and rent-seeking theories where windfall revenues may be used by political elites to buy political support so that they can continue to monopolize political power (Gelb and Majerowicz 2011).

Uganda's tax collection has stagnated between 10-13 percent of GDP over the last decade (AfDB 2010) and is heavily dependent on international trade taxes whose share in GDP averaged 6.3 percent in the same time period (Hisali 2012). This inelastic tax system is occasioned by, among other things, the pervasiveness of the informal sector in Uganda and the various tax incentives that are meant to attract FDI. The African Development Bank has estimated that Uganda loses approximately 2 percent of GDP to such tax exemptions and incentives (AfDB 2010).

Contrary to the belief that tax incentives may promote FDI, research has shown that incentives may not matter that much after all. What drives FDI is a conducive environment that guarantees growth and business competitiveness (IMF 2003). What is required, therefore, is for the Government of Uganda to focus on interventions that would improve the business environment

while focusing on the non-oil deficit as a benchmark to evaluate fiscal performance.

Uganda's Oil and Gas Revenue Management Policy (2012) acknowledges that oil has the potential to undermine non-oil revenue collection efforts. Moreover, oil revenues are likely to be partially offset by lower donor receipts. It should be remembered that oil is a finite resource and revenues are volatile. For this reason, the GoU should continue to focus on improving tax administration and widening the tax base with a view to improving non-oil tax revenues.

### 5.2.7 Reducing foreign debt

Recent studies have introduced a new dimension into the literature on the management of revenues from the export of natural resources—it is suggested that a developing country can use part of its resource revenues to repay foreign debt (Van der Ploeg and Venables 2011; Henstridge and Page 2011; Van Ploeg *et al* 2011). Such studies have empirically shown that reducing the stock of foreign debt reduces borrowing costs and thus, stimulates private investment and accelerates growth.

Despite recent shocks to the economy that resulted into slower growth, Uganda enjoys relatively sustainable debt levels (IMF 2012). Yet, Uganda's relatively favourable position has resulted in part from previous debt cancellation initiatives, such that the public debt now appears to be at sustainable levels. The Heavily Indebted Poor Countries (HIPC) initiative gave Uganda debt relief amounting to U.S.\$1 billion in net present value (NPV) terms delivered over a period of twenty years (Kuteesa and Nabbumba 2004). The

country has also benefited since 2006 from the Multilateral Debt Relief Initiative.

However, following these debt cancellation initiatives, recent developments point to Government's increased appetite for debt. The external debt stock, expressed as a percentage of exports of goods, services and income, increased from 74 percent in 2009 to 86 percent in 2010 (World Bank 2012). Public and publicly guaranteed (PPG) external debt increased from U.S.\$ 2.3 billion (15.3 percent of GDP) to U.S.\$ 2.9 billion (19.5 percent of GDP) between FY2009/10 and FY2010/11. Over the same period, domestic debt increased from 9.3 percent of GDP to 13.4 percent, contributing to the increase of total public debt from 24.6 percent to 32.9 percent of GDP (IMF 2012).

The Uganda Debt Strategy (2007) is cognizant of the fact that debt relief initiatives in themselves can provide a basis but cannot ensure a permanent exit from unsustainable indebtedness. Inevitably, developments in the oil sector, with increasing external financing needs, will add to the debt vulnerabilities in the medium term before full production starts in earnest (IMF 2012). While the oil revenues are expected to ease Uganda's financial challenges, we recommend that the GoU not engage in any borrowing to be secured on the basis of expected oil and gas revenues. To be absolutely clear, the Public Finance Bill prohibits collateralization of oil revenues.

### **5.2.8 The Petroleum Fund**

Consistent with international practice, the Oil and Gas Revenue Management Policy (OGRMP) provides for the creation

of a Petroleum Fund (PF). The PF will be established in the Bank of Uganda, but under the control of the Ministry of Finance, Planning and Economic Development (MoFPED). In theory, such funds play a triple role of fiscal smoothing, macroeconomic stabilization and saving for future generations. In the case of Uganda, the Petroleum Fund has been earmarked to perform the duties of financing the budget and saving for future generations. Since the PF is basically a very important player in the management of Uganda's oil revenues, it is important that its management be strictly subjected to effective oversight to minimize embezzlement, malfeasance, and corruption.

The rules that will govern the Petroleum Fund are still not clear and it is not yet known who exactly at the Bank of Uganda would directly control the PF (Mugume, September 2012). In practice, there should be a law that caps the amount of money, either in percentage terms or otherwise, that can be integrated into the annual fiscal framework. In its current form, the Public Finance Bill does not spell out any such rules or caps. There should also be a law that guides the kind of investment ventures that are permissible with such funds. Uganda can learn from the experiences of Norway and Botswana in efforts to design and adopt effective investment guidelines, specifically those that would enhance the ability of the Ugandan economy to use these funds to create permanent wealth.

### **5.2.9 Revenue expenditure options**

Revenues from the export of natural resources, including oil and gas, should best be seen as a temporary stream of resource flows into the national treasury, which can

be used as a catalyst or springboard for institutional and policy reforms that become the basis for creating permanent wealth. Uganda's economy has not registered fundamental structural changes despite more than two decades of impressive economic growth. Structural change is achieved when productivity in the primary agricultural sector and industry rises and a large share of employment shifts from agriculture to services.

Henstridge and Page (2012) provide a number of options that Uganda can employ to ensure accelerated growth and structural transformation. They posit that if oil revenues are used well—for instance to enforce regulatory reform with a view to reducing the cost of doing business for the private sector, to invest in infrastructure and skills development and to enable a more robust approach to agricultural development—accelerated growth and wealth creation will result.

In making the case for increased public spending, we are mindful of the Dutch disease consequences of natural resource dependence, and indeed of all sorts of windfall revenues. We argue that with prudent fiscal and macroeconomic policies, any Dutch disease consequences may be offset by Uganda's huge infrastructural deficits, structural constraints in the productive sectors and an economy that is below full employment. Indeed, Nkusu (2004) argues that the Dutch disease effects need not arise for low-income countries (such as Uganda) that can draw on idle productive capacity to satisfy the resource-induced demand. Here below we examine the possible oil expenditure options that the Government of

Uganda should consider as priority:

(i) Investing in infrastructure

Poor infrastructure, in both the energy and transport sectors, has been highlighted in the Five Year National Development Plan (NDP) as being among the binding constraints to growth and competitiveness of the Ugandan economy. At the national level, only 11 percent of all households have access to electricity, with rural access even lower at only about 3 percent (Mawejje *et al* 2012). Annual electricity consumption per capita, estimated at 75 kwh, is low even by sub-Saharan African standards. Yet, the linkages between adequate electricity supply and GDP growth are well documented. For example, Odhiambo (2009) and Wolde-Rufael (2006) both show that long-run causal relationships exist between electricity consumption and economic growth in sub-Saharan Africa.

Uganda's inadequate electricity supply has significant implications for both human development and the building of a sustainable and competitive industrial base. For example, the Uganda Electricity Regulatory Authority (ERA) (2006) indicates that industrialists lose up to 156 days a year due to electricity interruptions. The major challenges in the electricity sector are the numerous constraints in power generation, high prices and technical losses (Mawejje *et al.* 2012). Therefore, it is prudent that some of the revenue from the sale of the country's oil is invested in electricity generation and distribution so as to build a competitive and resilient industrial sector.

Uganda's transport sector is still undeveloped. The challenges in the sector are compounded by Uganda's landlocked status. As a result,

the cost of doing business is high. It is estimated that transport alone currently accounts for 40 percent of the total cost of production, especially for firms engaged in the import/export business (PSFU 2011). The poor quality of Uganda's road network and the fact that several parts of the country do not even have roads, is a major contributing factor to the high cost of doing business in the country. The percentage of paved roads nationally, at less than eight percent, is one of the lowest in the region.

Without alternative direct access routes to the sea, rail transport would be the most cost effective and preferred means of transport for goods. However, after many years of neglect, the railway network has almost collapsed with the result that Uganda has only 337 kilometres of rail lines, the shortest in Africa (PSFU 2011). In addition, Uganda's rail lines are characterized by narrow rail gauges, which effectively limit the speed of cargo transportation to 40 km/hr compared to 120 km/hr with wider rail gauges. As a result, Uganda continues to depend on even much less efficient road transport for access to regional and overseas markets.

Closing the infrastructural deficits will require a lot of resources, some of which must come from the revenues received from oil. The Africa Infrastructure Consortium (2010) estimates that the annual budgetary requirement to eliminate the infrastructural deficits is about U.S.\$ 912 million per year over a ten year period.

(ii) Investing in agriculture

Agriculture employs over 60 percent of the entire labour force and accounts for about a quarter of GDP and ninety percent

of exports. The sector is still highly labour intensive, using rudimentary tools and poor production methods. This has resulted in low growth rates and declining agricultural productivity. Yet, according to Wiebelt *et al* (2012), Uganda's oil economy presents an unparalleled opportunity to transform the agricultural sector and reduce poverty. That economy will raise domestic demand for traditional food stuffs as well as higher value products in horticulture and other value-added agricultural products. Clearly, oil revenues present immense opportunities for agricultural transformation and value addition.

But, how exactly do you make the agricultural sector more productive? We argue that productivity in agriculture has been declining on account of several problems, including (a) soils depleted of minerals; (b) rudimentary farming practices; and (c) market policies that are not supportive of agricultural transformation. What is required for effective agricultural transformation is for the government to fast track fertilizer use, as well as implement other policies that ensure the competitiveness of the sector both domestically and in regional/international markets.

Agriculture is a very important sector in Uganda and as such, the GoU should not leave it to the vagaries of the market. For a start, the Government should put into place an effective system for the eradication of hunger and malnutrition. While households will continue to grow a wide range of crops and keep a wide range of livestock, it is necessary for the Government to focus on a few products that will be supported in terms of production, value addition, and marketing.

What is required for Ugandan agricultural transformation is farmer access to improved technologies. Therefore, government expenditure on research and development for agriculture is paramount.

Beyond food security concerns, emphasis should also be placed on adding value to agricultural products so that, eventually, Uganda will be able to have effective control over the entire agricultural value chain. In short, agriculture can be the bedrock of a competitive manufacturing sector and Uganda's efforts to deal effectively with poverty. Investments to add value to primary commodities such as cotton, coffee and tea would auger well for poverty alleviation efforts, as well as for general economic growth.

(iii) Investing in education and skills development

Uganda introduced Universal Primary Education in 1997 and Universal Secondary Education in 2007. School enrolment rates have greatly improved over the years. Yet, the basic literacy rate, at 69 percent, is the second lowest in East Africa (EAC 2010). This points to the challenges that exist in the education system, where increased enrolments do not necessarily translate into superior learning outcomes.

Beyond primary and secondary education, Uganda's higher institutions of learning also face challenges training the skilled individuals needed to drive innovations and research for national development. The inadequacy of quality skilled labour is a major hindrance to national development. The current mismatch between the demand for and supply of adequately skilled labour is partly due to

failure of the country's higher education system to produce the necessary human capital. The challenges in Uganda's education system have resulted in a labour force that does not have the management and practical skills to drive industrial productivity. Henstridge and Page (2012) assert that 60 percent of top executives in Uganda do not have university training or its equivalent, compared to 6.8 percent in Zambia and 30 percent in Kenya and Tanzania. Moreover, studies have demonstrated that export sophistication is highly influenced by higher educational attainment of the labour force (Clarke, 2005).

It is therefore not surprising that Ugandan firms have the lowest labour productivity in the East African Community, rank poorly by wider comparison within sub-Saharan Africa, and much lower productivity than that in China and India (Badagawa 2010). Due to the low productivity, labour costs in Uganda are relatively higher than regional averages. Studies indicate that Tanzania's labour productivity is 40 percent higher than Uganda's, while Kenya's is 60 percent higher, meaning that a worker from either Kenya or Tanzania has a higher job output compared to their Ugandan counterpart (Bakunda and Mpanga 2009). The National Development Plan has outlined various interventions to address the skills challenge and these should be fast tracked. Government ought to institute adequate measures to estimate the current skill gaps with a view of preparing the labour force for oil sector opportunities. This can be achieved if government forges a strategic partnership with industry. In addition to skills specific to the oil sector, there are strong arguments for investments of oil revenues in skilling the entire labour force in manner

that can help to diversify and transform the economy. Uganda rolled out the universal primary education programme in 1997 and has since recorded various successes in access to education especially for the poor (Nishimura et al., 2008). But the quality of the education offered is greatly constrained by the inadequate financing available (Oketch and Rolleston, 2007). However, the oil revenues can help to ease the financing constraints in the education sector. A recent policy report by UNESCO (2013) estimates that following the oil discovery, Uganda's total budget is likely to double by 2016. If this translates into doubling of the education budget, then Uganda can have enough resources to send all primary and post-primary-aged children to school.

(iv) Investing in the tourism sector

The National Development Plan (NDP) highlights tourism as a key growth sector in Uganda. According to the World Travel and Tourism Council (2013), travel and tourism contributed as much as 8.8 percent of Uganda's total GDP in 2012 and is forecast to rise by 2.8 percent in 2013. In 2012, the total job contribution of the tourist industry, including jobs indirectly supported by the industry, was 7.6 percent of total employment (483,500 jobs). In addition, tourism contributed up to 4.4 percent of total investment and this is expected to rise by 3.9 percent in 2013.

Uganda is heavily endowed with tourist attractions that, if managed well, can quickly turn the country into a major destination for tourists, with significant implications for job creation and economic growth. With 10.2 percent of the world's bird species, Uganda has more birds per square kilometre than

any other country in Africa. Uganda is also endowed with 6.8 percent of the total butterfly and 7.5 percent of the total mammal species in the world. Mountain Gorillas, the Nile River, mild and extremely accommodating weather, and diversity of culture, all make for a good tourist destination.

Yet, Uganda's tourism sector has continued to struggle, often overshadowed by those of its more aggressive neighbour, Kenya, and most recently, Rwanda. Uganda, though, needs to take seriously lessons learned from other tropical tourist destinations such as Costa Rica and Rwanda that have been able to more effectively exploit their tourism potential. Costa Rica has an area 20 percent the size of Uganda. One quarter of its land area is protected and reserved for tourism-related activities and the country has set itself up as the world's top ecotourism destination (PSFU 2011). Costa Rica has a comprehensive and very effective framework designed to ensure sustainable use of its biodiversity. Effective engagement at the local and community levels helps to ensure that every citizen understands the importance of biodiversity and has a stake in sustaining it. In 2001, Costa Rica received over 1.1 million tourists and earned more than U.S.\$1 billion dollars in tourism revenue. Uganda, with its great biodiversity and other natural endowments, currently raises just U.S.\$800 million dollars per annum (PSFU 2011).

According to the NDP, constraints in the tourism industry include limited funding, as well as, a severe lack of personnel trained in tourism and hospitality. Thus, the sector is dominated mostly by foreigners. Other constraints include a poor support transport network, and inadequate research on

emerging trends and markets. Therefore, addressing such constraints using part of the oil revenues would help to accelerate growth while creating opportunities for current and future generations.

**5.2.10 Adequacy of the existing legislation on revenue management**

The 2008 National Oil and Gas Policy (NOGP) and the 2012 Oil and Gas Revenue Management Policy (OGRMP) set the stage for the development of a legal framework for oil revenue management. Specifically, the OGRMP provides details on how the revenues arising out of oil and gas activities will be managed and integrated into existing government revenue and expenditure systems. And, it is on the basis of these policies that the Public Finance Bill (2012) was drafted with a full chapter on petroleum revenue management. Here below we provide an analysis of the existing legislation with regard to Public Finance Management and provide recommendations for Government consideration:

(i) A separate bill for petroleum revenue management

The Government has opted for a single finance bill, thereby deciding to address oil and gas revenue management within the general framework of budgeting legislation. However, given the anticipated size of the oil revenue, as well as, their volatile and exhaustible nature, we propose that a separate bill for petroleum revenue management should be considered as a matter of priority.

(ii) Management of the Petroleum Fund  
Section 52 of the 2012 Public Finance Bill provides for the establishment of the

Petroleum Fund (PF). However, the bill does not specify any details on where the Petroleum Fund’s accounts are to be located. The bill does not specify a governing body for the PF or their functions and responsibilities. Section 55 (6) states that any balances after withdrawals from the Petroleum Revenue Holding Account in accordance with the annual cash flow of government shall be invested by the Bank of Uganda. We propose that for transparency, such monies should be transferred to the Petroleum Revenue Investment Reserve, as stipulated in section 58 (3), with the approval of Parliament.

(iii) Petroleum Fund outward payments  
While the spirit of the NOGP and OGRMP is to ensure that oil resources are used in a manner that takes into account the welfare of both current and future generations, the Public Finance Bill does not impose any specific limits and restrictions on the amount of revenues that can be withdrawn for use in the annual budget. As was discussed earlier, spending beyond the country’s absorptive capacity can lead to serious macroeconomic consequences.

The OGRMP specifies a rule for managing petroleum revenues: the non-oil and non-grant budget deficit is identified as a fiscal anchor, which will be complemented by a limit in the growth in government expenditures. However, this is not reflected in the Public Finance Bill. It is important that the bill imposes specific limits on the amount of funds that can be transferred out of the Petroleum Fund.

(iv) The petroleum revenue investment policy

Section 62 of the Public Finance Bill establishes

an investment advisory committee whose role shall be to advise the minister on a number of issues as stipulated in section 64. However, there is no legal requirement for the minister to take the committee's advice into account. There is therefore a risk that the committee's relevance is compromised under this arrangement. We propose insertion of a clause in this section of the statute requiring the minister to explain his or her decisions to parliament if he or she has not followed the committee's advice.

Section 59 restricts the type of instruments that the fund can be invested in, as specified in 59 (2) (a) and 59 (2) (b). However, section 59 (2) (c) imperils these restrictions by suggesting that "any other qualifying instrument prescribed by the minister" can also qualify. In practice, the Public Finance Bill should give clear instructions on how the money can be invested without giving so much discretion to the minister. We, therefore, recommend that section 59 (2) (c) of the bill be amended to include the following clause in the appropriate place: "With the advice of the investment advisory committee and parliamentary approval."

## **5.4 Environmental Management**

The oil and gas industry poses grave long-term environmental risks to Uganda. Serious environmental damage could result from any of the activities along the entire oil and gas value chain—from exploration, extraction, and processing to marketing and distribution. Oil and gas development activities in the Albertine Graben, if not well managed, could pose significant environmental challenges. The extent to which oil and gas development negatively affects the environment could

depend on the size of extractive activities, the sensitivity of the location of each activity, and even the technology used (Sigam and Garcia 2012). With Uganda recording huge successes with its exploration efforts, and given the ecological sensitivity of the exploration areas, it is important that due attention be accorded to the environmental consequences, if the country is to optimize value from the extraction of oil resources.

### **5.4.1 Impact on the environment**

Oil and gas activities have significant implications for environmental sustainability and land productivity. First, is the land degradation challenge that is associated with excavation activities; second, is the waste management challenge. The National Environmental Waste Management Regulations (1998) prohibit the illegal disposal of untreated waste into the environment. An Environmental Impact Assessment would be required for any entity intending to run waste treatment operations or facilities in Uganda.

The NOGP recognizes the environmental challenges associated with oil production. It assigns environmental protection duties to the licensed companies and describes the duty of the state as being to legislate, regulate and monitor compliance. For all intents and purposes, the policy lays a strong foundation for environmental protection. However, ensuring compliance is the more problematic area where the state could place more emphasis.

Even at this early stage in the development of Uganda's oil fields, reports indicate that some oil companies have failed to fully comply with the rules governing waste management and

disposal. For example, the Action Aid-owned publication, *Oil in Uganda* (2012), reported in May 2012 that Heritage Oil illegally dumped, with impunity, untreated waste in a farmer's garden for a nominal compensation of some U.S.\$300. Such irresponsible handling of the waste has very serious implications for environmental sustainability and public health and does not auger well for intergenerational equity.

The fact that Uganda's oil discoveries are located in a game reserve and in grazing areas, as well as near important water bodies, raises important questions for environmental sustainability. Despite assurances by the Government of Uganda and the various private oil companies operating in the region that the environment will not be seriously compromised, communities in the Albertine valley continue to express fears regarding the potential environmental impacts of oil exploration and development. Those fears were summed up by Mulimba (February 2013), the Local Council leader of Butiaba sub-county,, who remarked thus:

What shall we do if the oil spills destroy our grazing land and fishing waters? Our cattle are our wealth. The lake supports our livelihood.

Construction of a refinery has been planned in Kabale village, Buseruka sub-county, Hoima district. Kabale village is located above the escarpment and unlike the rift valley is very fertile and supports crop agriculture and is a food basket for the region and beyond. The refinery is expected to displace households on an estimated 29 square miles of land. Again, the land around Kabale is communally-owned with only a few individuals who have perpetual rights (i.e., free-hold titles) over

the land. The construction of the refinery raises major environmental concerns to the people of the area with regard to proper waste management

#### **5.4.2 Impact on biodiversity**

The Albertine Graben is an ecologically sensitive region that is also rich in biodiversity. With 39 wildlife-protected areas, the region is a tourism hot spot rich in all sorts of animal, bird and plant life. The National Environment Management Authority (NEMA) (2012) states that the region has 14 percent of all African reptiles (175 species), 19 percent of amphibians (119 species), 35 percent of butterflies (1,300 species), 52 percent of birds (1,061 species), 39 percent of mammals (402 species), 14 percent of plants and more than 400 fish species. Yet, the oil and gas activities could result in habitat destruction, as well as, water and soil contamination that could lead to a loss of plant and animal life. According to Kityo (2011), the biggest risks to biodiversity in the Albertine rift arise from four sources: seismic surveys, oil pad construction, drill waste and waste pits, and oil spills.

What is required is for the state to strengthen the institutional capacity of the relevant public bodies so that they can effectively monitor oil companies and make sure that they comply with and uphold best practices in environmental and biodiversity sustainability.

#### **5.4.3 Institutional capacity for environmental protection**

It is the mandate of NEMA to ensure environmental sustainability. However, the institution is faced with numerous capacity constraints, which hinder its efficiency in overseeing the activities in the Albertine

Graben (Muramira, September 2012). Such capacity to oversee all oil and gas activities would require availability of people with the appropriate training and skills, and the right type of technology and equipment. In addition, the agency must also be provided with enough financial resources so that it can perform its duties effectively. Of course, the staff must also be adequately constrained by the law so that they do not engage in behaviours (e.g., corruption) that compromise the agency's ability to carry out its functions.

In response to growing demands, the NEMA has proposed an institutional review that would require the creation of new specialized departments and the recruitment of new staff. The new departments have been established but with insufficient resources (financial and human capital) to efficiently perform their functions. Table 1 shows the staffing shortfalls at the national environmental authority in the four most critical departments for oil and gas management.

**Table 1: National Environment Management Authority (NEMA) Staffing Levels**

Department/ Unit	Staffing level		
	Required	Current	Shortfall
Oil and Gas	7	2	5
Environmental Impact Assessment	13	4	9
Audit and Inspections	12	4	8
Natural Resource Management	6	3	3
Totals	38	13	25

Source: Interview with NEMA officials.

It is evident from Table 1 that about two thirds of critical technical positions at the NEMA have not yet been filled. Moreover, the available staff in the new departments are not part of the government pay-roll but are only remunerated using internally generated resources (here internally generated resources refer to organisational incomes from other sources other than official Government releases). . Moreover, the institution suffers huge financial short falls to allow it fully run its operations. For example, current the budgetary short falls at the NEMA are estimated at well over Ushs 4 billion (Approximately US\$ 1,600,000).

Due to budget and other logistical constraints, the NEMA has not been able to establish a logistics and coordination office that would ensure their presence in the Albertine Graben. Moreover, the required air, water and soil quality standards do not exist. Due to these constraints, it has been reported that Uganda has failed to carry out a comprehensive environmental and social impact study in the Albertine Graben oil exploration and production area, and that the majority of the Environmental Impact Assessments completed so far have been reported to be substandard (Oil in Uganda 2012).

Our results are consistent with the findings of COWI (2012) that highlight similar capacity gaps for institutions such as the Directorate of Water Resources Management, Directorate of Environmental Affairs, National Forest Authority and the Department of Meteorology. The aforementioned institutions were identified as key to environmental management in Uganda, but are faced with inadequate manpower,

equipment and financial resources.

What is required, therefore, is for the Government of Uganda to strengthen the structure of these institutions by, for example, fully staffing them and providing them with enough resources to perform their jobs effectively. Budgetary support could possibly be realized if a percentage of the revenues collected by the Uganda Revenue Authority (URA) on environmental levies is channelled to activities that promote environmental sustainability (Muramira, September 2012). Of course, it is important to note that in addition to providing each of these public institutions with the resources to perform their functions, they must also be adequately constrained by the law so that those who work in them do not engage in behaviours (e.g., corruption) that conflict with their ability to serve the public.

Below, we discuss some ways in which the GoU can make certain that environmental and biodiversity concerns are prioritized in the exploitation of the oil and gas resources in the Albertine Graben.

(i) Toxic waste management

Waste materials generated as a result of ongoing exploration and oil development processes should be handled as stipulated in the National Environment Waste Management Regulations of 1998. Waste should be disposed only legally and all waste treatment plants or facilities should be established away from sensitive ecological zones, water bodies, human settlements and other fragile ecosystems. In addition, the GoU should undertake close monitoring of the activities of all oil companies, as well as other operators, to make sure that all waste

disposal activities are undertaken according to Ugandan law, as well as globally accepted best practices.

(ii) Restoration of drilling sites

Work to prepare the drilling sites may produce severe environmental damage in the form of vegetation loss, habitat destruction, oil waste spillage and soil and water contamination. Oil companies should be tasked with the job of restoring the ecosystem as close to its original state as possible (that is, the state in which the ecosystem was before the drilling operations began).

(iii) Contingency plans for oil spills

Presently, the oil companies are expected to develop contingency plans for oil spills. Basically if there is a massive spill or blowout, the oil companies are expected to clean up the mess and restore the environment, not NEMA. Unfortunately, at present, Uganda does not have the specialized equipment needed to cope effectively with the types of environmental damage that can be caused by an oil spill. Such equipment would have to be shipped in from abroad and that could take many weeks or months.

The relevant authorities should therefore start the process of developing contingency plans for oil spills and leakages—at the drilling and refining sites, as well as during transportation. Of course, protection of the environment is the job of the Government of Uganda. The GoU must either put together an appropriate plan to deal with possible oil-related emergencies or make certain that the oil companies and other industry operators (e.g., companies transporting crude oil to refinery sites or refined oil to export markets) have those contingency plans in place

(iv) Environmental standards

It is important that the Government of Uganda set standards for environmental protection before actual drilling can begin. These standards must reflect generally accepted best practices, as well as provisions of the Universal Declaration of Human Rights. This is in line with the fact that environmental and ecosystem degradation can have a significantly negative impact on health, reproductive integrity, access to clean water, food security, and other human rights-related concerns. Unfortunately, discussions with NEMA officials reveal that Uganda has not yet developed appropriate and effective quality standards for air, water and soil. Specific regulations should be developed for the oil sector so that effective monitoring can be undertaken and damage to Uganda's environment and ecosystem minimized. With environmental standards that take into consideration provisions of the UDHR and other international human rights conventions, Ugandans who believe that their rights to a clean and safe environment are violated can take legal action to stop further degradation of their environment and seek compensation for their loss. Well-articulated standards should help the oil companies and other operators to more accurately determine the costs of their activities in this sector.

#### 5.4.4 Adequacy of existing legislation on environmental management

So far, Uganda has not updated existing environmental legislation to bring it in line with the changing environmental protection requirements in the oil and gas sector. However, the Petroleum (Exploration, Production and Development) Act has taken some positive steps to ensure that

environmental offenses are punishable by law. For example, sections 127 and 162 now impose strict liability for pollution damage and negligent contraventions of the legal provisions. However, the fines, both for individuals and companies, are extremely lenient considering the high value nature of the industry. Section 6, for example, prohibits engagement in "petroleum activities" without authorization and sets penalties for breach of the law. Section 6 is titled "Prohibition of petroleum activities without authorisation" and sets out the law as follows:

- (1) Petroleum activities in, on or under any land or waters in Uganda is subject to Ugandan jurisdiction, shall not be conducted without an authorisation, licence, permit or approval issued in accordance with this Act.
- (2) A person who contravenes subsection (1) commits an offence and is liable on conviction—
  - (a) if an individual, to a fine not exceeding ten thousand currency points or imprisonment not exceeding ten years or both; and
  - (b) if a body corporate, to a fine not exceeding one hundred thousand currency points.

Similarly, section 4(5) sets a fine not exceeding 5,000 currency points for a person "who carries out the management of the production, transportation, storage or treatment of waste arising out of petroleum activities without licence." Such minuscule fines are not deterrent enough to guarantee compliance with the law. At a minimum, corporate and individual fines should be at the same level as criminal penalties and should result in the revocation of the license

to operate. Managers and other high-ranking employees should be held personally liable for their behaviours. In addition, the law should ensure that fines, where they apply, are not tax deductible or cost recoverable.

Therefore, with respect to the spirit of the National Oil and Gas Policy, which set the scene for renewed emphasis on environmental protection in the wake of massive oil discoveries, the bill fails to adequately ensure that penalties are high enough to guarantee compliance. Finally, section 4(6) requires that National Environment Management Authority design and adopt rules governing the management of the production, transportation, storage and treatment of waste arising out of petroleum activities. However, we determined that NEMA lacks the technical capacity and budget support to execute its mandate. For example, NEMA currently has only about one-third of the technical staff that it needs to fully and effectively perform its assigned tasks. In addition, the institution is yet to develop and adopt appropriate air, water and soil quality standards for the industry.

## 6. CONCLUSION

Uganda has discovered sizeable deposits of commercially viable oil in the Albertine Rift. Exploration activities, covering an estimated 40 percent of the exploration areas in the Albertine Graben region, had, by September 2012, led to the discovery of about 3.5 billion barrels of crude oil deposits. These are considerable deposits that, if harnessed well, could provide Uganda with a solid foundation for poverty alleviation and human development. Of course, if managed opportunistically, the results could be not just a failure to deal effectively and fully with poverty but deterioration in economic, social and political conditions. For example, if through corrupt processes, oil revenues are not allocated equitably, marginalized groups could resort to violent and destructive mobilization, a process that could create political and economic instability.

This paper has accordingly, examined ways in which Uganda can use its oil resources to accelerate economic growth, deal with poverty and improve national living standards, while at the time dealing effectively with the challenges of inter-generational equity. This was achieved through a perception analysis of stakeholder views on the suitability of available institutions, including the country's legal regime, to deal with the challenges of efficient management of oil and gas and inter-generational equity. In particular, our analysis considered three aspects of inter-generational equity: resource, revenue and environmental management.

We determined that Uganda has not made significant progress in ensuring that the country's oil wealth is invested in projects

that benefit the people. Despite efforts to streamline the legal and regulatory framework and provide for the construction of a refinery so that Uganda can add value to its oil before it is exported, a lot still has to be done to make certain that, first, oil production is carried out efficiently, second, that the environment and the ecosystem are protected, and third, that the revenues derived from the sale of the oil are devoted only to projects that produce the greatest benefits for the people of Uganda. With a robust legal regime, strong independent institutions, transparency in government operations and communication, prudent public financial management and responsible environmental management practices, intergenerational equity is achievable.

The Government of Uganda has an important and critical role to play in the management of the country's natural resources, including oil and gas. It is the Government's job to ensure efficiency in the extraction of oil while at the same providing oil companies and other industry operators with an incentive structure that would enhance investment in the sector. The Government can maximize revenues accruing to the national treasury from oil operations by making certain that the process through which exploration and extraction licenses are granted is competitive. Such competitive auctions can be undertaken in two stages—(i) screening of potential bidders for technical, as well as, financial soundness; and (ii) evaluating bids on the strength of the bidders' willingness and ability to pay royalties, as well as the bidders' technological readiness and commitment to preserve the environment.

With respect to revenue management, we determined that Uganda needs to significantly strengthen its public financial management system, including improving tax collections and making certain that public investment decisions are based on sound investment principles—whether the investments are made in Uganda or abroad. In addition, all public expenditures should be made only in line with the strategic development needs of the country, as stipulated in the National Development Plan. Specifically, the country's oil revenues should be invested in assets that are likely to generate income for the country directly or indirectly through enhancing entrepreneurial and other productive activities (e.g., infrastructure, agriculture, industry, skills development and tourism).

Uganda's oil resources are located in one of the most environmentally sensitive and ecologically fragile regions in the country. Oil development activities could have undesirable consequences for the environment, biodiversity and the livelihoods of the indigenous peoples. Unfortunately, Uganda does not have a very good record of environmental management and is presently ill-equipped to deal with the environmental issues that are likely to accompany oil production. First, Uganda has not upgraded its environmental statutes to make them capable of dealing with the complex issues associated with oil production. Second, the National Environment Management Authority has neither the required technical staff nor the requisite budgetary support to effectively fulfil its mandate.

The discovery of commercially viable oil reserves in Uganda necessitated the drafting of a new policy and the provision of a legal

framework to guide the development of the sector. The 2008 National Oil and Gas Policy seeks to position the sector in such a way that it can effectively contribute to poverty reduction and create lasting value for society. Following the NOGP, an Oil and Gas Revenue Management Policy was drafted. These two policies were followed by three new bills: the two petroleum bills and the Public Finance Bill. However, there are gaps and loopholes in the existing law that need to be plugged. First, existing legislative acts lack specificity in some of their clauses; second, they do not provide policy predictability to the investors; third, they are contradictory between some sections; fourth, they do not provide strong environmental protection and are not deterrent enough to warrant enforcement. Therefore, the proposed legal framework fails to reflect the principles of the NOGP and does not satisfactorily protect the economic and environmental interests of both current and future generations.

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## APPENDICES

## Appendix 1: List of stakeholders consulted

No.	Names	Designation	Institution
1	Alex Nakajjo	Operations Officer, Trade and Regional Integration	European Union
2	Aliyo Barnabas Michael	Senior Economist	Mistry of Finance
3	Dr Stefan Lock	First Secretary Head of Section, Economic and social sectors	European Union
4	Dr. Adam Mugume	Executive Director, Research Department	Bank of Uganda
5	Ernest N.T Rubondo	Commissioner, Petroleum Exploration and Production Department	Ministry of Energy and Mineral Development
6	Eugene Muramira	Director, Policy Planning and Information	NEMA
7	Fred Kalyesubula	Deputy Chief Administrative Officer	Buliisa District
8	Geraldine O'Callaghan	Senior Governance Advisor	DFID
9	Giorgio A. M. Ficarelli	First Counsellor Head of Operations Section	European Union
10	Gloria Sebikari	Communications Officer, Petroleum Exploration and Production Department	Ministry of Energy and Mineral Development
11	Hon Biraahwa Mukitale Stephen Adyeeri	Chairperson, Committee on the National Economy	Parliament of the Republic of Uganda
12	Hon Fred Kabagambe Kaliisa	Permanent Secretary	Ministry of Energy and Mineral Development
13	Hon. Simon D'junga	Minister of Energy	Ministry of Energy and Mineral Development
14	James Insingoma	LC I chairperson,	Kabaale Village, Hoima
15	John F.S. Muwanga	Auditor General	Office of the Auditor General
16	Kasangaki Ofungi	LC I Chairperson	Kyehoro Village, Hoima
17	Kiiza Lawrence	Director Economic Affairs	Mistry of Finance
18	Prof. Emmanuel T. Mutebile	The Governor	Bank of Uganda
19	Rachael Ssebudde	Economist	The World Bank, Uganda Country Office
20	Saphetiya Mboneraho Kato	Chairperson	Hoima District Land Board
21	Seremos Mulimba	LC III Chair person	Butiaba subcounty, Hoima district
22	Ssali Edward	Senior Auditor	Office of the Auditor General

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