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UGANDA COUNTRY ECONOMIC MEMORANDUM

Economic Diversification and Growth

in the Era of Oil
and Volatility

ABRIDGED VOLUME

June 2015
Joint Report of the World Bank and the Government of Uganda



THE REPUBLIC OF UGANDA



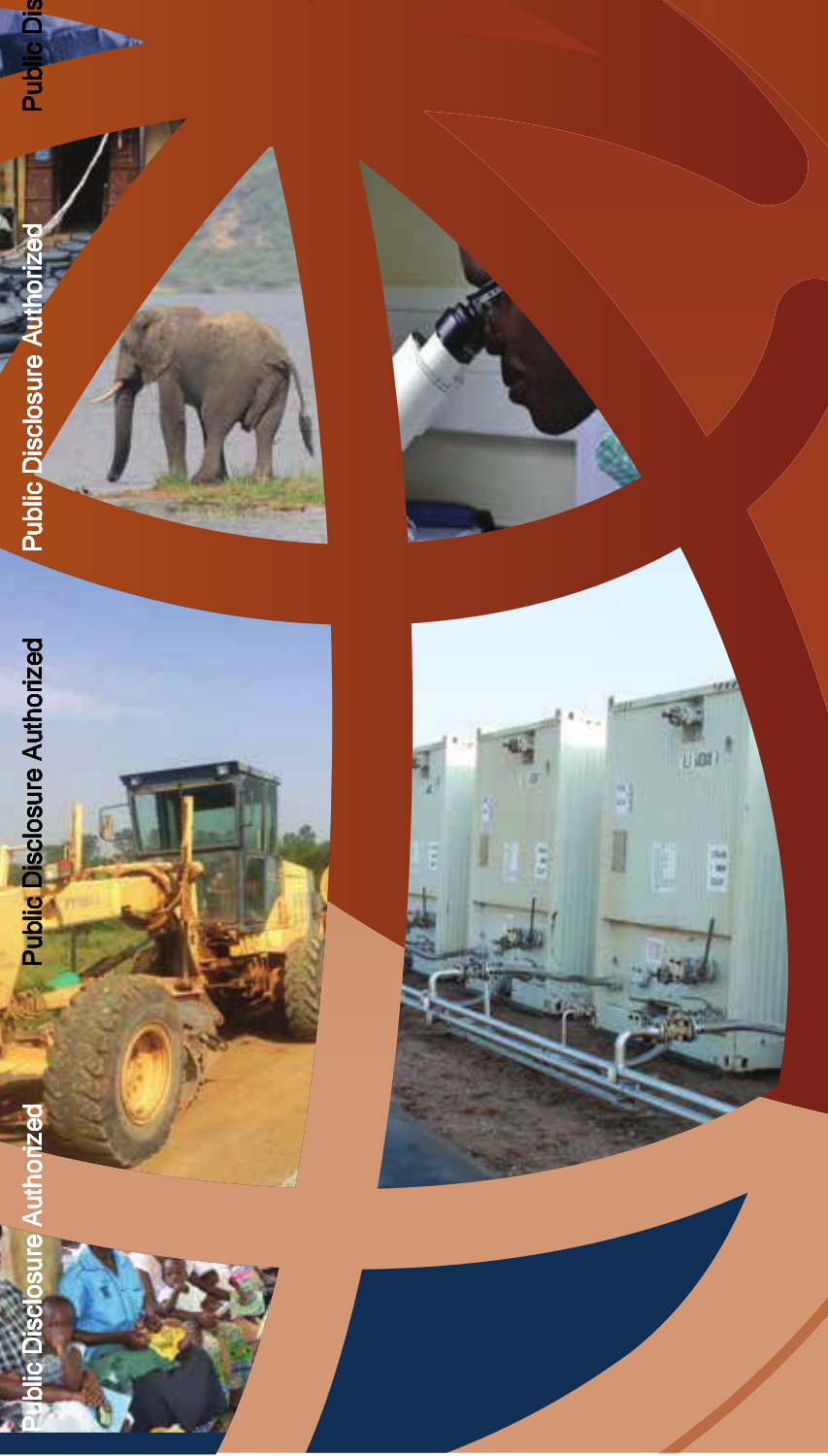
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Preface

For about ten years, from the early 2000s to 2010, the Ugandan economy grew at an average of 7 percent per annum. This achievement was accompanied by a dramatic decline in poverty rates (from 68.1 percent in 1992/93 to 33.2 percent in 2012/13, using the international poverty line of \$1.90 [2011 PPP]). Since then, a number of external and domestic factors slowed down the GDP growth rate (3.3 percent in 2013/14) which rebounded to 5 percent in FY2014/15 and an estimated 4.6 percent in FY2015/16.

Uganda is about to become an oil-producing country, and the Ugandan population hopes that the new resource will accelerate economic growth, reduce poverty and enable the country to reach its long-term goal of becoming an upper middle income country in less than thirty years. The timing of the project and its impact will depend on the level of international oil prices, which are extremely low today. However, we have reasons to believe that the price of oil will rise again and that Uganda's future oil production will have a major influence on the country's economic and fiscal performance.

The experience of other countries, in Africa and other parts of the world, shows that large scale production of oil, gas and other mineral resources offers great opportunities, but also presents major challenges. In Angola, during most of the 2000s, high oil production and high international prices boosted GDP growth, but a massively expanded and poorly managed public investment program created congestion, inefficiencies and inflationary pressures, instead of developing - slowly and soundly - the necessary long-term physical and human capital.

A new Uganda Country Economic Memorandum entitled "Economic Diversification and Growth in the Era of Oil and Volatility" has been prepared by a team of World Bank economists working in close cooperation with a Ugandan Government team. The memorandum discusses the prospects of oil and mineral production in Uganda and uses the lessons of international experience to propose an agenda of policy and institutional reforms aimed at maximizing the positive impact of oil production and avoiding the "resource curse" that affected negatively Nigeria, Angola and too many other new producers of oil, gas and minerals in the world.

We shall not try to summarize the main conclusions of the report but would like to emphasize the following six messages, which - we believe - can guide future government and donor policies.

First Message. The government views economic diversification as a key component of its strategy. The report fully supports that view. Past experience shows a strong correlation between diversification and long-term economic success. The report argues that Uganda does not need to remain a low-productivity economy dominated by agriculture and a mainly informal services sector. A product space analysis shows that Uganda has potential for the emergence of a modern manufacturing sector focused on agro-processing and light manufacturing, which would serve both the domestic and the regional markets and would provide substantial export opportunities for a variety of small and medium-sized enterprises.

Second Message. Improved governance and a conducive business environment are essential to promote the type of private sector development that will make economic diversification possible. However, a sound and well managed public investment program, largely financed by oil-related government revenue, is equally essential to remove constraints to private sector growth. Large investments in public infrastructure are urgently needed in the whole country and, in particular, in the underdeveloped and very poor Northern region. For the long-term, increased public spending in education and health is even more critical. This will offer opportunities to all and also create the well-trained labor force which a modern manufacturing and services sector will need.

Third Message. The report includes a wealth analysis which shows that oil-producing countries should invest to develop the long-term capital (physical and human) that will replace non-renewable oil resources when depleted. Quality, however, is more important than speed. A massive increase in public spending and a poorly designed and implemented public investment program will do more harm than good, stimulating a number of negative forces (resource curse, Dutch Disease) that will block the development of non-oil economic activities. The report advocates a “sustainable investing approach” that combines substantial savings with investment and links the size and speed of the public investment program to progress in absorptive capacity.

Fourth Message. Regional integration already helped Uganda diversify its production and its exports. More important than regional free trade are measures that will reduce regional transaction costs, notably investments in regional transport and energy infrastructure, and also improvements in logistics services. More complex is the issue of the creation of a monetary union. The example of the Euro-zone shows how difficult it is for individual countries in a monetary union to make the necessary macroeconomic and fiscal adjustments to external and domestic shocks. More thinking is essential before final implementation of the reform.

Fifth Message. More than one third of the Ugandan population remains poor and vulnerable to shocks and recent economic growth did not reduce income inequality. This is a major problem for many developed and developing countries today. Three types of measures could help reduce poverty and income inequality in Uganda. First, a significant infrastructure development program in the underdeveloped Northern region. Second, improved education and health services overall and in particular in the North. Third, the report discusses the feasibility of direct transfers to the poor linked with behavioral improvements (sending boys and girls to primary school, reducing dropout rates, vaccination and other basic health services). That type of scheme may be tested on a small scale in the poorest communities.

Sixth Message. The CEM describes in general terms how Uganda can experience long-term growth, fight poverty and meet the challenges that come with the development of new resources. Much more needs to be done to translate the proposed strategy into specific action plans. This should be the priority of future economic and sector work for the Ugandan government and for its development partners.



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Minister of Finance, Planning, and Economic Development
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List of Acronyms

ACD	Anti-Corruption Division of the High Court
AFCE	Africa Region East Africa Country Unit
AFMUG	Africa Region Uganda Mission
AFREC	Africa Region External Communications
AMV	Africa Mining Vision
ANS	Adjusted Net Savings
ASGM	Artisanal and Small-Scale Gold Mining
ASM	Artisanal and Small-Scale Mining
ASYCUDA	Automated System for Customs Data
ATIA	Access to Information Act
BNDES	Brazil National Bank for Social and Economic Development
BoU	Bank of Uganda
BP	British Petroleum
BPD	Barrel per day
CEDP	Competitiveness and Enterprise Development Project
CEM	Country Economic Memorandum
CEMAC	Central African Economic and Monetary Community
CGE	Computable General Equilibrium
CHD	Chad
CIID	Central Intelligence and Investigation Department
CNOOC	Chinese National Offshore Oil Company
COMESA	Common Market for East and Southern Africa
COW	Coalition of the Willing
CPA	Comprehensive Peace Agreement
CPI	Consumer Price Index
CSOs	Civil Society Organizations
CSR	Corporate Social Responsibility
DFID	Department for International Development
DNR	Depletion of Natural Resources
DPP	Department of Public Prosecution
DRC	Democratic Republic of Congo
DSGE	Dynamic Stochastic General Equilibrium
DTAs	Double Tax Agreements
E&P	Exploration and Production
E.I.A	Environmental Impact Assessment

EA	Exploration Areas
EAC	East African Community
EALA	East African Legislative Assembly
ECOWAS	Economic Community of West African States
EDU	Education Expenditure
EITI	Extractives Industry Transparency Initiative
EPCs	Engineering, Procurement and Construction
EPPs	Entry Point Projects
FDI	Foreign Direct Investment
FY	Financial Year
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GFS	Government Financial System
GIIP	Gas Initially in Place
GMFDR	Macroeconomic and Fiscal Management Global Practice
GNI	Gross National Income
GS	Gross Savings
HDI	Human Development Index
HIPC	Heavily Indebted Poor Countries
ICT	Information Communication Technology
IDA	International Development Association
IFC	International Finance Corporation
IFMS	Integrated Financial Management System
IG	Inspectorate of Government
ILPI	International Law and Policy Institute
IMF	International Monetary Fund
IOCs	International Oil Companies
JBSF	Joint Budget Support Framework
JVPs	Joint Venture Partners
LCPs	Local Content Policies
LICs	Low-Income Countries
LPG	Liquefied Petroleum Gas
MACMOD	Macro-econometric Model
MAMS	Maquette for MDG Simulations
MDAs	Ministries, Departments and Agencies

MDGs	Millennium Development Goals
MEMD	Ministry of Energy and Mineral Development
MENA	Middle East and North Africa
MFM	Macroeconomic and Fiscal Management
MFNP	Murchison Falls National Park
MFPED	Ministry of Finance, Planning and Economic Development
MICs	Middle Income Countries
MNCs	Multinational Corporations
MoES	Ministry of Education and Sports
MOU	Memorandum of Understanding
MTEF	Medium Term Expenditure Framework
NDP	National Development Plan
NEMA	National Environment Management Authority
NGOs	Non-Governmental Organizations
NOC	National Oil Company
NOGP	National Oil and Gas Policy
NONG	Non-Oil Non-Grant
NPA	National Planning Authority
NRC	Natural Resource Charter
NTB	Non-tariff barriers
O&G	Oil and Gas
OAG	Office of the Auditor General
OECD	Organization for Economic Corporation and Development
OFSE	Oil Field Services and Equipment
OLG	Overlapping Generations
OPM	Office of the Prime Minister
PAC	Public Accounts Committee
PCI	Product Complexity Index
PD	Pollution Damages
PEFA	Public Expenditure and Financial Accountability
PEPD	Petroleum Exploration and Production Department
PFM	Public Financial Management
PIM	Public Investment Management
PIMI	Public Investment Management Index

PNP	Progressive Nationalization Plan
PPDA	Public Procurement and Disposal of Assets
PPPs	Public Private Partnerships
PS	Product Space
PSA	Production Sharing Agreements
R&D	Research and Development
RCA	Revealed Comparative Advantage
RECs	Regional Economic Communities
ROR	Rate of Return
SADC	Southern Africa Development Community
SAM	Social Accounting Matrix
SBI	Sustainable Budget Index
SDSP	Skills Development Strategy and Action Plan
SMEs	Small and Medium Enterprises
SSA	Sub-Saharan Africa
STOIIP	Stock Tank Oil Initially In Place
TASU	Technical and Administrative Support Unit
TFP	Total Factor Productivity
TSA	Treasury Single Account
UAE	United Arab Emirates
UBOS	Uganda Bureau of Statistics
UGX	Uganda Shillings
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Program
UNEP	United Nations Environmental Programme
UNHS	Uganda National Household Surveys
UPIK	Uganda Petroleum Institute Kigumba
URA	Uganda Revenue Authority
US\$	United States Dollar
WEF	World Economic Forum
WFADC	Documentation and Communication Products

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1. Thorvaldur Gylfason and Jean-Pascal Nganou (2014): Diversification, Dutch Disease, and Economic Growth: Options for Uganda, Chapters 1 and 5.
2. John Matovu and Jean-Pascal Nganou (2014): Fiscal Policy Stance and Oil Revenues, Growth and Social Outcomes for Uganda, Chapter 4.
3. Pierre-Richard Agenor and Jean-Pascal Nganou (2013): Expenditure Allocation and Economic Growth in Uganda: An OLG Framework, Chapter 4.
4. Jean-Pascal N. Nganou, Juste Some, and Guy Tchuente (2014): Growth, Institutions and Foreign Direct Investments in Developing Countries, Chapter 4.
5. Andreas Eberhard, Willy Rwamparagi Kagarura, and Jean-Pascal Nganou (2014): Uganda: Transforming Natural Resources Wealth into Long-term Development-A Wealth Accounting Approach, Chapter 4.
6. Jean-Pascal Nganou, Juste Some, and Guy Tchuente (2014): Government Spending Multipliers in Natural Resource-Rich Developing Countries, Chapter 4.
7. Vincent Belinga, Maximilien Kaffo Melou, and Jean-Pascal Nganou (2014): Analysis of the Oil and non-Oil Government Revenues Nexus: Policy Lessons for Uganda, Chapters 2 and 4.
8. Paulina Aguinaga, Charles Ncho-Oguie, and Jean-Pascal Nganou (2014): Review of Oil-Price Subsidies: Lessons for Uganda, Chapter 2.
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10. Sam Wills and Rick van der Ploeg (2014): Monetary Union and East Africa's Resource Wealth, Chapter 7.
11. Rick van der Ploeg and Sam Wills (2014): Genuine Saving in East Africa: Guidelines for exploiting Natural Resource Wealth, Chapter 7.
12. Chandra Vandana, Ying Li, and Rachel Sebudde (2015): Uganda's Diversification: from farm-to-firm produced exports or farm-to-farm produced exports?, Chapters 1 and 7.
13. Luc Désiré Omgba and Vanessa Mugabe (2015): Natural Resource Charter for an efficient use of oil resources in Uganda: Building a bridge between the government and the population, Chapter 2 and 5.
14. Kenneth Amaeshi and Jean-Pascal Nganou (2014): Sustainable Development of the Oil and Gas Sector in Uganda: The role of Corporate Social Responsibility (CSR), Chapter 6.
15. Youssef Kiendrebeogo and Jean-Pascal Nganou (2014): Firm's Export, Productivity and Investment Climate in Uganda: Evidence from the Enterprise Survey, Chapter 6.
16. Rachel Sebudde and Faizal Buyinza (2014): Export, Innovation and Firm level Productivity: Evidence from Manufacturing Firms in Uganda, Chapter 6.
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Overview

Uganda wants to become an upper middle-income country within thirty years. Economic diversification is a key component of the country's development strategy. This is a sound objective. International experience shows a strong correlation between diversification and economic success. A modern economy needs a combination of manufacturing, trade and services to optimize the standard of living of the population. Economic development is a process of structural transformation through which a country moves from producing 'poor-country goods' to 'rich-country goods.'

Uganda's economic structure changed over the past three decades, with a gradual shift from agriculture to manufacturing and services. Coffee and cotton still dominate the country's exports (39 percent), but new export products have emerged, and manufactured products now account for 24 percent of total merchandise exports. The transformation in the output and export structures was not accompanied by a similar shift in the structure of employment. Agriculture employs three quarters of the population. As most of the new jobs are in informal/low productivity activities, the current pattern of economic growth generates few benefits for the bottom 40 percent households. Uganda's oil and gas potential offers an opportunity to accelerate the economic diversification process. The 'product space' analysis in the report shows that Uganda's diversification strategy should be focused on light manufacturing.

Uganda's oil reserves are modest: about 6.5 billion barrels of which 1.3—1.7 billion barrels are recoverable. So far, exploration activity was focused on three areas in the Albertine Graben region. EA1 has the largest reserves,

before EA2 and EA3. Geological surveys also identified 17 minerals with potential for commercial exploitation.

Negotiations with three major oil companies – Total (France) for EA1, Tullow (Ireland) for EA2, and CNOOC (China) for EA3 – are not completed. CNOOC may start production in 2017/18, Total and Tullow two years later. Current plans involve the construction of a refinery that would process 30,000/60,000 barrels/day for the local and regional market. What is not processed by the refinery would be exported through a pipeline to a seaport in Kenya or in Tanzania. Total oil production would peak at 230,000 barrels/day in 2025, then decline to end in 2044. The viability and the timing of the project depends on international oil prices. At the current price of about \$50, only EA1 would generate a rate of return higher than 10 percent. Projections in the report are based on an international price of \$90/barrel.

Oil production will have a significant impact on Uganda's economy. Average GDP growth rates could exceed 9 percent over 20 years. The construction phase would create 13,000 (temporary) jobs. The development of local capacity, notably in transport and logistics, would then boost growth and employment. With about 70 percent of the net present value of oil production accruing to the government, oil revenue-financed public spending would also stimulate economic growth. Additional public investment averaging \$2.1 billion/year would be used to improve infrastructure (transport and electricity) and develop the human capital. This is essential to remove constraints to growth, transform natural resources into other forms of wealth, and create new sources of sustainable income.

Uganda, however, will face four main challenges:

competitiveness (Dutch Disease), volatility, distorted public finance management practices, and poverty/inequality.

- a) *Competitiveness.* The massive inflow of FDI during the construction phase and then the rapid increase in oil exports (and price hikes) can lead to a sharp appreciation of the country's local currency with disastrous consequences for farm exports, tourism, other non-oil economic sectors and the diversification process.
- b) *Volatility.* Oil and other commodity prices are subject to rapid changes. Extreme volatility produces fluctuations in exchange rates, export earnings, output and employment and discourages investment and growth.
- c) *Distorted public finance management practices.* Many oil countries cannot resist the temptation to accelerate public investment by borrowing against future oil revenue. Rapid increases in public investment often lead to absorptive capacity constraints, congestions and inefficiencies. Tax collection is weak in oil-producing countries. Governments in oil countries are also tempted to subsidize local oil prices, with a negative impact on the environment. Abundant natural resources may also crowd out financial capital and slow down the emergence of a well-developed financial system.
- d) *Despite significant progress, poverty and inequality remain a major concern.* While the national headcount of poverty declined to less than 20 percent, it is as high as 44 percent in the underdeveloped Northern Region.

Government policies should include measures aimed at maximizing the benefits of oil production. Oil revenue should be used to support oil and mineral exploration (so far 60 percent of the oil-rich Albertine Graben region has not been explored). Government agencies should strengthen their capacity to negotiate good contracts with oil companies. The licensing process should be transparent (EITI) and include environmental impact assessments. However, future macroeconomic and fiscal policies should be focused on ways and means of leveraging the new resources to stimulate economic diversification, build up long-term capital and ensure the sustainability of the country's wealth.

- a) To maximize the socio-economic impact of its new revenue, Uganda should increase public investment gradually, and save some of its oil revenue in the early years of production. The CEM proposes a sustainable-investing approach combining investment (to foster structural transformation) and saving (to mitigate absorptive capacity constraints and Dutch Disease effects). Uganda plans to use the non-oil non-grant fiscal deficit rule which limits total spending (excluding investment and social expenditures) to the sum of non-oil revenue and a specific deficit target. Set at a prudent level and used flexibly, the NONG rule could be an effective public spending policy instrument.
- b) The volatile nature of oil prices generates boom and bust cycles that can be prevented through adequate fiscal policy. The government should save sufficient reserves not only for future generations but also to finance countercyclical policies when oil revenues decline. An inflation targeting monetary policy could increase the effectiveness of countercyclical fiscal policies.
- c) The quality of investment is critical for sustainable long-term growth. Economic simulations indicate

that, initially, investment in transport and energy infrastructure would have a stronger impact on growth. In the long-term, however, education and health spending will be more effective. Manufacturing and modern services – and the success of the government's diversification strategy – depend on a healthy and well-educated labor force.

- d) Effective private sector development policies are a critical component of an economic diversification policy. Improving the business environment, addressing critical infrastructure deficiencies, improving access to capital, strengthening existing small and medium-sized firms are some of the main instruments of the policy.
- e) Reducing poverty and inequality is essential to promote political and economic stability. Future infrastructure development programs should give priority to the poorest/underdeveloped regions of the country. Social programs focused on the poor should be designed and implemented. Direct cash transfers to poor households, linked with changes in health and education practices should be considered and tested.

Implementation of the proposed strategy depends on the capacity and efficiency of three main actors: Uganda's public sector, private enterprises and regional institutions.

- a) Within Uganda's public sector, seven institutions play a major role in formulating and implementing the strategy and managing oil and mineral resources. A combination of technical support and capacity development programs should improve the technical competence of these institutions. Corruption is a serious problem. Transparency and accountability, stronger performance of audit and anti-corruption agencies and improved PFM systems are essential. Better public investment planning, based on detailed

feasibility studies should improve the quality and efficiency of the country's development program. The development and implementation of an effective nationwide communication strategy for the oil and gas sector is also a priority.

- b) The private sector is the most powerful instrument of economic development. The agricultural sector (demand for food) could be a major beneficiary of oil production. Mining and tourism have potential for private sector development. Building on existing capacities, Uganda could expand and diversify its manufactured exports. Realistic and effective local content policies would promote linkages between the oil industry and the domestic private sector. Their success depends on the selection of sectors in which local capacity is available or can be developed.
- c) Uganda is one of the main beneficiaries of its EAC membership. Regional integration helped Uganda increase and diversify its exports. The development of a regional infrastructure and the reduction of cross-border trading costs will be as important as trade preferences to stimulate regional trade and economic activity. Regional cooperation will play a role in the development of Uganda's oil industry (ownership of the refinery and construction/management of the pipeline). The EAC plans to create a monetary union within ten years. Substantial benefits are expected but the development of oil and gas production in Uganda, Kenya and Tanzania and the fluctuations of energy prices will have asymmetric consequences on the three main EAC countries and two resource-poor countries (Rwanda and Burundi). Prudent macroeconomic and fiscal policies will be essential to prevent a spill-over of the Dutch Disease.

Part I: An Economic Development and Diversification Strategy - Main Goals

The first part of the report focuses on the importance of economic diversification for Uganda and on the prospects/challenges of oil and mineral development. It addresses the following three issues: (a) why diversification is important for economic development; (b) where Uganda stands in that area and why it should give a new impetus to its diversification strategy; and (c) what are the prospects, possible impact, and challenges associated to oil and mining development for Uganda's economy.

A. Why is economic diversification important for economic development? Lessons from international experience

Economic development is viewed as a process of structural transformation through which a country moves from producing 'poor - country goods' to 'rich - country goods'. A modern economy needs a combination of manufacturing, trade, and services to optimize the standard of living of the population. Economic success is generally reflected by the country's ability to produce a variety of goods and services that can be sold to other countries. For a country like Uganda, the challenge is therefore to move away from dominant (subsistence) agricultural activities that keep the rural population in poverty, and from over-dependence on a few natural resources that may delay the expansion of modern manufacturing and services and job creation for the majority of the population.

Although many resource-rich countries have developed their economies and enjoy higher standards of living over time, the most successful ones are the few that have been able to diversify their production and export base (see Figure 1). Malaysia, Indonesia, and Mexico have all moved away from oil dependence by diversifying their exports, and witnessed accelerated and sustainable economic growth over time. By contrast, Angola, Nigeria, Libya, and Venezuela have not succeeded in diversifying their economies, and reported lower per capita growth over the past three decades.

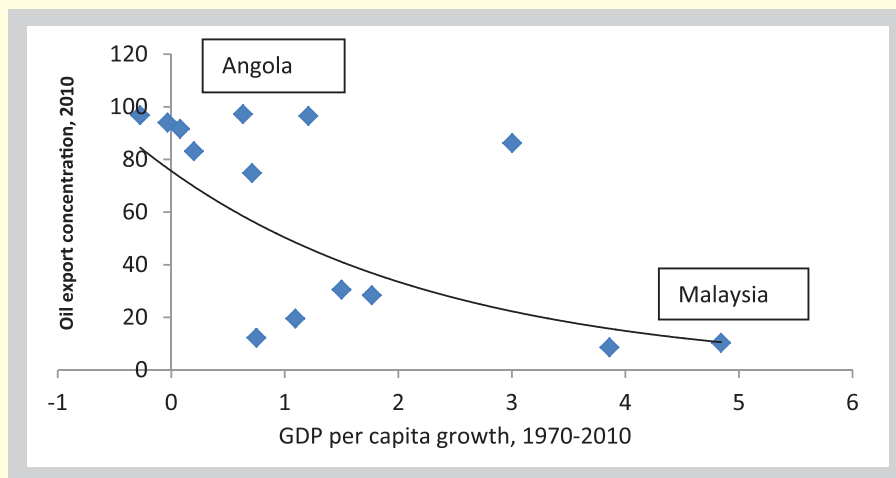
B. Why should Uganda expand and accelerate its diversification strategy?

The structure of the Ugandan economy changed significantly over the past three decades, with a gradual shift from agriculture to manufacturing and services. The growth in the last decade was largely driven by the expansion of services, which now account for almost half of the country's GDP. The share of the primary sector (including agriculture) declined to 30 percent, while industry represents approximately 23 percent. Among services, telecommunication, transport, and financial services grew by over 7 percent annually over the past three years, reflecting higher local demand and technological changes (the mobile phone revolution). The industrial sector grew by 6 percent between 2011 and 2013, reflecting the

expansion of construction, fueled by growing investment and the gradual urbanization process. Some growth was generated by manufacturing, particularly the emergence of agro-processing (including fish fillets, meat processing), metal, and chemical industries (including gold). Although the primary sector remains the least-performing sector, its growth rate improved from 1.3 percent during the second half of the 2000s to 1.9 percent in 2011-13.

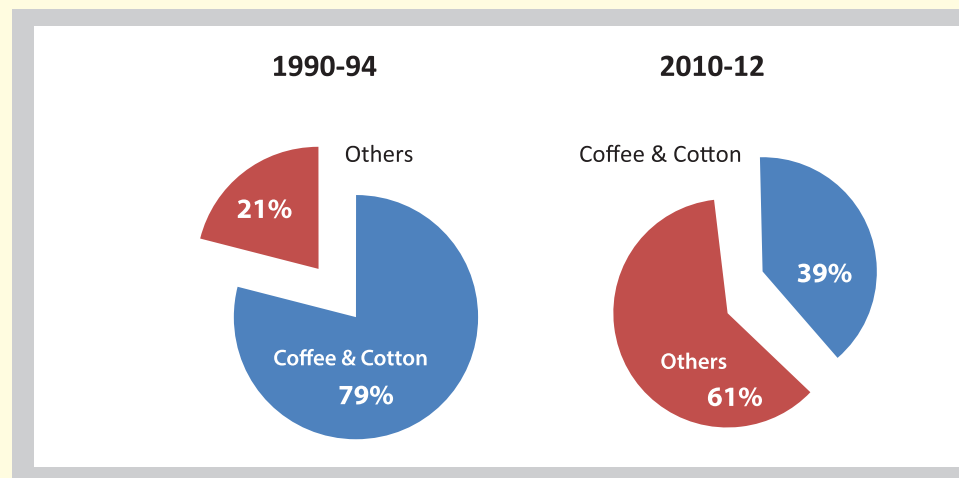
The transformation of Uganda's economy is visible through an increased diversification of its trade base. This diversification is both geographical and in terms of products. First, Uganda's trade has become gradually less dependent on Europe and increased its partnership with Asian and regional countries. Fifteen percent of Uganda's imports come from Kenya and 41 percent of its exports go to South Sudan, the Democratic Republic of Congo (DRC), Kenya, Rwanda and Burundi. Second, in terms of products, trade concentration (as measured by the contribution of five top products in total export earnings) declined from over 95 percent in the early 1980s to about 86 percent in the 1990s and 55 percent in 2010-12. Although coffee and cotton still dominate Uganda's exports (39 percent), the country's export basket now includes about 60 new products, including cooking oils, processed fruits and vegetables, and fish. In addition, several new sub-sectors (flowers, wood, minerals, and chemicals) have emerged. Uganda also exports light manufactures (skins and hides processed

Figure 1: Export Diversification and Per Capita Income Growth in Oil-producing Countries.



Source: Cherif and Hasanov (2014): "Soaring of the Gulf Falcons: Diversification in the GCC Oil Exporters in Seven Propositions", IMF Working Paper WP/14/177.

Figure 2: Uganda's Export Trade



Source: Chandra et al. (2015).

into high-value leather), and heavy manufactures, including construction materials made from iron and steel. The share of manufactures in total merchandise exports increased from 2 percent in 1994 to 34 percent in 2012. This is a good sign for the future of the country's industrialization process, although the construction sector still relies on imported iron and steel.

The gradual transformation in the output and export structures of Uganda was not accompanied by a similar shift in the employment structure. Today, approximately three-quarters of Ugandan households continue to report agriculture as their primary economic activity. While the labor force is moving away from farming, most of the new jobs are created in informal and low-productive activities, such as trading. The fastest growing sectors of the economy (finance, communication) are not as labor intensive.

Consequently, the current pattern of growth has only weakly benefited the bottom 40 percent of the population.

In this context, it is clear that Uganda should scale up its diversification efforts. The product space analysis (PS) conducted in the main report, shows that a sound diversification strategy should be focused on light manufactured exports, such as garments, leather, and wood products. These products do not require sophisticated skills, which are not readily available in Uganda, and would use the large pool of unskilled and semi-skilled workers available in the country. Uganda's strategy could get inspired by the recent success of Ethiopia and Lesotho in developing a vibrant local manufacturing industry. Other opportunities include agriculture-related processing industries (cereals, dairy products, more types of cooking oils, and new sugar products), that can leverage the country's agriculture pro-

duction. The existing chemicals and metal product industries can also serve as stepping stones towards more sophisticated diversification in the longer term.

The oil and gas potential of the country can offer an opportunity for Uganda to diversify its economy, although this needs proper management to avoid a negative impact on other forms of diversification. Oil can help a country diversify through different channels. First, oil could help Uganda promote the emergence of an energy-intensive industry, such as chemicals, fertilizers, or cement. Second, oil will bring substantial revenues to the state, which could invest them in infrastructure and human capital development. Third, the exploitation of oil could create synergies with local industries through forward and backward linkages. Successful countries are those which have been able to harness those channels over time.

C. What are the prospects, potential impact, and challenges of oil and other extractive industries in Uganda?

a. Prospects of oil and mineral development

Today, the country's total oil reserves are estimated at 6.5 billion barrels (of which 1.3 billion barrels are recoverable), but only 40 percent of the country's potential has been explored so far. Drilling activity intensified along the Albertine Graben in the early 2000s with a special focus on three exploration areas (EA1 with 923 million barrels of recoverable reserves, EA2 with 231 million barrels, and EA3A with 134 million barrels). Beyond oil, Uganda has a rich mineral industry. Geological and airborne surveys conducted since 2003 identified 17 minerals (copper, cobalt, gold, iron ore, columbite tantalite, tin, titanium, tungsten, limestone/marble, phosphate, vermiculite, rare earth elements, kaolin, gypsum, salt, glass sand, and dimension stones) with potential for commercial exploitation. Today, Artisanal and Small-scale Mining (ASM) provides direct employment to more than 200,000 people and more than 1.5 million people benefit from backward and forward linkages to the mineral sector.

In the oil sector, negotiations between the government and international investors began in 2012, but are not yet finalized. Three major international oil companies, including Total (France) for EA1, Tullow (Ireland) for EA2, and CNOOC (China) for EA3A, are expected to start production in 2017/18 (CNOOC) and 2019/20 (Total and Tullow). Current plans include (i) the processing of 30,000-60,000 bar-

rels/day in a local refinery for the domestic and the regional markets (Burundi, DRC, South Sudan and Rwanda), and (ii) exporting additional output through a pipeline linking Uganda's oil fields to the coast line of Kenya or Tanzania. Total production is expected to peak at 230,000 barrels/day by 2025, but will decline thereafter and end around 2044.

At this stage, the investment plans are influenced by two important factors that are not entirely under the control of the Government of Uganda. The first one is the construction of the pipeline that will enable Uganda to export its oil through Kenya or Tanzania. The second factor is the medium to long-term price of oil on international markets. The economic viability of the three main oil areas will largely depend on the future price of oil. As illustrated in Figure 3, the rate of returns of the three existing areas will exceed 10 percent only if the oil price is over US\$85. At a price of US\$50, only one of the three areas will generate a rate of return higher than 10 percent.

b. Impact of oil and mineral development

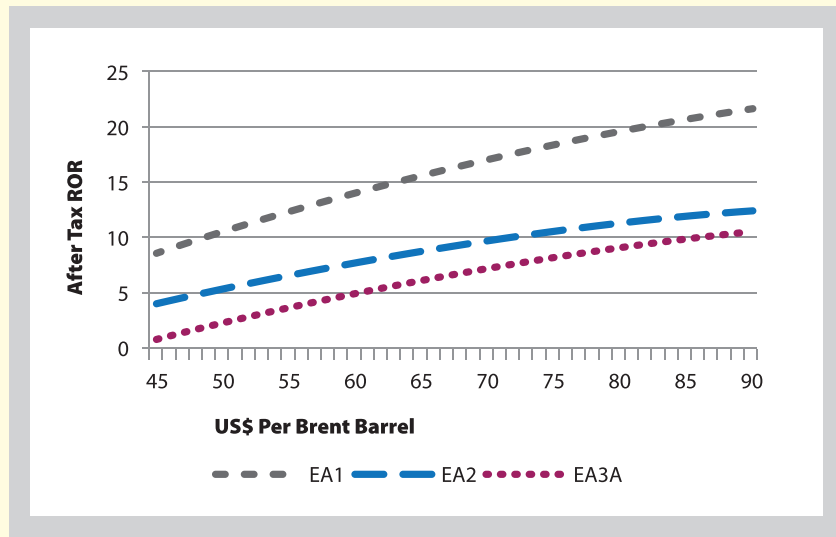
Oil production will have a significant impact on Uganda's economy. This report used alternative macroeconomic models to evaluate the (present and future) impact of oil production on Uganda's economy. Based on an international oil price of US\$90, our projections show that GDP growth rates could exceed 9.0 percent per year over the next two decades through a combination of demand and supply effects directly generated by oil activities. This impact will however vary over time, depending on production patterns. Those effects are also sensitive to the policies that will be implemented by the Ugandan authorities.

The first impact of oil on the local economy will be created through the creation of 13,000 jobs during the initial phase of construction. The number of permanent jobs in and around the oil industry will decline to about 3,000 when production begins, but the development of local capacity through training and linkages, notably in sectors like transportation and logistics, has the potential to boost further economic growth and employment.

The second impact is related to the sequential trade balance effects of oil. In fact, as foreign direct investment (FDI) increases when firms are focusing on the construction phase in the petroleum sector as well as other oil-related imports, growth in total imports is expected to accelerate from 4.5 percent in 2014/15 to an average of 12.5 percent over the period 2017/18 to 2020/21. Subsequently, annual import growth will gradually decline, reaching 7 percent in 2030/31, as the need for significant imported inputs declines and the construction phase winds out. At the same time, oil exports will increase gradually from a very insignificant level in 2017-20 to 6.6 percent of GDP in 2024-30. In line with these developments, the country's trade balance (as share of GDP) will first deteriorate slightly from a deficit of 9.7 percent in 2014/15 to 17.9 percent on average over the period 2017/18 to 2020/21 but will improve significantly thereafter due to the stronger performance of oil and non-oil exports.

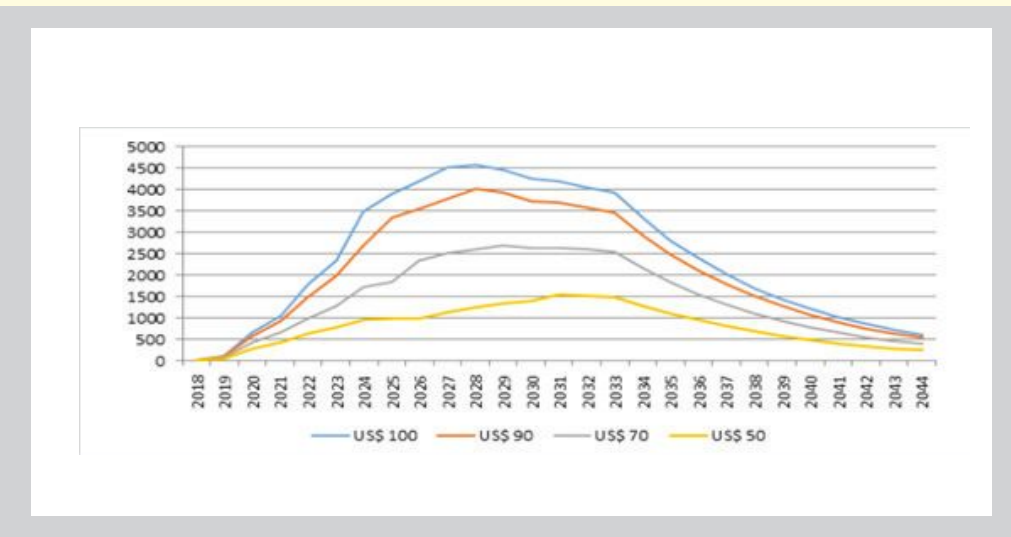
Third, oil production will also have a positive (indirect) impact on Uganda's economy through the use of additional public revenue. On the basis of the production sharing agreements already concluded, and assuming a long-term international price of US\$90 per barrel, about 70

Figure 3: Economic Viability of Oil Areas Depending on Future Barrel Price



Source: Oil & Gas Mega Model (Uganda).

Figure 4: Impact of Oil Price on Projected Government Petroleum Revenue



Source: Eberhard et al. (2014).

percent of the net present value of oil production would go to the government. The amount of additional public revenue would average US\$2.5 billion/year (more than 50 percent of current government revenue). Based on past experience in successful oil-producing countries, and taking into account Uganda's situation, those revenues should be used to finance the existing needs in infrastructure and human capital. While smart management will require finding the right balance between consumption and savings, the current needs are so high in Uganda that a substantial share of the additional revenues should be used to address current deficiencies. Access to electricity and connectivity are serious challenges for private businesses but infrastructure investments would help reduce Uganda's lag with other low-income countries. Concurrently, improvements in education will be particularly critical to boost the stock of human capital in the long-term, notably when oil and mineral resources are

depleted. In brief, an assets diversification strategy which transforms natural capital (including oil) into tangible and intangible capital is essential for the sustainability of the country's wealth.

The magnitude of the stream of additional oil-related government revenue, and therefore its growth impact, will largely depend on the future price for crude oil. Revenue projections are very sensitive to the assumed oil price (Figure 4). Before oil prices started declining heavily in mid-2014, the price for one barrel of oil had hovered around the US\$100 mark for several years. At this level, oil revenue for the government would average close to US\$2.5 billion a year between 2017/18 and 2044/45. Assuming an international price of oil of US\$50 per barrel, average oil revenue will only amount to about US\$800 million a year. Similarly, the direct contribution of the oil sector to GDP

would fall to 4.5 percent from 9 percent under our baseline scenario.

So far, the contribution of the mining sector has remained modest, but prospects are positive. The growth of the sector averaged 9.8 percent in recent years, but its contribution to GDP did not exceed 0.3 percent. Mineral exports (mostly gold, iron ore, silver, tin, tungsten, vermiculite, cobalt, and copper) accounted for only 1 percent of total exports in 2012/13. However, Uganda's rich mineral wealth is virtually untapped. Political, and economic stability in the country, availability of geo-data, and growing global demand, notably from emerging countries like China, and India, led to significant increases in FDI for the sector. To harness the exploitation of its mineral resources, the government must adopt a comprehensive development-driven policy, focused on the value of the derived demand through the mineral

value chain. This includes the creation of a sound legal, and regulatory framework, and addressing infrastructure inadequacies, and human capital deficiencies, notably in knowledge-intensive areas. Many of the mineral sector developments could be financed through the additional revenue that the government is set to receive with the onset of oil production. Simulations suggest that the government will receive an additional US\$56 billion in revenue over the next two decades, which, if soundly invested, could also support the minerals sector. This in turn may attract additional FDI which could further boost mining activity in the years to come.

There is little doubt that oil (and other minerals) can be a game changer for Uganda. As evidenced above, the exploitation of those resources can increase employment, government revenues, and exports. These direct positive effects can be magnified through smart policies that will favor the optimal allocation of public revenues towards infrastructure, and human capital. However, international experience also demonstrates that the management of oil brings a full variety of challenges to policymakers.

c. Challenges associated with oil and mineral development

These challenges are at different levels. The first level is associated to the project cycle from construction to exploitation, and its impact on the country's main economic and financial variables. The Dutch Disease effect is well known by economists. The massive inflows of FDI in the phase of construction (even if it is partly compensated by higher imports) can lead to a real appreciation of the local currency that will reduce Uganda's export competitiveness.

This negative effect can even become more important after the start of oil exports. Rising exchange rates together with price hikes for services (triggered by oil revenue and expatriate workers' earnings) would affect the profitability of farm exports and tourism sector. The volatility of oil prices can also have severe negative consequences for oil producers. The volatility of oil prices had a major impact on Congo, Venezuela, and Nigeria and many other oil-producing countries. Volatility produces fluctuations in exchange rates, export earnings, output, and employment, and discourages investment and growth.

The second level of challenges concerns public finance. It starts with the temptation to borrow against (future) oil revenues. Few countries have been able to resist this temptation as illustrated by the recent example of Ghana. The government should realize that oil revenues are volatile and will depend on international oil prices on oil markets. The establishment of contingent financial reserves is important in that context. Often, the availability of oil revenues reduces the country's tax effort. A one percentage point increase in resource revenue (in percent of GDP) may lead to a decline in non-resource government revenue by 0.2-0.3 percentage points. Tax collection is weak in oil-producing countries. Uganda will also have to establish a reliable and transparent public investment management system, which will help the government select and implement an optimal portfolio of investment projects. Finally, there is evidence that resource-rich countries tend to allocate a smaller share of their national income to education. They send fewer children to school than countries with the same income level but fewer natural resources. A possible explanation is a false sense of economic security that influences the mindset of

the authorities and segments of the population.

The third level of challenges lies in the mix of policies that the government will use to promote private sector activities. The government may wish to influence the allocation of resources by introducing a complex set of subsidies and incentives. For example, the government can be tempted to subsidize local oil prices with the good intent to favor local businesses but this can be detrimental in the longer term as it discourages energy saving behavior and negatively affects the environment. The government may also wish to indirectly subsidize resource-based industries by not charging them enough for their extraction rights. Taxing the revenue of these industries too lightly can lead to overvaluation of the currency and associated balance of payment and external debt problems. Abundant natural resources may also crowd out financial capital by holding back the emergence of a well-developed financial system, and producing an inefficient allocation of savings across industries and firms.

These challenges, by nature, are not easy to address. In addition, multiple and evolving factors have to be taken into account in the decision making process. The oil-producing countries that have been able to optimize the use of their oil resources are those that have been able to increase the governance framework over time. Countries rich in natural resources are generally getting lower scores in terms of governance indicators (see the Ibrahim index of Africa governance) and corruption (Transparency International; see also Figure 4). However, the most successful countries have been those that were able to improve their scores over time (Figure 5).

Part II: Policy Priorities Around Four Building Blocks

The second part of the report discusses how Uganda's oil should be used as a tool to promote further economic diversification. Our proposal is to adopt an action plan organized around four building blocks. The first building block includes measures aimed at strengthening the benefits that the country expects to receive from its untapped oil and mineral potential by enhancing exploration and negotiating good contracts with investors, while minimizing the negative social and environmental impacts of oil and mining production. Such actions should be taken at an early stage of the cycle. The second building block is about macroeconomic and financial policy considerations, that is, savings and consumption trade-offs, borrowing, and volatility concerns. The third building block is about public sector management, including allocative and financial efficiency of public expenditure, and efforts to minimize the possible crowding out of non-resources expenditures and aid. Finally, the fourth building block concerns policies to promote private sector development. All these four building blocks are important but it is their combination that will ultimately determine to what extent oil will help Uganda diversify its economy and improve the living conditions of the majority of its citizens.

A. Leveraging the benefits of oil and extractives for economic diversification

Very often, policymakers focus their attention on how to use the resources derived from oil. While this question is

obviously important, the first stage should be to ensure that the maximum amount of revenues will be collected by the country. This supposes that exploration activities continue and that contracts with investors are well negotiated by the government. Therefore, the government's agenda should include measures aimed at supporting new exploration in areas with untapped oil and mineral potential and maximizing the economic and fiscal benefits expected from oil/mining production through good contract negotiations and promoting more transparency in the licensing system. At the same time, during those initial negotiations, the government should attempt to minimize the negative impacts oil and mineral developments may have on the environment and ensure the emergence of a consensus on how oil revenues will be shared among stakeholders in the country.

a. Supporting oil and mineral exploration

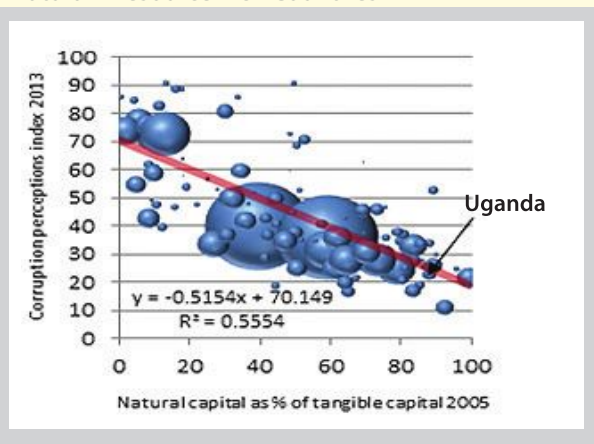
Uganda's government must encourage exploration of oil and mineral deposits first in the parts of the oil-rich Albertine Graben region that have not been explored (about 60 percent of the region), and, second, where potentially viable mineral deposits have been identified. The adoption of downstream and upstream laws in 2012 clarified the legal framework and paved the way for a new round of exploration licenses. As a result, private FDI flows are among the highest in East Africa and keep growing. However, more efforts are needed to attract additional FDI

resources, facilitate the exploration and exploitation of the country's resources, and create a business climate favorable to the development of domestic economic activities linked with, or independent from, the oil and mineral sector. This means: (i) additional geological and other surveys, which can be (partially) financed by the public sector with the help of Uganda's development partners, and (ii) the creation of a stable legal and institutional environment attractive for private investors. The exploration of oil and minerals requires large investments and state-of-the-art technology. It is economically risky and most of the developing countries need the help of foreign investors to access the most appropriate exploration technology.

b. Strengthening capacity in contract negotiations and promoting transparency in the licensing process

First, the government should negotiate good contracts with foreign investors. The bargaining power of oil companies is reinforced by their vast experience in the field. The government should not hesitate to hire independent expertise that will strengthen its negotiating position and will help obtain the best possible outcome. So far, oil-related negotiations have been led by the Petroleum Exploration Production Department of the Ministry in charge of Mineral Development. A first phase of production sharing agreements (PSA) has already been negotiated with IOCs with respect to three main exploration areas (EA1, EA2, and EA3A).

Figure 4: Higher Corruption (less transparency) in Natural - Resource Rich Countries

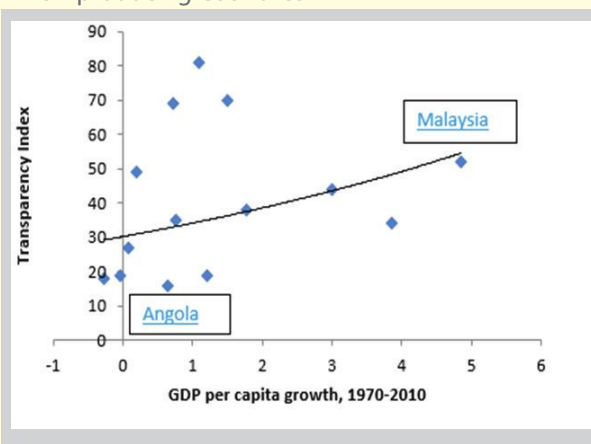


Source: Authors' computations based on World Bank, World Development Indicators, updates of World Bank data (2006) and data from Transparency International.

Note: 'Natural Capital' goes beyond 'Natural Resources'. This explains Uganda's very high share of natural capital as per the 2005 figures which do not include oil (that is, natural capital represents 84 percent of tangible capital).

Second, the government should establish a Multi-sector team because oil contract involves many different issues, ranging from land to labor, taxes and environment. The second recommendation would be to invest in educating local staff on various aspects of the oil and gas industry so that the country does not need to always rely on outside experts. Incidentally, some of the national institutions dealing with the oil sector, including the National Oil Company (NOC) and the Petroleum Authority, are not yet in place. This could also explain why the Petroleum Exploration Production Department of the Ministry in charge of Mineral Development, which is currently leading negotiations, may be overstretched resulting in long delays

Figure 5: Transparency and Economic Performance in Oil-producing Countries



Source: Authors' computations based on World Bank, World Development Indicators, and data from Transparency International.

on processing production license applications.

An important step forward would be to improve accountability by publishing all contracts. The Access to Information Act of 2005 (ATIA) provides that detailed information on PSAs and production licenses should be available to the public, and an online cadaster similar to the one available in the mining sector (which provides detailed information on mineral licenses) should be introduced for the oil sector. A growing body of international evidence shows that full transparency regarding the conditions of contracts is an important pre-condition for accountability. Without transparency, natural resource rents may be confiscated and may not benefit the rightful owners of the resource.

Adherence to the Extractives Industry Transparency Initiative (EITI) would also send a positive signal to the local and international community about the government's commitment to good governance in the oil and mining sector. The recently enacted PFM Law indicates that annual and semi-annual reports of the Petroleum Fund should be submitted to the parliament. Ugandan laws and regulations, however, do not require oil companies to publish information about payments made to the government. The preparation of new regulations for implementing the PFM Act provides an opportunity to introduce mandatory disclosure requirements regarding payments by the oil companies (in line with EITI standards).

c. Minimizing the impact of oil and mineral development on the environment

The risk of environmental damage linked to oil production is not immediate but should be addressed as early as possible. Environmental impact assessments should always be carried out before delivery of exploitation licenses. In addition, oil and mining companies should be responsible for restoring degraded land and polluted resources to their original condition. The capacity of local communities should be developed to ensure that environmental damages are minimized and to help these communities derive substantial benefits from local content policies.

d. Agreement on basic principles of redistribution mechanisms

Oil benefits can vary both in level and utilization. At an early stage, it is important that all stakeholders agree on basic principles. There is no single blue print applicable to all oil-producing countries. Consequently, a dialogue



Contractors handling lifting equipment at an exploration site in western Uganda

on the issue should be initiated and extensive consultation mechanisms should be created to avoid future conflicts.

The use of oil resources may worsen existing inequality and may create conflicts between local interests and national development objectives. It is therefore important to set up clear rules of distribution of revenues between the national and local governments. There have also been repeated calls on governments to distribute oil earnings directly to households in the form of lump-sum transfers based on the Alaska distribution model. These proposals are motivated by the lack of trust in political leaders with respect to the management of oil earnings. Again, it would be essential to agree on the rules of the games that will

determine the allocation of oil revenues to finance structural investment and to help finance vulnerable groups.

Effective consultation mechanisms should lead to a sound infrastructure development program that will assess the above-mentioned trade-offs between the national and local governments as well as between structural investment projects and cash transfers. The government may launch specific studies on how oil revenues can be used to address poverty by targeted programs. It may want to explore the feasibility of conditional cash transfers to low-income households linked with special initiatives for the welfare of children and other vulnerable members of the community. As Uganda spends around 0.4 percent of GDP

on social protection schemes (excluding contributions to pension funds) compared to 2-3 percent in other developing countries, increasing spending on social protection would enable the poor to better participate in the growth process as Uganda transforms itself into a middle-income country. It would also reduce vulnerability. Experience in other countries over the past decade shows that well-designed large-scale social protection programs can have a tremendous impact on the conditions of the poorest, at affordable fiscal cost. As an illustration of the effectiveness of such programs, we have estimated that the impact of providing monthly cash transfers of about UGX25000 to households in the North East, the West Nile, and the Mid-North regions would contribute to a significant reduction in poverty rates from 74.5 percent to 67.8 percent in the North, from 42 percent to 33.7 percent in the West Nile, and from 35.6 percent to 31.1 percent in the Mid-North.

B. Macroeconomic and financial policy considerations

To leverage its new resources for further economic diversification and ensure the sustainability of the country's wealth, Uganda must transform its natural capital into physical, human, financial, and social capital. Maintaining macroeconomic and financial stability is an important part of this objective. The government's policy in this regard should address the following issues: (a) minimize savings-consumption trade-offs through appropriate consumption-investment decisions, (b) adopt borrowing dynamics consistent with acceptable debt limits, and (c) isolate the economy from oil price volatility.

One of the manifestations of the resource curse is Dutch Disease, which turns poorly managed natural resource

wealth into a mixed blessing and reduces long-term growth. In fact, although the discovery of oil resources is expected to generate extra resources and spur investment in physical infrastructure and human capital, it is also associated with challenges as it may inhibit the development of the tradable sectors due to a real appreciation of the exchange rate (Dutch Disease). Moreover, the lack of diversification and inadequate transformation of natural capital into other forms of capital critical for long-term sustainable growth can exacerbate the effects of Dutch Disease. Therefore, prudent macroeconomic policies (including an inflation targeting monetary policy) are essential to fight the effects of Dutch Disease and achieve the country's economic diversification objectives.

a. Savings-Consumption trade-offs

Resource-rich countries pursue different investment strategies for their oil proceeds. Brazil used natural resource rents to expand its savings abroad, while Botswana's priorities were more focused on building its existing stock of infrastructure and human capital. Judgments about the absorptive capacity of the domestic economy and about the appropriate pace of investment are the main factors that should determine savings and consumption trade-offs. The strength of the institutional framework should also be taken into account. In weak institutional set ups, investment spending leads to low returns due to poor project selection, appraisal, and implementation. In such circumstances it makes sense to save part of oil revenues and invest in foreign assets, including sovereign bonds in industrialized countries with high credit ratings. These savings would be used at a later stage when improved investment capacity will enable the economy to adjust gradually to higher investment levels.

In Uganda, the Public Finance Management Act 2015 stipulates that all oil-related revenues will be deposited

into a holding account overseen by the parliament, which will be used to finance the budget or will be transferred to a special savings fund called the Petroleum Revenue Investment Reserve. This savings fund will operate as a sovereign wealth fund. It will enable the country to save for future needs and will smooth government expenditure when oil prices fall. The law, however, does not indicate which share of annual oil revenue will be deposited in the account. In Ghana, the law stipulates that each year 15 percent of all oil revenue should be saved and deposited in a stabilization fund to absorb unexpected oil revenue shortfalls. If Uganda adopts a similar rule, enough savings would be accumulated by the end of 2024/25 to absorb a sudden drop in oil revenue of almost 50 percent. Simulations from a Dynamic Stochastic General Equilibrium (DSGE) model indicates that 15-30 percent of oil revenue should be saved to minimize the volatility of three key macroeconomic aggregates (public consumption, private investment, and total employment).

In resource-rich countries, the ultimate policy goal must be to transform a temporary increase in revenue into a long-lasting source of income. To measure to which extent countries save and invest in a sustainable manner, the 'wealth accounting framework' uses the concept of adjusted net savings (ANS), which takes into account investments in different forms of capital, including depreciation. While Sub-Saharan Africa grew robustly at an average annual rate of 5 percent since the turn of the century, many resource-rich countries (Nigeria, Angola) had negative ANS rates because they depleted resources without exhibiting high returns. Since 1982, Uganda's ANS has also been negative, principally as a result of the depletion of its forests.

The discovery of oil in commercial quantities boosted Uganda's total wealth but also raised the challenge to report a positive ANS in the future. Starting in FY2017/18, oil rents will average about 3.4 percent of GNI

for over 25 years. In other words, the average wealth of a Ugandan today is about UGX2.7 million higher due to oil discoveries.

To increase its ANS, Uganda should not only consume some of its oil revenue to improve the living conditions of current generations but should also invest strategically to lift the income level of many generations to come. To achieve this, Uganda needs to build up other forms of capital as oil reserves are gradually depleted. If the depletion of oil reserves leads to increased consumption and is not matched with increased investments in other forms of capital, Uganda's wealth will decline over time. As was mentioned before, the development of the oil industry offers many opportunities to raise public investment and to improve the living standards of the country's for both current and future generations.

New oil revenue will enable Uganda's government to accelerate public investment, but it will also create new challenges for the private and the public sectors and may lead to low investment quality. The case of Angola shows that increasing investment too quickly exacerbates absorptive capacity constraints in the public sector and triggers supply-side bottlenecks in a private sector unable to increase the supply of non-tradable products and services. Weak institutional structures for public investment management often lead to low returns due to poor project selection, appraisal, and implementation. Accelerating the pace of investment will be feasible if the management of public investment improves and the government implements policies aimed at stimulating an adequate response of the private sector to the resource boom. Background analysis using the Computable General Equilibrium (CGE) and Overlapping Generations (OLG) models shows that improved efficiency in public sector spending would lead to higher GDP growth rates.

To maximize the socioeconomic impact of new revenue, Uganda should increase investment levels gradually and save some of its oil revenue in the early years of oil production. Investing abroad gives time to consider which domestic investments should be undertaken. The CEM compares three alternative strategies using a DSGE built for Uganda, that is, (i) the all-saving approach, in which natural resource proceeds are totally saved (only the return on savings is used to finance the domestic economy), (ii) the all-investing approach, in which all the proceeds are invested in productive projects, and: (iii) the sustainable investing approach, which allocates a fraction of the natural resource proceeds to remove growth binding constraints (such as infrastructure), while the rest is stored in a *Parking Fund* for future investments. The sustainable-investing approach provides an optimal combination of investment and saving depending on the size of oil production and the characteristics of the country's economy. Investment is needed to foster structural transformation but the increase in investment should be gradual to mitigate absorptive capacity constraints and Dutch Disease effects. In particular, the gradual scaling-up of investments under this scenario triggers a smaller exchange rate appreciation than the all-investing approach, but higher levels of welfare than the all-saving approach.

The countries that implement clear fiscal rules on how initial oil revenue will be spent generally are the most successful in their transition from net oil consumer to net oil producer. According to its Petroleum Revenue Management Policy, Uganda will use the non-oil non-grant NONG fiscal deficit as an anchor for public expenditures. This means that total spending will be limited to the sum of domestic non-oil revenue and the deficit target. With current domestic revenue reaching 14 percent of GDP, a non-oil non-grant fiscal deficit target of 5 percent would limit

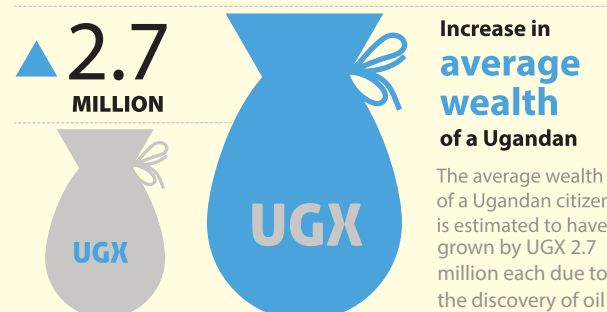
today's expenditure to 19 percent of GDP. Set at a prudent level, the NONG fiscal deficit rule could prevent a too rapid increase in expenditure when oil production begins.

In addition to implementing an adequate NONG fiscal deficit rule, the government should deposit each year a fixed share of oil revenues in a savings account. The right level of NONG fiscal deficit depends on expected oil revenue and the targeted level of government expenditures. The CEM presents two alternatives. The first option would set the NONG deficit target at a fixed rate of 5 percent of GDP. With expected oil revenue of 1.2 percent of GDP and grants of 0.6 percent over the first four years of oil production, the overall deficit would average 3.5 percent, thus enabling Uganda to comply with the 3 percent deficit target of the EAC monetary union by FY2020/21. However, a fixed target of NONG budget deficit does not take into account the bell shape nature of the oil production path. It would therefore result in high fiscal deficits in the early years and very low deficits when oil production peaks by the mid-2020s. Alternatively, the proposed NONG fiscal deficit limit would be revised every 3-5 years in line with the inflow of oil revenue.

Resource-rich countries use a wide variety of fiscal rules to promote sound fiscal management of natural resources. In 1994, Botswana adopted a Sustainable Budget Index (SBI), which provides that the ratio of non-education, non-health recurrent expenditure to non-mining revenue should not exceed unity. Implementation of the policy prevented excessive spending and ensured fiscal sustainability in anticipation of the depletion of diamond deposits.¹ Both the fixed and the flexible fiscal deficit rules presented in the previous paragraph would comply with a Botswana type system. Combined with an explicit savings target for each year, the NONG rule would also have advantages over Ghana's widely praised petroleum revenue management law, which establishes that 70 percent of the benchmark annual oil revenue is channeled to the budget, 15 percent allocated to a stabilization funds and 15 percent saved for future generations. In fact the Ghanaian mechanism does not really limit spending, since the government can comply with the saving rule while borrowing for additional expenditures. In effect, since the beginning of oil production in 2011, recurrent spending already rose by 10 percent creating serious risks for Ghana's near - term economic outlook. Under Uganda's NONG fiscal deficit rule, such a spending increase would not be possible.

b. Borrowing dynamics

The government may be tempted to spend in advance some of its future oil revenue through substantial borrowing on the financial markets. This may generate short-term benefits through growth of private consumption but would have negative long-term consequences, as savings are sacrificed. It might also help to smooth investment expenditures over time, taking into account the limited absorptive capacity of the economy. The case of



1. Kajo (2010): "Diamonds Are Not Forever: Botswana's M. rm Fiscal Sustainability"

Ghana is the most recent example that illustrates the need to establish safeguards. The coming on stream of oil in late 2010, which coincided with preparations for the 2012 presidential election, fuelled the formation of excessively optimistic expectations, with negative consequences in terms of fiscal prudence. Instead of using initial oil revenues for fiscal consolidation, given Ghana's high fiscal deficits, the government raised expenditure and used future oil revenues as collateral to increase its debt.

Excessive borrowing in Ghana was possible because the revenue management law does not include clauses which ensure that prospective oil revenues will not lead to excessive government borrowing. Whereas an original draft of the Petroleum Revenue Management Bill included a clause that prohibited the use of oil revenues as collateral for loans (that is, oil-backed loans), the clause was dropped during the drafting process. Consequently, the country is tapping heavily into international capital markets to frontload investments which expanded from 15 percent of GDP in 2007 to 26 percent in 2013. Moreover, in 2011 the government signed a US\$3 billion loan with the Chinese Development Bank, which explicitly commits future oil revenues as collateral. Under the agreement, the Government of Ghana will sell crude oil directly to a Chinese agent to support the repayment of the loan.

In Uganda, the Public Finance Management Act explicitly prohibits the collateralization of future oil revenues. However, prudent debt management will always be required over time.

c. Volatility Concerns

Oil - dependent countries are exposed to oil price volatility, which may be caused by political developments, natural disasters, sudden changes in the global oil demand and other exogenous factors. Commodity price volatility, through its



Stone quarrying for road construction

impact on export earnings, could affect the effectiveness of fiscal policy and economic growth in resource-dependent countries as has been seen during the recent decline in international oil prices. Lower oil prices reduce government revenues and the capacity to finance public spending.

The volatile nature of oil prices generates boom-bust cycles, which can be prevented through adequate fiscal policy. The rationale is simple: the government can adopt a counter-cyclical fiscal policy when oil revenues are declining, thus helping the economy to absorb the shock. Such policy is subject to two conditions.

First, the government should have sufficient reserves to finance such policy, which raises the question of how much oil revenue should be saved, not for future generations, but to act as a buffer in case of negative shocks. The second condition is that the countercyclical fiscal policy can have an impact on the real economy. This requires some knowledge about the magnitude of fiscal multipliers and their heterogeneity with respect to boom and recession cycles. A background paper prepared for the CEM (using a sample of 99 countries) shows that spending multipliers are higher for resource-rich countries (ranging from 0.55 to 0.74), which are more capable of boosting GDP through government spending. In addition, spending multipliers seem to be higher during recessions (0.55-0.59) than during booms (0.01). In other words, fiscal interventions are more effective during recessions in oil-producing countries than everywhere else.

In this context, sound planning instruments and expenditure stabilization mechanisms are needed to ensure that increased government spending resulting from positive changes in commodity prices does not negatively impact macro-stability and delivers value for money. An inflation targeting monetary policy based on export commodity (Product Price Targeting) could increase the effectiveness of countercyclical fiscal policies (Franklin 2012).

This is a valuable lesson for Uganda, which must avoid falling victim of spending pressures often encountered in resource-rich countries. Moreover, Uganda should establish sufficient buffer to smooth out the adverse effects of price volatility on macroeconomic and financial variables. The implementation of clear fiscal rules involving some savings will also be critical in this regard.

C. Public sector management issues

Sound public sector management is essential to harness the potential of extractive industries and speed up the socioeconomic transformation of resource-rich countries. The design of an effective public sector management strategy should deal with: (a) the efficiency and the allocation of public spending, (b) the crowding out of non-oil domestic revenue, (c) public spending pressures and the revenue sharing with local governments, and (d) the oil-aid nexus.

a. Efficiency and allocation of public spending

The pace and the quality of investment are critical for sustainable long-term growth. Countries that invest a large share of their natural resources wealth grow faster. However, what matters is not only how much a country invests but how well it invests. Because of poor investment quality, some countries are unable to produce returns generating sustainable consumption levels. Angola and Nigeria are typical examples of countries that did not fully enjoy the benefits of increased oil production (and high prices during the oil boom) because of the poor quality of their investments.

Recent government programs emphasize investments aimed at improving the country's deficient infrastructure. Uganda's infrastructure investment needs (Works and Transport, Energy and Mineral Development, Water and Environment, Information and Communication Technol-

ogy) are estimated at US\$21 billion (until 2025). Public investment in infrastructure increased significantly since the adoption of the first National Development Plan (NDP1). Road construction and maintenance increased from 2.4 percent to 3.1 percent of GDP from 2009 to 2013. At the same time, public spending in education and health declined from around 6.5 percent of GDP in 2003/04 to 4.5 percent in FY2012/13 and social services are under pressure. Although Uganda's primary school enrollment rates are high, overall spending per primary school student is below the average in low-income countries. This may explain the low completion rates as compared with similar countries. Better schooling outcomes and increasing the share of students transitioning from primary to secondary education will require additional funding. Health sector expenditures will also need to increase over the long-term.

The CEM argues that investments in infrastructure and human capital are both critical for Uganda's medium and long-term prosperity. Economy-wide simulations conducted during preparation of the report, suggest that using initial oil revenue to address the most urgent infrastructure needs, notably in energy and transport, will have a stronger growth impact than increased spending on education and health. Allocating oil revenue to infrastructure during the first four years of oil production would lead to a 0.8 percentage point higher increase in the GDP growth rate than if all resources are allocated to human development. Focusing efforts on infrastructure also yields better outcomes for the MDGs. All the 2015 MDG targets would be met by 2020, with the exception of Universal Primary Education.

In the long run, however, education and health spending will have more impact on growth than spending on infrastructure. A study prepared in the context of this report, which exploits the features of an overlapping generation (OLG) growth model, concludes that a 3 percent-

Infrastructure projects like road construction require heavy investment, thus the temptation to borrow in anticipation of oil revenue is high



age points increase in the share of government spending on health and education would have a long-term growth impact of about 0.7 percentage points compared to only 0.4 percentage points for a similar increase in spending on infrastructure. The study explains that while an increase in the share of infrastructure spending would have indirect effects on human capital accumulation and the production of health services, it would also have congestion effects that mitigate the initial benefits of a higher public capital stock. These findings support the strategy of the government which wants to allocate most of the initial oil revenue to infrastructure, but recognizes that neglecting the social sectors would have a growing opportunity cost in the medium to long-term.

The social sector plays an important role in determining the distributional impact of GDP growth. The build-up of human resources through education and training is not only good for growth, but it will help diversify since manufacturing and modern services depend on a well-educated labor

force. This is especially relevant for a country like Uganda where only 20 percent of the labor force has completed secondary education, compared with 50 percent in Ghana. Investments in education are important to ensure that Uganda's youth is prepared for new job opportunities in the emerging oil industry and other sectors. These jobs will go only to Ugandans who are adequately trained and educated, but the number of Ugandans with the necessary technical skills is insufficient. The skills shortage goes beyond the oil sector and is a binding constraint for a modern economy. The implementation of the recently developed Oil & Gas Skills Development Strategy and Plan will be crucial to harnessing the benefits of oil and gas for the citizens of Uganda.

b. Crowding out of non-oil domestic revenue

Increased fiscal space due to oil revenue may lead to lower tax mobilization in other sectors. Many resource-rich countries experience a decline in non-oil tax revenue

when the government begins to receive a substantial inflow of oil-related revenue. A decline in tax revenue would have negative macro-fiscal implications. If for instance recent efficiency gains were to disappear when oil production begins, the ratio of non-oil tax to non-oil GDP would fall from 13 percent today to less than 10 percent in the medium term. The government would therefore need to reduce expenditure to meet the 3 percent deficit ceiling of the EAC and GDP growth rates would be significantly lower than in the baseline scenario. By the end of the projection period, the GDP would be 35 percent lower than in the baseline scenario.

Improving domestic revenue mobilization will have critical long-term growth effects. Using the overlapping generation growth framework developed for Uganda, it is estimated that increasing the tax revenue-to-GDP ratio from 12.7 percent of GDP to 15.1 percent - the average ratio for low-income countries estimated by Baldacci et al. (2004)

- would lead to a 1.5 percentage points increase in the growth rate. A more ambitious tax reform program aimed at increasing the tax revenue - to - GDP ratio to 18 percent - the average ratio for low-income countries estimated by the International Monetary Fund (2010) - would result in higher long-run growth of about 3.3–3.7 percentage points. Consequently, Uganda needs to pursue ongoing efforts to improve tax collection. These efforts should be accompanied by fiscal rules that incentivize improvements in tax administration and collection. In fact, one of the advantages of a NONG fiscal deficit rule is that the incentive to mobilize non-oil domestic revenue remains high even when oil revenues start to flow. Using a NONG fiscal deficit as a fiscal anchor implies that a drop in non-oil tax revenue would need to be accompanied by an equivalent reduction in expenditure. With a credible limit based on an enforced NONG fiscal deficit rule, the government would be encouraged to continue ongoing efforts, widen the tax base, and improve the administrative efficiency of tax collection.

c. Public spending pressures (including subsidies) and Revenue sharing with local governments

In many oil-producing countries, domestic production of oil and gas created pressures to lower domestic petroleum prices below international levels. Several factors could help the Ugandan government manage these pressures. First, at this stage Uganda does not have substantial fuel subsidies (except for kerosene) and domestic prices generally follow international prices. Second, Uganda repeatedly suffered from prolonged fuel shortages and price spikes due to: (i) limited fuel storage capacity (equivalent to 20 days, one of the lowest in the region) and (ii) the country's dependency on fuel imports from the Mombasa refinery. Third, as Uganda is a landlocked country, the cost of transporting petroleum products is very high (it is true that as the country invests in infrastructure, the cost of transportation will decrease, leading to lower prices at the

pump). In this context, the best option may be to introduce an automatic price adjustment mechanism (see the system adopted by South Africa), that organizes a full pass-through of international prices but provides for a smooth adjustment of domestic prices, by limiting the magnitude of any single price change per week or per month.

Many resource-rich countries have grappled with the complex issue of revenue sharing with local governments. No clear, effective and field tested formula seems to be available at this stage. In addition the distribution of oil revenue to local governments should take into account macroeconomic and financial stabilization issues influencing the management of both central and local governments. Economic and financial stabilization policies will always remain one of the principal functions of central authorities. The study of the Nigerian experience may provide useful examples of what should be done and what should be avoided. Most of these issues will be addressed as the government develops a more detailed strategy aimed at optimizing the benefits to be derived from oil and other extractives.

d. Oil revenue and aid

Recent research argues that the growing number of hydrocarbon discoveries in low-income countries could reduce the need for foreign aid (Arezki and Banerjee, 2014). However, empirical evidence shows that there is no significant statistical relationship between oil discoveries and the level of foreign aid. Many analysts argue that while the often sizable stream of new income from the exploitation of natural resources will relax budget constraints in developing countries, donors have many strategic reasons to continue providing aid (Alesina and Dollar 2000). These include: (i) ensuring access to oil and energy produced by the recipient nation (to address the energy needs of the donor countries); and (ii) facilitating access for major Western oil companies to oil extraction contracts. In addition, foreign

aid is critical to address the governance and other economic management challenges often experienced by resource-rich countries. Given its weak governance practices and institutions, Uganda's oil riches is not likely to substantially decrease its access to foreign aid. A recent paper (Dobronogov et al. 2014) discusses how donors should respond to potential windfalls in their client countries. It argues that while complementing other available self-insurance mechanisms (for example, Sovereign Wealth Funds and facilities from International Monetary Fund), the International Development Association (IDA) could be structured to provide a larger degree of insurance against major declines in resource prices.

D. Policies to promote private sector development

The private sector is the most powerful instrument of economic development. It creates economic growth, generates government revenue, provides employment, modernizes technology, trains staff, develops skills and reduces the costs associated with hiring expatriates. Oil and mineral development brings new opportunities for private sector development. Together with growing urbanization and overall economic growth, it expands demand for food and other services. Increasingly international oil companies outsource a number of specific tasks, ranging from construction to food provision. This is a good opportunity for domestic suppliers to obtain contracts and participate in the supply chain of oil production. Cheaper oil could also stimulate the emergence of energy intensive industries, including fertilizers, chemicals, metal products and cement.

Several factors, however, affect the capacity of the Ugandan private sector to take advantage of these opportunities. First, the current business environment is not very favorable. According to the most recent Global Competitiveness Index, Uganda ranks 129th out of 148 countries.



The revenue mobilisation performance will need to be improved prior to the first flow of oil revenues

Corruption, inadequate access to finance and deficient infrastructure are viewed as the main constraints. The number of registered firms is growing but more than 90 percent of these firms are microenterprises. As a result, Uganda's potential suppliers may lack the capacity to meet the quality standards of international oil companies. Finally low backward and forward linkages with other sectors may limit the positive impact of the oil industry on the country's private sector.

In this context, government policies should address a wide variety of private sector development issues. The first priority should be to pursue ongoing efforts to improve the business climate, address the most critical infrastructure deficiencies, including electricity, communications and transport, and support public and private initiatives aimed at improving access to long-term capital. Strengthening existing enterprises and encouraging small and medium - size firms to grow and join the formal sector should be an essential component of that policy.

Perhaps the most effective instrument of the public sector in that area is likely to be the introduction of effective local content policies in order to promote new linkages between the oil industry and the domestic private sector. Uganda's petroleum law already provides for preferential treatment for goods produced in the country. This applies not only to oil companies but also to contractors and sub-contractors that constitute the supply chain. The government should also include in future oil contracts provisions aimed at promoting socioeconomic development (use of local suppliers, support for training and local skills development programs, priority for Ugandan citizens).

The final success of local content policies will largely depend on the capacity of local suppliers to deliver products and services on time at a competitive cost. The role of the government and private enterprises should, therefore, be to select sectors and sub-sectors in which local capacity is available or can be developed through appropriate training and financial support. A high priority should first be given to the construction phase. International investors

are expected to spend approximately US\$10.8 billion (39 percent of 2014's GDP) in the next 4-5 years and to create almost 13,000 direct jobs during that phase. This is a unique opportunity that should not be missed by Uganda.

Achieving the short and long-term objectives of the proposed strategy will require a series of actions, including (a) improving public sector management (PFM, PIM, public sector incentives), (b) improving the role of the private sector and the civil society, (c) leveraging the possible impact of regional integration while mitigating associated risks (for example, in the context of the monetary union), and (d) managing expectations of the population.

A. Improving public sector institutions and management

a. Institutions

Managing oil resources involves many different aspects of economic management, including energy, finance, labor, industrial policy, land, infrastructure and social services. Seven key institutions - the Ministry of Finance, Planning and Economic Development, the Ministry of Justice, the Bank of Uganda, the Uganda Revenue Authority, Energy (PEPD), National Environment Management Authority (NEMA) and Office of the Auditor General (OAG) - will play a major role in formulating and implementing the government's oil sector strategy. Two other institutions - the Petroleum Authority and the National Oil Company are in the process of being created. The creation of NOC is critical to shield the state from direct liability. Other institutions in the social and infrastructure sectors (the Ministry of Education, the Ministry in charge of labor and gender, the Ministry of Health, and the Ministry of Works and Transport) also play a significant role, notably with respect to the formulation and implementation of policies and strategies concerning infrastructure and skills development in the O&G sector.

Part III: Government Actions Necessary to Address Specific Implementation Issues

The government should clarify the roles and responsibilities of its institutions. The lack of clear definition of the respective roles of the Petroleum Authority, the Ministry of Energy, the National Oil Company and other agencies involved in oil management is particularly important for the development of a promising oil sector. Creating all the necessary oil management institutions and clarifying the roles of the existing ones must be done before production begins. For instance, the absence of a National Oil Company could obscure the division of labor between the Ministry of Energy and the Ministry of Finance and could strengthen the influence of other institutions. Such problems would be difficult to correct at a later stage in an environment which may be dominated by rent-seeking behavior.

The strengths and weaknesses of each institution should be assessed and addressed through hiring the most appropriate expertise (domestic or foreign) and comprehensive local capacity building programs. Most of these institutions need specialized expertise to perform new tasks in the oil sector. Highly skilled technical personnel is also needed to help the Ministry of Finance design and use effective oil revenue spending and saving mechanisms. Each year, MFPED sends two public sector agents abroad to study oil and gas management issues. This is not sufficient to remedy the lack of specialized MFPED staff in that area. The Ministry of Justice also needs skillful negotiators to negotiate the best possible deals with international oil companies and maximize the share of oil revenue accruing

to the government. The Ministry should use experienced consultants and develop local capacity through staff training abroad and in the country. The URA will also need additional technical staff specialized in reporting, auditing and taxation of the oil and gas sector for its recently established Natural Resource Management unit. NEMA should review its guidelines taking into account the special characteristics of complex oil-related environmental issues. OAG itself is concerned with its lack of technical knowledge with respect to the auditing of oil and gas institutions. In effect, the government should address weaknesses in the accountability chain, including staffing and specialized technical skills, as well as legal, case management, and political interference issues.

In summary, while close coordination between MFPED, Energy, URA, the Bank of Uganda and other institutions is vital for effective management of oil revenue, the development of a comprehensive capacity building program for the O&G sector also is of high priority. In this context, the recent preparation of a skills development strategy and actions plan (SDSP) for the O&G sector is a positive initiative.

b. Management

The government should design an oil revenue management strategy dominated by transparency and accountability, including information of the public through

joint briefings on oil sector revenue involving the government and the oil companies. The government should also strengthen its PFM systems and, in particular, improve its public investment management capacity, with special emphasis on more effective implementation. Uganda's performance is good with respect to budget transparency (ranking 18th out of 100 countries), but its PFM systems are weak in terms of budget credibility, budget execution controls (particularly payroll), procurement compliance and legislative scrutiny of external audit reports.

The recently approved PFM law introduced a Contingencies Fund to finance unforeseen, but urgent and unavoidable expenditures without destabilizing other components of the budget. This is already a positive step toward improving budget credibility. However, additional measures are necessary to enhance the effectiveness of the PFM system. These measures include: (i) accelerating the complete roll out of IFMS to all entities, interfacing IFMS with IPPS and extending it to funds with specific conditions (for example, donor projects), as 77 percent of expenditures going through the IFMS leave a substantial gap that can be exploited; (ii) introducing the Treasury Single Account (TSA) to promote greater transparency and accounts reconciliation; (iii) improving on unpredictable and late release of funds which often lead to under-spending or to rushed spending at year-end, making procurement less competitive and more costly (70 percent of public expenditures go through procurement systems); (iv) reviewing parliamenta-

ry processes for a more efficient handling of audit reports and strengthening inter-institutional linkages between OAG and its partners (investigation bodies and other regulators/ auditors including PPDA) to improve coordination and focus reporting on risks and impact; and (v) developing the capacity of public servants in PFM functions, and introducing incentives and performance management frameworks (pay reform and performance appraisal). Incidentally, public sector wages stagnated and are now low compared to private sector equivalents.

Public Investment Management (PIM) systems also need to improve, in terms of strategic guidance for public projects (alignment on NDP priorities and adoption of minimum technical and financial standards), project selection, budgeting and implementation (integration into the budget cycle and medium-term expenditure frameworks), project audit and evaluation. The most urgent measure to strengthen PIM systems is the development of a Public Investment Methodology for Project Appraisal which is forthcoming with support of a Bank technical assistance project financed by the DfID trust fund.

B. Participation of the private sector and involvement of civil society

Governments and corporations have different goals. The main goal of good governments is to promote the long-term economic and social development of their citizens. The goal of multinational corporations (MNCs) and other private enterprises is to generate profits for their shareholders and maximize returns on investments. However, to achieve their objectives, governments need to create an environment favorable to private sector investment. At the same time, private enterprises recognize that the sustainability of their activity depends on effective cooperation with governments,



donors and the civil society in support of common objectives. In fact, close collaboration between the public and the private sectors and also with the civil society is a win-win for Uganda as it creates substantial benefits, including training, import of technology (through MNCs), joint infrastructure (through PPP), and accountability (through improved demand for good governance).

Despite a mediocre business environment, the number of registered enterprises tripled during the 2000s, but the business landscape is dominated by micro-enterprises. Oil production will stimulate private sector development, but the lack of linkages between the oil industry and other sectors, and the incapacity of smaller firms to meet the high standards of international oil companies may limit the pos-

itive impact of oil development on other sectors. Nevertheless, the agricultural sector should benefit from the higher demand for food. Uganda should also be able to develop agro-processing and light manufacturing and the country has the resources necessary for the development of a competitive tourism industry.

In this context, the main priorities for public sector interventions are: (i) improving the business environment and helping small enterprises manage crises; (ii) promoting regional integration and open trade policies; (iii) increasing the competitiveness of strategic sectors; (iv) supporting the growth of larger formal sector enterprises; and (v) encouraging the densification of the industrial landscape to enable firms to benefit from economies of agglomeration. An effec-

tive collaboration between the public sector, the private sector, and the civil society will be particularly critical. Such a collaboration should take place at three levels: (a) during the design of the strategy: the private sector should be involved in the development of the legal and institutional framework and should also participate in negotiations. In this context, the government should be able to capitalize on the influence of pressure groups such as the Uganda Chamber of Mines and Petroleum; (b) during implementation of the strategy: through various interventions such as PPPs, joint infrastructure projects, training, transfer of technology, and community help; and (c) for the monitoring of the strategy: joint mechanisms (for example, EITI) will be crucial for an effective monitoring of this trilateral collaboration.

C. A sound approach to regional integration

The report discusses the consequences of oil development on the ongoing regional integration effort and on the future creation of a monetary union. Oil production will provide an opportunity to expand regional infrastructure and promote regional integration but it will also complicate the coordination of macroeconomic and fiscal policies at the regional level. Regional integration is crucial for a landlocked country like Uganda. As an example, Uganda needs a pipeline through Kenya or Tanzania to export most of the expected oil production. Subsequently, priority should be given to using oil revenue to enhance connectivity across countries, notably (but not only) with Kenya which is Uganda's natural gateway to global markets. Efforts should also focus on the central corridor linking Uganda to Tanzania in order to diversify trade routes. Oil revenues will provide an opportunity to remove some of the infrastructure bottlenecks since the cost of upgrading or building new connectivity infrastructure (such as ports on Lake Victoria, railways, and regional roads) is very prohibitive. The effectiveness of regional infrastructure developments will also depend on the removal/reduction of soft infrastructure

barriers, including non-tariff constraints and logistical services. It should also be noted that the resource endowment of many EAC countries gives an opportunity to a country like Uganda to invest in the provision of specialized skills which could then be utilized in other countries.

On the macroeconomic front, regional cooperation, including the move towards monetary union will be complicated by the emergence of oil and gas resources among regional economies. Abandoning independent monetary policy at the national level and transferring that function to a regional entity comes with a number of advantages. First, it may be the best way to create an independent and credible central bank which no national government can dominate. Second, a regional monetary authority is less likely to import recessions since monetary policies do not need to be linked to countries outside the area. Third, creating a single currency can significantly reduce trade costs if the members of the union are also major trade partners.

EAC countries will face four major challenges as they move towards a single monetary policy. First, the additional oil-financed demand will trigger an increase in relative prices in commodity-rich countries which will make them more vulnerable to commodity-price shocks. Second, there will be a big difference between resource-endowed countries (Uganda, Tanzania, and Kenya) which will grow faster than the other countries (Burundi and Rwanda). Third, the value of independent monetary policies may be limited in developing countries, where there is little financial intermediation and limited scope for changes in interest rates to affect the behavior of households and firms. Fourth, the timing of the oil and gas production in the region is still uncertain and production will not start at the same time. It is probable that Uganda will export oil before Tanzania produces gas on a large scale.

In this context, the CEM recommends that: (i) EAC countries should adopt sound fiscal policy (including clear fiscal rules) to minimize changes in the price levels in East Africa's new commodity exporters, relative to their neighbors and, (ii) the process of integration should be slow and reversible, as Uganda builds on its experience on inflation targeting monetary policy management. Meanwhile, the other members of the East African Community should establish a network of stable, pegged exchange rates - ideally through harmonizing interest rates rather than accumulating foreign reserves at least until the resource expenditure stabilizes.

D. Managing expectations

Given the numerous uncertainties associated with the oil sector, the eventual development of the sector and the possible emergence of additional government revenue should not significantly change the overall goals of the government strategy. Efficiency gains and economic diversification must continue to dominate Uganda's strategic objectives. Efficiency can provide fiscal space virtually



equal to the expected levels of oil revenue. More importantly, despite the role oil production and revenue can play in Uganda's future, the country should not abandon other available development and economic diversification opportunities. In fact, future oil revenue will be best used if integrated into Uganda's current development objectives and partnerships.

In this context, the development of an effective communication strategy is a high priority. This strategy should define clear responsibilities for nation-wide communications on the oil and gas sector. The ultimate goal of the strategy will be to empower citizens by educating them on pertinent issues concerning the prospects and the possible impact of oil, gas and other mining activities, and to encourage them to participate in the ongoing dialogue on the future use of oil and gas revenue. This will also encourage transparency and accountability.

Ultimately, the success of Uganda in optimizing the benefits from oil will be largely determined by the country's capacity to set up the stage for a non-oil economy in the longer term. Successful countries have been those that have used non-renewable resources to diversify their economies by a combination of policies and actions aimed at building the stock of physical and human capital and implementing an effective social policy to protect vulnerable groups. Simply put, Uganda's success will be measured by its capacity to go up the ranking in the human capital index, the doing business indicators, and access to basic infrastructure over time. **CEM 15**

Oil-rich countries are tempted to subsidize fuel prices at their own peril



Table 1: Summary of CEM Recommendations

Coverage	Recommendation	Timeline
Setting up of the right institutions	Channel the revenue generated by resource rents into human capital (through education and training), social capital, institution building, good governance and transparency and keep rent seekers at bay	Short to medium term
	Design an efficient oil revenue management strategy emphasizing transparency and accountability through better information of the public on the role of the State in the management of oil resources and through regular, joint briefings on oil sector revenue, involving both the government and the oil companies	Short to medium term
	Cooperation of the government, the civil society and the private sector in the design of a national resource charter aimed at assessing progress achieved in addressing institutional gaps in the management of the oil sector	Short to medium term
	Clarify the respective roles and responsibilities of institutions involved in the management of the oil sector (including Petroleum Authority, Ministry of Energy, National Oil Company and other institutions involved in oil management)	Short to medium term
	Develop a strategic framework to promote the co-existence of oil and tourism during the lifecycle of oil exploration	Short to medium
	Develop and implement an effective national communication strategy for issues related to the prospects, possible impacts of oil, gas, and other mining activities	Immediate to short term
	Improving performance of existing institutions	Additional efforts to promote economic diversification through communicating the virtues of diversification
Address weaknesses in the chain of accountability, including staffing, resources, specialized technical skills, legal and case management issues, and political interference		Short to medium term
Guide stakeholders, including CSOs and the private sector, including through regulations. For the promotion of development activities in line with the country's development goals. One of the objectives of these regulations would be to prevent and fight abuse by businesses and other stakeholders		Short to medium term
Improve public investment management and strengthen PFM systems		Short to medium term
Address constraints to growth, exploit forward and backward linkages, and stimulate business development		Short to medium
Improve product complexity through training, skill development, FDI and/or joint venture with foreign firm		Immediate, short-medium term
Adopting the right set of policies		Maintain macroeconomic stability through inflation targeting monetary policy and prudent fiscal policy involving spending constraints/limits
	Design and implement a set of business friendly policies in the areas in which Uganda may have a comparative advantage (food processing, construction materials and other labor intensive industries)	Short to medium term
	Invest in infrastructure, with special attention to horizontal and vertical inequality, and invest in human capital to promote a larger long-term growth impact	Short to medium term
	Adopt a fiscal rule based on non-oil fiscal deficit for the use of resource proceeds in order to mitigate the effects of oscillating oil prices and oil revenue	Short to medium term
	Strengthen domestic revenue mobilization to ensure that increased oil revenue is not offset by declining tax collection in other sectors (large or small, local or foreign businesses)	Short to medium term
	Firm commitment to sound macroeconomic policies (including monetary and fiscal policies) as the East African Community prepares the creation of the monetary union. This is critical to avoid the risk of cross-border spillovers of negative macroeconomic impacts caused by poor economic management of resources	Short to medium
	Improve the quality and competitiveness of trade and transport infrastructure and logistics, which are essential to reduce cross-border transaction costs	Short to medium
	Streamline domestic regulatory regimes to improve the efficiency of regional infrastructure and create effective regional markets for services	Short to medium term
	Design an effective oil revenue sharing formula with local governments	Immediate to short term

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