

# FINANCING INFRASTRUCTURE DEVELOPMENT IN UGANDA



Joseph Maweje  
Ezra Munyambonera

February 2017



**RESEARCH SERIES No. 130**

**FINANCING INFRASTRUCTURE  
DEVELOPMENT IN UGANDA**

Joseph Mawejje  
Ezra Munyambonera

February 2017

**Copyright © Economic Policy Research Centre (EPRC)**

The Economic Policy Research Centre (EPRC) is an autonomous not-for-profit organization established in 1993 with a mission to foster sustainable growth and development in Uganda through advancement of research –based knowledge and policy analysis. Since its inception, the EPRC has made significant contributions to national and regional policy formulation and implementation in the Republic of Uganda and throughout East Africa. The Centre has also contributed to national and international development processes through intellectual policy discourse and capacity strengthening for policy analysis, design and management. The EPRC envisions itself as a Centre of excellence that is capable of maintaining a competitive edge in providing national leadership in intellectual economic policy discourse, through timely research-based contribution to policy processes.

**Disclaimer:** The views expressed in this publication are those of the authors and do not necessarily represent the views of the Economic Policy Research Centre (EPRC) or its management.

Any enquiries can be addressed in writing to the Executive Director on the following address:

Economic Policy Research Centre  
Plot 51, Pool Road, Makerere University Campus  
P.O. Box 7841, Kampala, Uganda  
Tel: +256-414-541023/4  
Fax: +256-414-541022  
Email: [eprc@eprcug.org](mailto:eprc@eprcug.org)  
Web: [www.eprcug.org](http://www.eprcug.org)

## TABLE OF CONTENTS

|  |    |
|--|----|
| EXECUTIVE SUMMARY  | 2  |
| 1. INTRODUCTION  | 4  |
| 2. STUDY APPROACH  | 5  |
| 3. STATUS OF UGANDA'S ENERGY AND TRANSPORT INFRASTRUCTURE      | 7  |
| 3.1 Electricity infrastructure                                 | 7  |
| 3.2 Transport infrastructure                                   | 8  |
| 4. EVIDENCE FROM THE LITERATURE: ALTERNATIVE FINANCING OPTIONS | 9  |
| 5. STUDY FINDINGS AND DISCUSSIONS                              | 10 |
| 5.1 Domestic resource mobilization                             | 11 |
| 5.2 Improving Public Investment Management                     | 13 |
| 5.3 External Development Finance                               | 16 |
| 5.4 Private Financing Mobilization                             | 18 |
| 5.5 Natural resource revenues                                  | 22 |
| 6. CONCLUSIONS AND POLICY RECOMMENDATIONS                      | 23 |
| REFERENCES   | 25 |
| APPENDIX   | 27 |
| EPRC RESEARCH SERIES   | 28 |

## EXECUTIVE SUMMARY

Uganda's progress towards achieving inclusive sustainable growth is curtailed by large deficits in infrastructure stock, particularly in the transport and energy sectors. This study explores options for financing the scaling up of infrastructure development in Uganda. The methodological approach involved a review of literature and a survey of key stakeholders whose views guided the analysis. Findings point to the opportunities and risks of scaling up domestic resource mobilization, improving efficiencies in public investments, leveraging new sources of external development financing, options in private financing and the potential role of the natural resource sectors as summarized below.

**Improving domestic revenue mobilisation is the primary available option for financing infrastructure development in Uganda.** However, efforts in this area have been hampered by, among others, weaknesses in the legal and regulatory frameworks; the narrow tax base; a large informal sector; tax exemptions; and institutional weaknesses. The study highlights two interventions that can support improved domestic resource mobilization efforts to support infrastructure development: leveraging the contribution of non-tax revenues (NTR) and curtailment of capital flight. With respect to enhancing the contributions of NTR, the study proposes that collection of NTR by self-accounting bodies and spending it at the source should be reviewed because the practice undermines efforts to improve revenue mobilization. Innovative ways of controlling capital flight involve reviewing government public procurements and local content provisions. The study proposes reforms to strengthen the capacity of the local private sector and to develop policy and regulatory frameworks to deepen local content in government procurement.

**Improving public investment efficiency can free up funds and create opportunities for enhanced infrastructure investments.** Currently, Uganda loses up to one-half of public resources allocated to various infrastructure projects due to challenges in public investment management. This loss is caused by a number of weaknesses including inefficient planning, absorptive capacity constraints, poor project selection and execution, inflated unit costs, issues with compensation and fraud. These challenges lead to delays and delivery of sub-standard works. When projects are delivered, provisions for operations and maintenance are often neglected, leading to faster depreciation. Another challenge affecting public investment management is the lack of coordination between the different agencies and local governments. The costs of these inefficiencies are huge, and eliminating them could easily double the stock of delivered infrastructure for the same cost. We propose reforms to improve capacity for public investment management. In addition, we propose carefully crafted land reforms that would allow government compulsory land acquisition but ensure that any rightful owners are fairly and expeditiously compensated and/or resettled. This arrangement would circumvent the current challenges with respect to compensation for land and property.

**The changing external development financing landscape implies that cheaper and patient concessional funds that can be invested in infrastructure are no longer readily available.** Development financing from traditional donors, particularly grants, has significantly decreased. New partners such as China are willing to provide Uganda with the funds required for major infrastructure developments significantly beyond what the traditional partners have been willing to offer, but at terms that are more commercial. Leveraging the larger pool of development partners offers Uganda an opportunity to negotiate for better loans. Otherwise, the dwindling concessional financing could complicate the debt sustainability position for Uganda. What is required is for the government to diversify possible sources of financing but also to improve capacity for public investment management to better utilize the additional available non-concessional financing and offset the associated higher costs.

**Private financing opportunities from both the domestic and international markets remain unexploited.** However, addressing such opportunities would require Uganda to build capacity in project management as an important first step. Various options exist for harnessing public-private partnerships (PPPs), pension funds, remittances, diaspora bonds and sovereign/Eurobonds. These options offer ready credit but on commercial terms. Funding infrastructure projects using commercial loans requires projects that 1) can pay back; 2) are ready-to-go; and 3) are free from bureaucratic, institutional and political inefficiencies. Uganda continues to struggle in these areas and should initially build capacity in the various elements of project execution to avoid wastage and debt distress from non-performing commercial loans. Considering the high appetite for credible investments, we propose that the government considers floating a domestic infrastructure bond as a means of attracting long-term infrastructure financing.

**Using natural resource revenues to ramp up investments in infrastructure is well articulated in Uganda's policy documents.** Oil for infrastructure will boost the productivity of the economy by unleashing the productivity of capital and labour and mitigate any Dutch Disease effects by harnessing idle productive capacity to unlock the productive potential of the economy and satisfy any resource-induced demand. However, using oil revenues is subject to risks, particularly price volatility, that could result in investment uncertainty. Another risk relates to political capture. Mitigating these risks requires that Uganda focusses on building and strengthening the requisite institutional and policy space, ensure strict adherence to the rule of law, and eliminate rent seeking, political and elite capture to ensure transformative gains from expenditures of natural resources wealth.

**In summation, the best available options for financing infrastructure are enhanced domestic resource mobilization and improved efficiency of public investment management.** The dwindling availability of concessional financing and options in private financing could complicate the debt sustainability dynamics if challenges in public investment management and execution are not addressed. Although the oil economy presents good opportunities, there are significant risks of investment uncertainty that could arise from unfavourable price fluctuations.

## 1. INTRODUCTION

Gaps in infrastructure stock undermine economic outcomes and growth in many developing countries, particularly in Africa (World Bank 1994). Although Uganda has made progress in infrastructure development, the country still faces huge deficits across all sectors, including transport, energy, water and information technology sectors that require financing beyond the public budget ceilings. These deficits in infrastructural provisioning affect the business climate and increase the cost of doing business with implications for enterprise growth and job creation (Maweje 2013). In addition, infrastructural deficits exacerbate poverty and inequality (Calderón and Servén 2010) and could therefore hinder the attainment of the sustainable development goals (SDGs).

Recent evidence shows that Uganda's infrastructure gaps will require sustained expenditure of approximately USD 1.4 billion per year over the next decade (Ranganathan and Foster 2012). This figure far exceeds the budget provisions in the medium term. Currently, Uganda spends approximately USD 1 billion annually on infrastructure, equivalent to approximately 11 per cent of GDP, with a funding gap of approximately USD 0.4 billion per year.

Both the Second National Development Plan (NDP II) and Vision 2040 have set ambitious targets aimed at propelling Uganda to lower-middle-income status by 2020, progressing to an upper-middle-income category by 2032 and attaining per capita incomes of USD 9,500 in 2040 (Government of Uganda – GoU 2015). Achieving these targets will require tremendous infrastructural investments to unlock the productivity of physical and human capital. Consequently, the NDP II targets address bottlenecks in key infrastructural sectors.

In the transport sector, interventions include prioritizing the Standard-Gauge Railway and the upgrading of strategic national roads from 3,795 to 5,295 kilometres (km). This prioritization is intended to link productive areas and support exploitation of minerals, oil and gas, tourism and decongestion of traffic in the city areas. In the energy sector, investment will focus on exploitation

of the abundant renewable energy sources, including hydropower and geothermal, to increase power generation capacity from 825 megawatts (MW) in 2012 to 2,500 MW by 2020; expansion of the national electricity power grid network; and promoting energy efficiency and use of alternative sources of energy. In the information, communication and technology (ICT) area, the priorities are the extension of the National Backbone Infrastructure (NBI) and construction of ICT incubation hubs/ centres and ICT parks. The government will also invest in water for production infrastructure to boost commercial agriculture and industrial activities. Emphasis is on the construction of large and small-scale water schemes for irrigation, livestock and rural industries and on increasing cumulative storage from 27.8 to 55 million cubic metres.

These interventions will require large financial investments. The GoU plans to use a mixture of both public and private resources. However, the discourse on financing infrastructure investments in Uganda must be cognizant of the changing global dynamics with respect to global cooperation. Traditional development assistance from members of the Organisation for Economic Co-operation and Development's Development Assistance Committee (OECD-DAC) is becoming less important (Greenhill et al., 2013). The changing traditional donor dynamics have two implications: first, cheaper and patient financing is no longer readily available; and second, the drying up of traditional financing requires greater capacity in Public Investment Management (PIM), which was previously not necessarily true because traditional financing was accompanied by this capacity. In addition, the East African Community (EAC) convergence and macroeconomic constraints imply that Uganda cannot adequately finance all its infrastructure needs in the medium to long term through deficit financing alone.

In light of a changing global financing landscape, therefore, provisions should be made for new and innovative infrastructure financing options to avoid crowding out other developments in the economy, such as service delivery in the health and education sectors. These sectors are equally important to achieve a balanced growth path for economic transformation. Furthermore, in exploring a diversity of options for



infrastructure financing, policy makers should be cautious not to draw Uganda into excess debt burden that can result in the heating of the economy. The emergence of the oil sector might have implications for the funding landscape.

Against this background, this study explores innovative options for financing the scaling up of infrastructure development in Uganda. The methodological approach involved a review of literature – drawing upon experiences elsewhere – and analysis of key stakeholder perceptions. The discussions in this study are limited to the energy and transport sectors because these sectors have been prioritized by the government as key to unlocking productivity and wealth creation.

The rest of the paper is structured as follows. Section two provides the study approach. The status of Uganda's infrastructure with a special focus on the energy and transport sectors is discussed in section three. Section four presents evidence from the literature. Section five discusses the study findings with respect to financing options. Section six concludes with policy options.

## 2. STUDY APPROACH

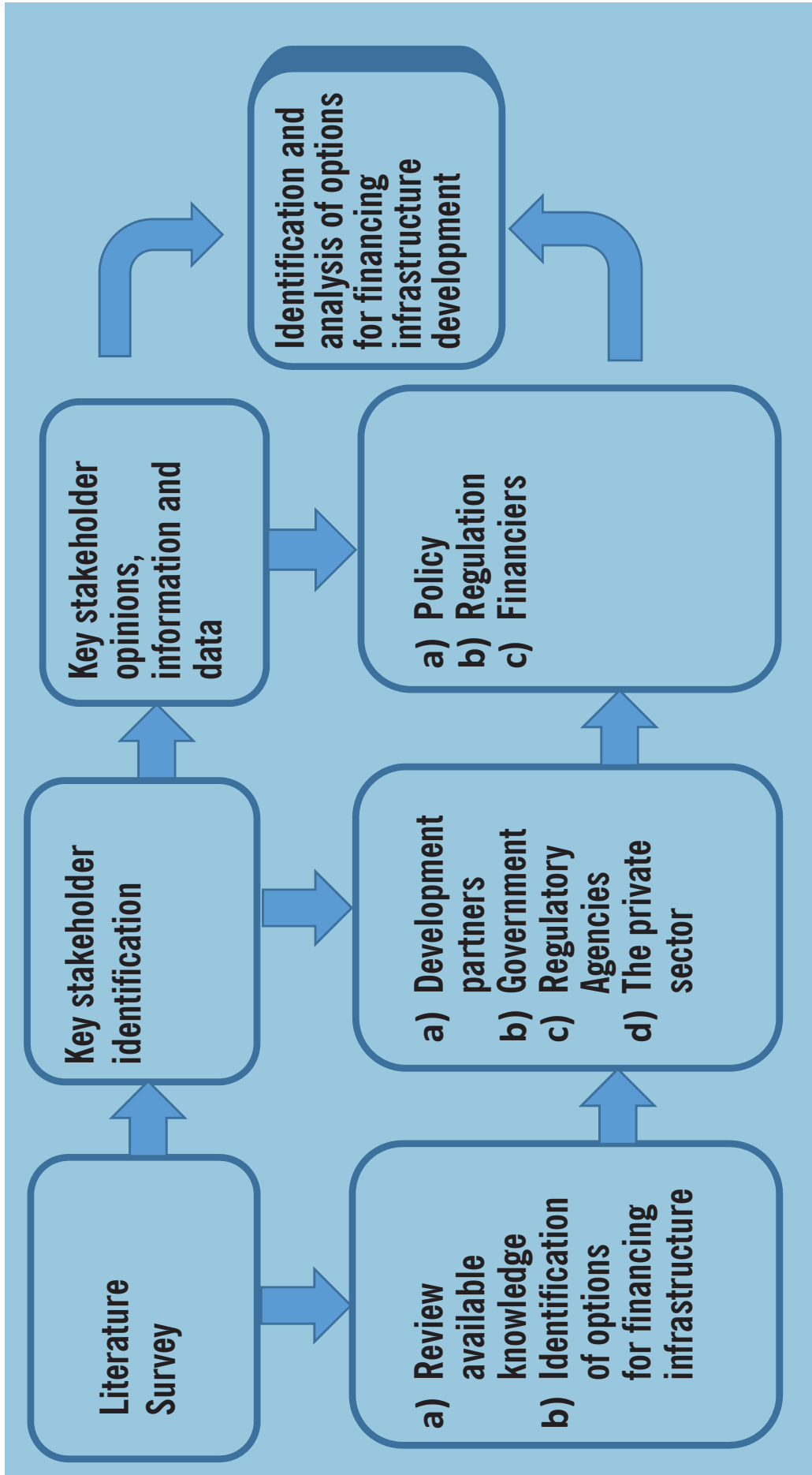
The analysis in this study followed two complementary approaches to investigate the available options for financing infrastructural development in Uganda. The first approach involved a critical review of the literature on available options for financing infrastructure in developing and emerging economies. The second approach involved a qualitative survey of key stakeholders whose views informed the analysis.

The review of literature proceeded in two directions. First, the study conducted a review of government documents from which the status of Uganda's infrastructure and future investment plans were gleaned. Second, study considered other academic and policy papers that provided useful case studies and analytical work from elsewhere. These sources were critical because they formed the background material upon which the analysis of financing options was based. Several important themes emerged from the literature.

Armed with the lessons from the literature, the study undertook a systematic process that involved mapping all of the important stakeholders in the identification, selection, financing, implementation, monitoring and evaluation of infrastructure projects in Uganda. The stakeholders were mostly drawn from development partners, the government, regulatory agencies, and the private sector. These stakeholders were deemed important because of the various critical roles they play in policy development, regulation, and financing of infrastructure development.

The identified stakeholders were engaged in discussions with the aim of validating and gauging the applicability of the identified options for financing infrastructure development in Uganda. In addition, issues around the identified options were identified and discussed. Information gathered through stakeholder engagement/interviews was complemented with relevant data from secondary sources. The analytical framework employed to assess the options for financing infrastructure investments in Uganda is presented in Figure 1. The adopted framework has three pillars: literature survey; key stakeholder identification; stakeholder opinions, information and data. These pillars form the crux of the analysis performed in this study.

Figure 1: Analytical Framework



Source: Authors

### 3. STATUS OF UGANDA'S ENERGY AND TRANSPORT INFRASTRUCTURE

Uganda has made significant improvements in the provision of basic infrastructure. These improvements notwithstanding, the country still faces considerable deficits in the provision of transport and electricity infrastructure. Uganda's infrastructural gaps have been extensively analysed by Ranganathan and Foster (2012), who provided a continental perspective on Uganda's infrastructure gaps. In the subsections that follow, the study discusses in detail the state of Uganda's infrastructure with a specific focus on the energy and transport sub-sectors. The study focusses on these two because they have been identified as extremely critical for accelerating growth and achieving middle-income status as stipulated in the Second National Development Plan and Vision 2040. Consequently, expenditures on these two sectors continue to account for a large share of the national budget.

#### 3.1 Electricity infrastructure

The electricity sector in Uganda underwent a series of systematic reforms that were intended to improve economic performance and to expand access (Mawejje et al., 2013). There is now a renewed focus on the prioritization of energy production, efficiency, and rural electrification. The total installed electricity generation capacity increased from 595 MW in 2010/11 to 850

MW in 2013/14. The total grid electricity supply increased by 7.1 per cent, from 2,738 Gigawatt hours (GWh) in 2012 to 2,933 GWh in 2013. The growth in overall installed capacity in recent years has largely been due to additional capacity at Bujagali (250 MW) in 2012 and other mini-hydro projects. The growth includes 100 MW of thermal power on standby.

However, despite these efforts, Uganda has recorded slow progress in ensuring that a majority of households have access to electricity. Data from the 2014 census indicate that access to electricity in all its forms increased from 7.8 per cent in 2002 to 20.4 per cent in 2014. Much of this increase, however, was accounted for by improvements for urban households, whose electrification rate increased from 39.3 per cent to 51.4 per cent. Only 10.3 per cent of rural households have access to electricity in all its forms; of these, 5.1 per cent have a connection to the national grid (table 1). These statistics indicate that tremendous effort continues to be required to ensure that the NDP II target of 80 per cent electrification rate by 2040 is achieved.

As a result, Uganda's electricity consumption per capita remains low, estimated at only 80 kilowatt hours (kWh) per capita at the end of 2012, which is significantly lower than Africa's average of 535 kWh per capita and the world's average of 2,472 kWh per capita. This level of consumption compares poorly with countries such as Kenya at 133 kWh, Ghana at 246 kWh and Zambia at 551 kWh per capita.

**Table 1: Distributions of households by main source of energy for lighting, %**

|                             | 2002  |       |       | 2014  |       |       |
|-----------------------------|-------|-------|-------|-------|-------|-------|
|                             | Rural | Urban | Total | Rural | Urban | Total |
| Electricity – all forms     | 2.7   | 39.3  | 7.8   | 10.3  | 51.4  | 20.4  |
| Electricity – national grid | na    | na    | na    | 5.1   | 47.7  | 15.5  |
| Electricity – other         | na    | na    | na    | 5.2   | 3.7   | 4.9   |
| Gas                         | 0.2   | 0.2   | 0.2   | 0.3   | 0.5   | 0.3   |
| Paraffin (All forms)        | 90.1  | 57.7  | 85.6  | 70.8  | 34.1  | 61.5  |
| Tadooba (local candle)      | 81.5  | 33.3  | 74.8  | 60.3  | 25.1  | 51.7  |
| Lantern                     | 8.6   | 24.4  | 10.8  | 10.9  | 12.1  | 11.2  |
| Firewood                    | 4.3   | 0.3   | 3.8   | 2.9   | 0.3   | 2.3   |
| Other                       | 0.9   | 0.2   | 0.8   | 26.2  | 22.7  | 25.3  |
| Total                       | 100   | 100   | 100   | 100   | 100   | 100   |

Source: UBOS (2016) – National population and housing census Report

**Table 2: Electricity and competitiveness**

| Indicator   | Uganda | SSA  | All countries |
|---|--------|------|---------------|
| Number of electrical outages in a typical month                 | 6.3    | 8.3  | 6.3           |
| Duration of a typical electrical outage (hours)                 | 6.8    | 4.6  | 2.6           |
| Losses due to electrical outages (% of annual sales)            | 6.3    | 4.4  | 2.6           |
| Average Losses due to electrical outages (% of annual sales)    | 11.2   | 7.3  | 4.7           |
| Percentage of firms owning or sharing a generator               | 52.2   | 48.0 | 34            |
| Proportion of electricity from generator, %                     | 8.4    | 14.2 | 8.1           |
| Average proportion of electricity from a generator, %           | 17.6   | 26.8 | 20.4          |
| Days to obtain an electrical connection (upon application)      | 18.1   | 29.0 | 30.9          |
| Percentage of firms identifying electricity as a major obstacle | 26.8   | 43.6 | 34.0          |

Source: World Bank Enterprise Surveys for Uganda, 2013

In addition, reliability of electricity supply continues to be a major hindrance to real sector production and a major constraint to the competitiveness of the business sector. The World Bank Enterprise Survey Data (2013) indicates that one in every four businesses in Uganda report electricity reliability as a severe challenge (table 2). In addition, the average duration of a typical electricity outage is longer (6.8 hours) than the Sub-Saharan Africa (SSA) average (4.6 hours), and associated losses are larger. Consequently, many businesses have invested in backup generators to cope with the intermittent electricity supply (Maweje et al., 2016).

To address these large energy deficits, the government has earmarked electricity generation projects, such as Karuma (600 MW), Ayago (600 MW), Isimba (183 MW), and many other mini-hydro plants for immediate construction. Other projects expected to start in the medium term include Oriang (380 MW), thermal generation from the oil refinery (100 MW), and other renewable projects (Okoboi and Maweje 2016). Clearly, these projects will require innovative financing modalities beyond feasible budget provisions.

### 3.2 Transport infrastructure

The GoU has prioritized investments in transport infrastructure as a means of unlocking productivity in a number of sectors including agriculture and tourism, and as a means of easing access to key national and regional markets. The government is also prioritizing roads in the Albertine region to facilitate oil production by 2020. Consequently, the stock of national paved roads increased from 3,200 km in 2009/10 to 3,795 km in 2013/14. The proportion of national paved roads deemed to be in fair to good condition increased from 74 per cent in 2010/11 to 80 per cent in 2013/14. The condition of national unpaved roads in fair to good condition increased from 64 per cent to 67 per cent over the same period (GoU 2015). However challenges remain; the proportion of paved roads remains low, and alternative options for using air, water and rail transport have not been fully exploited – which has implications for the cost of doing business (PSFU 2010). Moreover, the proportion of paved roads in the national road network stood at only 18.1 per cent in 2013/14.

**Table 3: The state of transport infrastructure in Uganda, 2015**

| Indicators  | Uganda | SSA    |
|---|--------|--------|
| Paved road density, km/1000 sq km of land area        | 18.9   | 310    |
| Total road density, km/1000 sq km of land area        | 104.7  | 137    |
| Share of the paved roads in national roads network, % | 18     | 20     |
| Length of railway lines, km                           | 1250   | 82,000 |
| Length of usable railway lines, km                    | 337    | 69,000 |
| Percentage of rail lines in operational state, %      | 27     | 20     |
| Percentage of cargo by rail, %                        | 8      | na     |

Sources: Uganda Bureau of Statistics (2015); World Development Indicators (2014); Ranganathan and Foster (2012); Yepes et al., (2008)

The railway sub-sector has also suffered from many years of neglect and underinvestment. The railway network in Uganda and indeed the entire EAC region is dilapidated and requires major improvements to facilitate the seamless flow of goods across the region and offer a more cost-effective alternative means of transport. The length of the entire railway network in Uganda is estimated at 1,250 km (Ministry of Works and Transport (MoWT) 2014), but the length of usable railway lines is a paltry 337 km and is one of the shortest in Africa.

To turn around the performance of the railway sub-sector, the governments of Uganda and Kenya agreed in 2004 to concession their respective railways together. The concessionaire is meant to rehabilitate, operate and maintain the rail networks as one railway system to improve the management, operation and financial performance of the two rail networks in a coordinated manner. Consequently, Rift Valley Railways (RVR) signed the Concession Agreements in 2006.

Despite these efforts, the rail sub-sector has continued to underperform. Consequently, the limited development of the railway infrastructure has resulted in low usage; the railway sector accommodated only 8 per cent of the freight volumes in 2012/13, which was less than the 8.9 per cent in 2011/12 and 10 per cent registered in 2010/11 (GoU 2015). The limited usage of railways could be attributed to the poor rail gauge, low speeds and limited wagons (PSFU 2010). These challenges were also the major bottlenecks to achieving the NDP I target of 17.8 per cent by 2014/15. Current efforts are geared towards the overhaul of the railway infrastructure, and construction of the standard gauge railway line was launched in 2015 to address this goal.

#### 4. EVIDENCE FROM THE LITERATURE: ALTERNATIVE FINANCING OPTIONS

The literature identifies various innovative options for financing development outcomes, particularly in low-income countries. The Africa Infrastructure Country Diagnostic (AICD 2008) provides an extensive survey

of emerging issues and patterns in financing public infrastructure in Sub-Saharan Africa, arguing that resources for financing infrastructural investments could be substantially improved by addressing the substantial inefficiencies that usually characterize project implementation. The study explores three major sources of inefficiency: under-maintenance, budget execution failures, and losses arising from hidden costs. Specifically, hidden costs include labour redundancies, un-accounted for losses, under-collection of invoiced amounts and mispricing.

The United Nations Economic Commission for Africa (UNECA 2015) has evaluated innovative financing sources to unlock, among others, the deficits in transport infrastructure, energy and human capital development for the economic transformation of Africa. Although recognizing the role of external financing, the following are proposed as sustainable alternatives for financing development in Africa: unlocking the constraints to domestic resource mobilization, controlling illicit financial outflows, tapping into private equity and forging new forms of partnership.

Private participation in infrastructure (PPI) financing, particularly from international capital markets and pension funds, has vast financing potential that remains largely untouched (Wentworth and Makokera 2015; Gutman et al. 2015; Collier 2014). The arguments in favour of PPI financing are premised on the seemingly abundant and readily available funds in international markets and the very low long-term interest rates. However, there are obstacles that explain the limited use of private financing in infrastructure development, particularly friction in matching potential suppliers of private sector financing with bankable/investable projects (Ehlers 2014).

Collier (2014) raises a number of issues that must be addressed for African governments to tap more effectively into international financing. In particular, he argues that attracting private investment has been hampered by the limited capacity of African governments to design the types of projects that would attract private investors. This issue usually arises when infrastructure projects are undertaken in an environment in which elites in government capture the intended benefits of the projects to amass

personal political capital. These challenges, coupled with organizational impediments, needlessly raise perceived risk to unreasonably high levels (Collier and Cust 2015).

Gutman et al. (2015) provide a detailed analysis of the three major sources of external financing: private participation in infrastructure (PPI) investments; official development financing (ODF) from multilateral institutions and most of the OECD-DAC donors; and official Chinese financing. Their analysis also considers the governance issues that are critical for ensuring the economic, social, and environmental sustainability with respect to these investment outcomes.

Many African countries that traditionally relied upon development assistance from the OECD-DAC donors to support infrastructure and other development interventions are increasingly finding new and innovative financing mechanisms (Ratha et al. 2008). The issuance of sovereign bonds in international markets, for example, is one option that many developing countries, including in Africa, are increasingly taking advantage of (Platz 2009). Among African countries, Ghana, Gabon, Tanzania, the Democratic Republic of the Congo, Zambia, Côte d'Ivoire, Senegal, Angola, Nigeria, Namibia, Kenya, and Ethiopia have all mobilized substantial resources by issuing sovereign infrastructural bonds between 2007 and 2014.

However, there are concerns that raising such finances from the open international market attracts unjustifiably higher borrowing costs for African countries. Within this realm, Olabisi and Stein (2015) investigate whether African countries pay a premium – beyond what can be explained by fundamentals such as risk ratings and macroeconomic variables – on international borrowing. They find that interest rates are indeed higher for sovereign bonds issued by African governments. For example, Gueye and Sy (2015) find that borrowers in Sub-Saharan Africa pay 338 basis points more than does the average emerging borrower.

An important consideration that shapes the commitment and capacity of governments and political elites to invest in developmental institutions, structures and relationships that underpin the

deliverance of quality projects is the political economy environment in which infrastructural designs and planning occur (Romeo and Smoke 2014). In Uganda, the system of decentralization ceded to a certain extent the responsibility over infrastructure development to the local governments. However, these local governments are faced with capacity challenges due to the inadequate skills and technical competencies of the councillors and project management committees to monitor and provide adequate oversight functions for the infrastructure projects (Tukahebwa 2012).

Issues of governance and efficiency in public investment management are critical in freeing up funds and creating opportunities for enhanced infrastructure investments. Corruption has been shown to be a major driver of unit costs, often leading to the delivery of expensive yet substandard projects (Collier et al., 2015). In many instances, provisions for operations and maintenance are neglected, leading to faster depreciation and possibly limiting the productivity effects of investment (Adam et al., 2014).

For natural-resource-rich countries, Collier and Cust (2015) make an interesting case for investing windfall revenues in infrastructural development at the expense of more fashionable alternatives such as the Norwegian Style sovereign wealth funds. The argument is that African countries have larger deficits in infrastructure and that therefore the return on infrastructural development is potentially higher in Africa than on foreign financial assets.

## 5. STUDY FINDINGS AND DISCUSSIONS

This section presents and discusses the findings from the literature survey, augmented with key stakeholder views and perceptions on the applicability and relevance of the identified options for financing infrastructure projects in Uganda. The options are classified into five broad categories: domestic resource mobilization, public investment management, external development financing, private finance mobilization, and natural resource revenues.

## 5.1 Domestic resource mobilization

### *Improving revenue performance*

Improving domestic revenue mobilization emerged as the primary available option for financing infrastructural development in any country. This approach encompasses efforts to increase the tax yield, increase domestic savings and minimize illicit financial flows. However, weaknesses in the legal and regulatory frameworks; the narrow tax base; the large informal sector; tax exemptions; and institutional weaknesses have contributed to low domestic revenue realisations in Uganda over the last decade. In addition, tax morale and, consequently, fiscal legitimacy are low because of inadequate service delivery and perceived limited government investments in infrastructures that are complementary to economic performance (Maweje and Okumu 2016).

All of these factors have contributed to low tax revenue performance that has stagnated at 12–13 per cent of GDP over the years. Therefore, effort should be focussed on these issues to improve domestic resource mobilization. Available evidence indicates that unlocking sector-specific bottlenecks, such as improving the productivity, formalisation and commercialisation of agriculture, can yield positive results with respect to tax revenue performance (Maweje and Munyambonera 2016).

If the government is able to follow through with a commitment to increase the tax-to-GDP ratio by 0.5 percentage points annually, an additional one-half trillion shillings can be generated in the first year alone, and subsequent increments would necessarily be larger. These increments are potentially large and can finance one quarter of the energy sector budget in the first year alone.

Discussions with key stakeholders highlighted two options that are considered novel and are often neglected but can potentially enlist large positive effects for making available resources that could be used for financing infrastructure development. These options, discussed herewith in detail, are leveraging the contributions of non-tax revenue and curtailment of capital flight.

### *Non-tax revenue (NTR) performance*

The three most important sources of domestic revenue in Uganda are international trade taxes, direct domestic taxes, and indirect taxes (figure 2). These three tax-heads contributed 95 per cent of all revenue collections in 2015/16. International trade taxes continue to be the most important sources of domestic revenues. In 2015/16, international trade taxes contributed UGX 4.8 trillion, equivalent to 42 per cent of revenue collections in 2015/16.

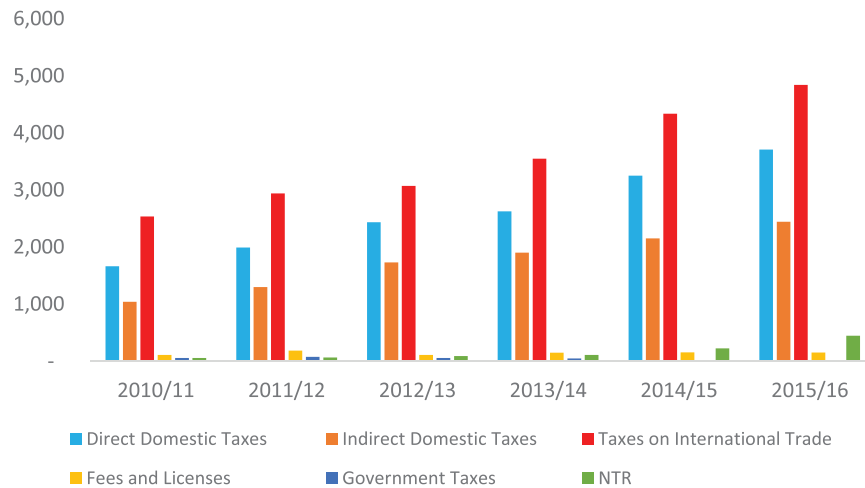
However, the composition of revenue collections is gradually shifting towards domestic indirect taxes, whose share in total revenues has increased to 32 per cent in 2015/16 from 30 per cent in 2010/11. Likewise, the share of indirect taxes has increased from 19 per cent in 2010/11 to 21 per cent in 2015/16, representing the equivalent of UGX 2.4 trillion.

The contribution of NTR is low but gradually increasing. The nominal contribution of NTR has increased eightfold over the last five years from UGX 56 billion in 2010/11 to UGX 445 billion in 2015/16. This increase has resulted in a corresponding percentage share increment from 1 per cent in 2010/11 to 4 per cent in 2015/16.

Non-tax revenue is obtained by the government from sources other than tax. Such sources include, among others, fees, fines and penalties, surplus from public enterprises, and levies and other collections. Leveraging the contributions of non-tax revenues can help to boost domestic revenue mobilization in Uganda.

An important source of non-tax revenue accrues from collections by self-accounting bodies such as the Uganda Communications Commission (UCC), Civil Aviation Authority (CAA), and Electricity Regulatory Authority (ERA). Such bodies collect NTR and spend at the source. This practice potentially undermines efforts to improve revenue mobilization. For instance, ministries departments and agencies (MDAs) submitted only 76 per cent of the 2012/13 NTR assessment, largely due to retention of NTR at source by MDAs (Lakuma and Lwanga, forthcoming). Consequently, NTR's contribution to revenue is small (0.2 per cent of GDP per annum), possibly due to non-remittance to the centre. However, the contribution of

Figure 2: Domestic resource mobilization, billion UGX



Source: Uganda Revenue Authority

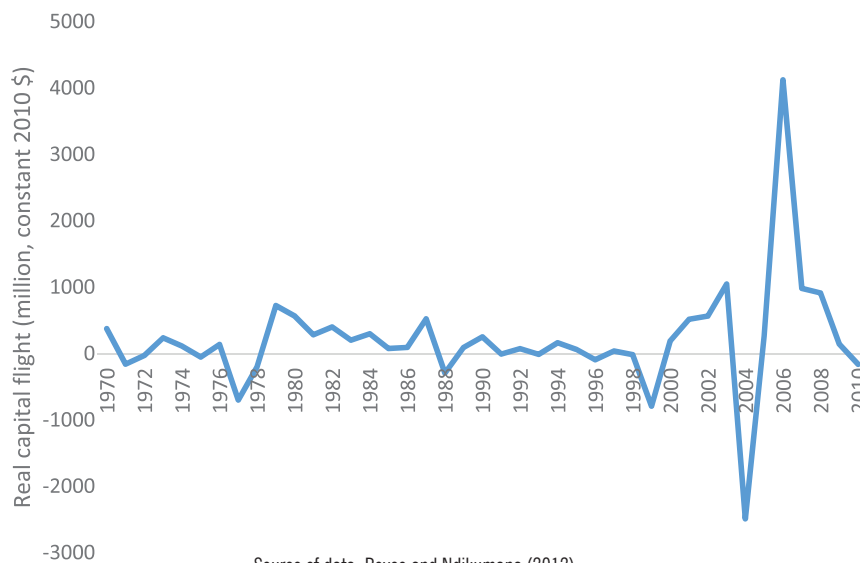
NTR has the potential to double to 0.4 per cent of GDP by 2019. This strategy will require NTR to contribute an additional UGX 130 billion per annum.

### Curtailement of capital flight

Capital flight is an endemic problem and a major deterrent to domestic revenue mobilization; it ultimately affects economic growth and transformation, particularly in Sub-Saharan Africa (Boyce and Ndikumana 2012). In Uganda, capital flight has been relatively low and stable for the entire period from 1970 until the mid-2000s. However, capital flight has become more pronounced in the past two decades (Figure 3).

An important conduit for capital flight is through corruption and tax evasion. In particular, corruption greases the wheels of capital flight and exacerbates tax evasion. In addition, extractive sectors are known to harbour secrecy that could be breeding grounds for corruption, tax evasion and capital flight. Experiences from elsewhere show that natural resource booms can exacerbate tax avoidance (Kedir 2014) and capital flight (Arezki et al., 2014), particularly in countries with weak policy rules and institutions. For example, estimates indicate that Zambia loses revenues of approximately 15 per cent of GDP to tax avoidance by corporations engaged in its copper mining business (Arezki et al., 2014). These discussions provide

Figure 3: Real capital flight (million, constant 2010 USD)



Source of data: Boyce and Ndikumana (2012)



important learning points as Uganda moves to develop its nascent oil and gas sector.

Data provided by Boyce and Ndikumana (2012) show that cumulative capital flight from Uganda in 2005–2010 amounted to USD 6,259 million in 2010 constant prices. This loss in revenues is large; to place it in perspective, the sum is sufficient to finance the current budget allocations to the ministry of works and transport six-fold. Uganda should therefore move quickly to strengthen the institutions of governance, including in the extractive sectors, to avoid the challenges of capital flight.

Uganda has put in place institutions to curtail illicit financial flows, but these institutions should be strengthened. Therefore, to stop illicit financial flows, it is imperative to empower institutions that collect financial intelligence and stop corruption. These institutions include the Financial Intelligence Authority and the Inspector General of Government. Otherwise, continued illicit financial flows could undermine revenue mobilization measures.

An important aspect of capital flight emanates from the nature of the domestic private sector and how this sector relates to government public procurements and local content provisions. The indigenous private sector

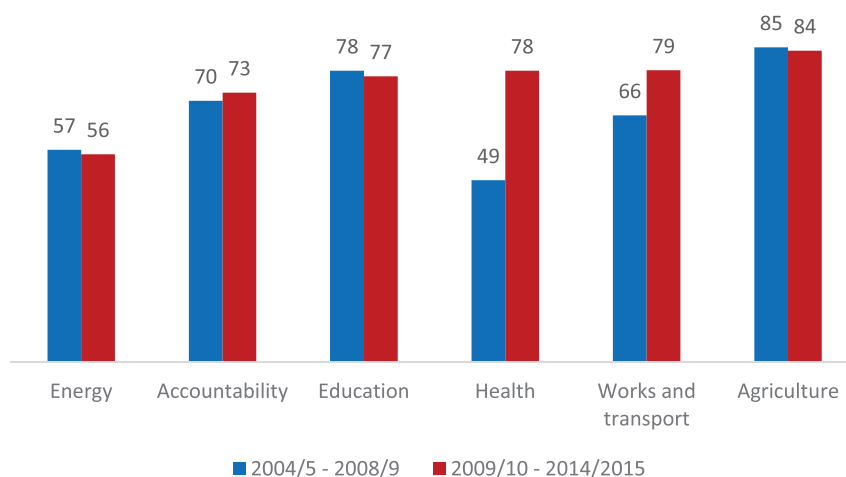
has not built capacity to take advantage of procurement opportunities offered by large public investments, particularly in infrastructure. These procurements have therefore largely benefited foreign firms, limiting the scope of the fiscal multiplier that would support domestic economic activity. Although funds usually come in as debt, they immediately flow out as in a revolving door, which limits the growth of the local private sector and the tax base. What is required is to strengthen the capacity of the local private sector and to develop policy and regulatory frameworks to deepen local content in government procurement.

## 5.2 Improving Public Investment Management

### Improving efficiency in the delivery of public projects

Inefficiency in the delivery of projects is a major challenge that has constrained increased spending on infrastructure, resulting into huge losses of revenue. Public investments are usually affected by absorptive capacity constraints and the limited capacity of public officials to manage critical project elements adequately. In particular, limited capacity for project selection, preparation, appraisal and approval and limited ability to monitor and ensure that quality projects are delivered on time has resulted in negligible returns on public investment.

Figure 4: Public investment budget execution rates, %



Source: World Bank (2016)

In addition, projects are usually riddled with corruption and the propagation of self-interests, which affect project selection and execution and lead to delays, leakages, and wastage. These challenges are often exacerbated by contract disputes, abuse of social and environmental safeguards, cost overruns, and abandonment of projects, often leading to the delivery of substandard projects and rapid depreciation of public capital stock. Consequently, there are large budget execution gaps in public investments, particularly in the transport and energy sectors (Figure 4).

The challenges in public investment management in Uganda imply that projects do not always deliver value for money. The World Bank (2016) indicates that every dollar invested in the development of public capital stock generates only 0.8 dollars' worth of economic activity. In other words, returns on public investment in Uganda are effectively negative. The low returns on infrastructure investment limit the growth enhancing potential of public investment and have implications for domestic resource mobilization, potentially limiting further infrastructural investments. This situation can be contrasted with countries in which returns on infrastructure investment are significantly higher due to better project investment management. In the United States of America, for example, Cohen et al., (2012) estimated that a dollar's worth of investment in infrastructure yields roughly double the initial spending in ultimate economic output in the short term and over triple over a twenty-year period.

In September 2016, the World Bank suspended new lending to Uganda, citing poor project management and execution (box 1). Of concern to the World Bank

were issues related to delays in project execution, weaknesses in social and environmental safeguards, monitoring and enforcement, and poor absorption of the funds.

Estimations show that improving budget execution rates in the energy sector to 100 per cent would result in a 78 per cent increase in investment delivery. Likewise, a 26 per cent increase would be obtained in the works and transport sector. These increments are large, and they do not require additional budgets (budget neutral). Discussions with stakeholders in the Ministry of Finance revealed that the government is aware of the public investment management challenges, and corrective reforms are underway. Specifically, a project analysis and PPP department has been created in the Ministry of Finance Planning and Economic Development to attempt to address the issues relating to improving efficiency in the delivery of public projects.

#### Unit costs in public investments

Another challenge facing public investments in Uganda's infrastructure relates to the high unit costs relative to other countries comparable to Uganda. Evidence from other developing countries indicates that corruption is a major factor explaining unusually high unit costs (Collier et al. 2015). Therefore, the high unit costs observed for Uganda's infrastructural procurements could be attributed to syndicated corruption and poor governance. A recent audit report by the Office of the Auditor General (2015) indicates that unit costs in the road sector are indeed higher than the average costs in the region (see illustration in box 2)

#### Box 1: World Bank suspension of development financing, September 2016

*Low absorption of borrowed funds has led to the suspension of World Bank lending to Uganda until the issue of poor absorption of loans, including project delays, enforcement and low disbursement, has been resolved. Out of the USD 2.6 billion (approximately UGX 8.8 trillion) loans extended, only USD 600 million (approximately UGX 2 trillion) had so far been used, and approximately USD 1.4 billion (approximately UGX 4.7 trillion) has yet to be utilized.*

## Box 2: The challenge of units costs: the case of the Kampala-Entebbe expressway

*The unit cost for the Kampala-Entebbe expressway was US\$ 2.315 million per lane kilometre, whereas a similar expressway costs US\$ 1.204 million per lane kilometre. Furthermore, a cost comparison was made using experience in the East African region, in which costs for constructing a 2 lane highway with similar pavement structure range between US\$ 800,000 to US\$ 900,000 per km. Adjustments to this figure consider that the four lanes and other infrastructure would amount to US\$ 4.140 million per km, less than half of the cost of the Kampala-Entebbe Expressway, which is US\$ 9.261 million per Km (Auditor General 2015).*

Using the information in Box 2 as a starting point, estimations indicate that procuring infrastructure projects at reasonable costs would deliver nearly twice the stock of infrastructure for the same cost. These revelations indicate that focussing on improving the governance and efficiency of delivery of infrastructure development in Uganda could significantly improve value for money and deliver a significantly higher amount of infrastructure for the same cost.

Another driver of project unit costs that could enlist large savings is related to land compensations to secure right of way for infrastructure developments. In many instances, disagreements over land valuations results in projects delays. In certain instances, connivance between landowners and government bureaucrats results in unfairly high compensations that lead to loss of revenues. Overcoming such challenges requires carefully crafted land reforms that consider the complex social and cultural aspects, would allow government compulsory land acquisition, but would ensure that any rightful owners are fairly and expeditiously compensated and/or resettled. This approach would require the establishment of efficient and fair legal and institutional frameworks for implementing these reforms. To ensure transparency, the government should also develop a database that is updated regularly – perhaps twice yearly – upon which land valuations are based. The key principle is that any compensation must follow the twin objectives of equity and equivalence – meaning that affected communities would be left neither impoverished nor enriched (see Lindsay 2012 for details). Such reforms, if well executed, could reduce rent seeking and save

the government money and time, leading to improved efficiency in public investment.

### **Operation and maintenance of public infrastructure**

An important aspect that compromises the productivity and life cycle of public infrastructure is the limited provision and budgeting for operations and maintenance. Subsequently, many infrastructure projects quickly wear out and depreciate at a faster rate than would occur if some minimum levels of maintenance were required. Many projects in Uganda have recurrent budgets for repair but not for operations and maintenance.

Operation and maintenance expenditures affect infrastructural projects in two distinct ways. First, inadequate planning and appropriation of maintenance expenditures result in faster depreciation of capital. Second, deficient operation expenditures reduce the productivity of the current stock of public capital, leading to economic losses. In many instances, the limited budgeting for operations and maintenance means that projects must be overhauled much more frequently than is desirable, leading to unnecessary loss of resources and creating a vicious cycle whereby resources are always spent on the same projects. This situation affects availability of funds for other projects. Coordination in government agencies

An important aspect that was raised in discussions with stakeholders relates to the poor coordination between the various implementing agencies. Many public investments in Uganda are spread amongst multiple institutions and agencies. This distribution

leads to delays in project implementation and in some instances delivery of projects that do not address development challenges in a holistic manner. For example, the rural electrification project in the Ministry of Energy and Mineral Development is not well linked to targets and outcomes in the Ministries of Agriculture, Animal Industry and Fisheries (MAAIF) or the Ministry of Trade, Industry, and Cooperatives (MTIC) to ensure that the extension of electricity supports value addition. Such coordination challenges limit the expected returns on public investments.

### 5.3 External Development Finance

Traditionally, Uganda has been financed on concessional terms by traditional donors including the OECD-DAC and other multilateral institutional (MRDI) sources. Recent trends indicate that development financing, particularly grants from the traditional donors, has significantly decreased, requiring the government to explore other avenues for financing development. Furthermore, the mode of financing by the MRDIs, which involves stringent terms and conditionalities, has not changed. This issue remains an impediment for financing development in the country (Davies et al., 2015).

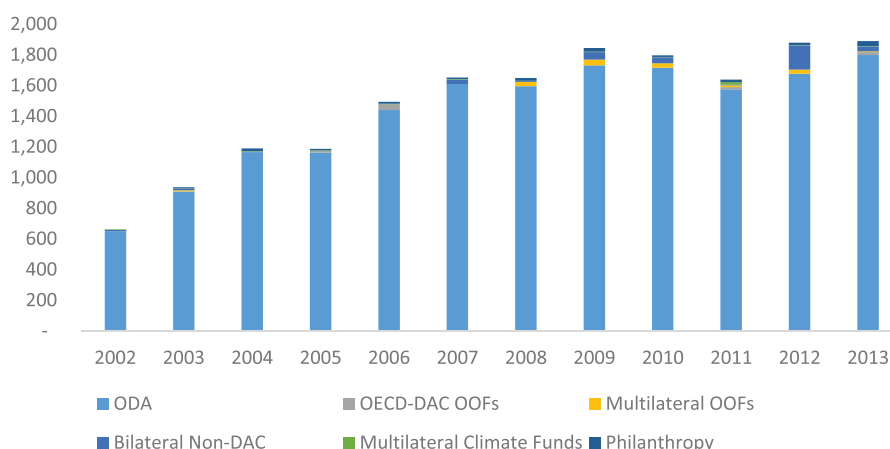
Figure 5 shows that most of the funding has been in the form of Official Development Assistance (ODA), with non-ODA financing averaging approximately 4.4 per cent of total development financing for the period. The emergence of China as a source of development financing, however, has diversified the sources of

non-ODA external development financing towards supporting infrastructure development in Uganda (Davies et. al. 2015). Chinese funding has increased from approximately USD 13.5 million per year between 2002 and 2009 to USD 56 million per year between 2010 and 2013.

Other assistance from non-DAC partners only totalled approximately USD 4 million in 12 years. Over the same period, the assistance from other official flows (OOFs) from OECD-DAC partners and multilateral development institutions amounted to USD 229 million over the 12-year period, averaging USD 19 million per year. These OOFs were primarily direct funding to the private sector. The other non-ODA financing was in the form of philanthropic flows and totalled approximately USD 177 million, or an average of USD 15 million per year, the bulk of which flowed directly to non-government entities. Multilateral climate financing amounted to USD 49 million at an average of USD 4.1 million per year (Davies et al., 2015). In the medium term, borrowing from China is projected to dominate external funding for Uganda in a mix of semi-concessional and non-concessional loans for infrastructure development.

It is projected that by 2025, as Uganda moves to realize its infrastructural development requirements, non-ODA loans will constitute 70 per cent of new government borrowings, amounting to USD 7.4 billion in value. Borrowing from China Exim Bank is expected to account for almost 80 per cent of all non-ODA

Figure 5: External Development financing per annum to Uganda, 2002–2013 (US\$ million)



Source: Davies et al. 2015

loans. Non-ODA loans from OECD-DAC partners and multilateral institutions are expected to account for only 20 per cent of non-ODA borrowing by 2025. Most of this borrowing is expected to be non-concessional lending from multilateral development institutions (such as the Islamic Development Bank and the African Development Bank), but it will also include commercial loans from the United Kingdom and Japan, which are currently pending Parliamentary approval. Clearly, financing from China has dominated other external development financing to Uganda over the past few years.

Although there could be challenges associated with Uganda external development finance (EDF) acquisition and implementation, there are also opportunities that the country can take advantage of to sustain its borrowing for infrastructure development. In the new financial landscape, Uganda will be able to enjoy a larger pool of development partners and a higher threshold for borrowing. New partners such as China are willing to provide Uganda with the funds required for major developments, significantly beyond what the traditional partners have been willing to provide. Moreover, with the renewed interest of other new partners such as IDB, IMF, and others, Uganda has an opportunity to negotiate for better loans by leveraging its larger pool of development partners. The limit to borrowing could be dictated by the debt sustainability position. Although the debt sustainability analyses continue to show low risks of debt distress, vulnerabilities have increased. The net present value of public debt-to-GDP ratio is expected to rise to 27.5 per cent of GDP by FY2019/20, up from the current 20.5 per cent, and still well below the 50 per cent EAC convergence threshold, demonstrating that Uganda remains a worthy borrower (MFPED 2015.)

Without a doubt, the country needs more external funding. China alone can provide less conditionality compared with the traditional donors who cannot afford to lend this amount of funds without soliciting a consortium of donors, thus taking more time. However, in the long term, the government must diversify borrowing from available sources of financing to avoid the risks of overdependence upon single sources such as China. The traditional donors are adjusting their terms of lending to poor countries and introducing a

mix of financial instruments such as export credits from traditional donors and blended financing for the EU. This change has come when the IMF and World Bank have reviewed terms and conditions for borrowing by Uganda as long as its debt position remains less distressed.

The need for increased borrowing for development for Uganda can be justified as long as the Uganda debt position remains less distressed. Indeed, Uganda can continue borrowing for infrastructure development as long as the rate of return on investments is higher. The traditional development partners are however sceptical about China's lending terms to Uganda, project implementation and bidding procedures, which are rather not transparent and are tied to China's EXIM Bank and Contractors. The opaqueness in such procurements is likely to exclude efficient contractors for large-scale infrastructure investment projects, thereby possibly compromising quality.

Considering the relatively large borrowing needs for Uganda, diversifying into other sources of financing can be important. Although there is renewed focus on moving borrowing from fully or semi-concessional sources to non-concessional sources, the viability of high-return projects could justify a move to tap directly into other sources of credit such as international credit markets, issuing Eurobonds, export credits and a combination of financing instruments that are emerging on the market. Furthermore, considering the changing landscape for external development financing, the government must build capacity to utilize the short-term nature of available non-concessional financing and offset the higher associated costs.

#### **Risks associated with EDF**

The effectiveness and impact of EDF could be undermined by several weaknesses, particularly due to the following factors: weak coordination among institutions coordinating EDF; weak human resource capacities to negotiate, design, and implement the projects at MDAs; and late approval and disbursement of funds by the donors. All of these factors could result in delayed implementation of the projects and low absorption of the funds.

Overall, it is estimated that of a total cumulative debt

of approximately USD 8 billion, only approximately 50 per cent is absorbed, which has led to the government paying a high cost for debt payment and servicing, currently estimated at approximately 12 per cent of the total budget. This payment has a stifling effect on desired infrastructure investments in Uganda.

#### 5.4 Private Financing Mobilization

Private financing mobilization has both domestic and foreign dimensions. The domestic dimension includes Public-Private-Partnerships (PPPs), pension funds and domestic capital markets. The foreign dimension includes sovereign bonds, foreign direct investment, remittances and diaspora bonds.

##### Public Private Partnerships (PPPs)

The GoU adopted a national PPP policy in 2010, and Parliament passed a revised PPP Bill in 2015. The objective of the national PPP policy is to encourage private-sector investment and participation in public infrastructure and related services in which value for money can be clearly demonstrated. The government has been engaging in a number of PPPs across a number of sectors since 2003, although there was no law in existence at the time, and plans to continue doing so in future. The existing projects, such as Bujagali Hydroelectric Project, UMEME Electricity Distribution Project, Eskom Electricity Generation Project, and Kenya-Uganda Railway Project, are being financed under the existing PPP framework. Others in the pipeline are the oil refinery and the expansion of the Kampala-Jinja Highway.

Quite a number of PPPs have involved commitments of development financing beyond ODA. By far the largest of these partnerships is the 250 MW Bujagali Hydropower Project, in which multilateral and bilateral development finance institutions (DFIs), including the AfDB, EIB, IFC, France, Germany and the Netherlands, committed debt financing to the private developer in a project worth over 900 million US dollars over a 30-year period. Karuma and Isimba Dams, with private funding from Chinese-EXIM Bank, operate within the same framework, which uses a Contract Financing Facility (CFF) to undertake the implementation of large-scale projects (MFPED 2015). Under CFF, Uganda can leverage private financing and foreign direct investments to realize tangible investments in

infrastructure.

Discussions with stakeholders revealed concerns that some sectors have turned to Contract Financing Facility in an attempt to bypass unreliable and inadequate releases from the centre. As argued by Musisi and Richens (2014), spending by agencies without parliament approval and proper supervision by MoFPED violates the constitutional requirement that all public borrowing and expenditures should be approved by parliament and follow public finance management procedures.

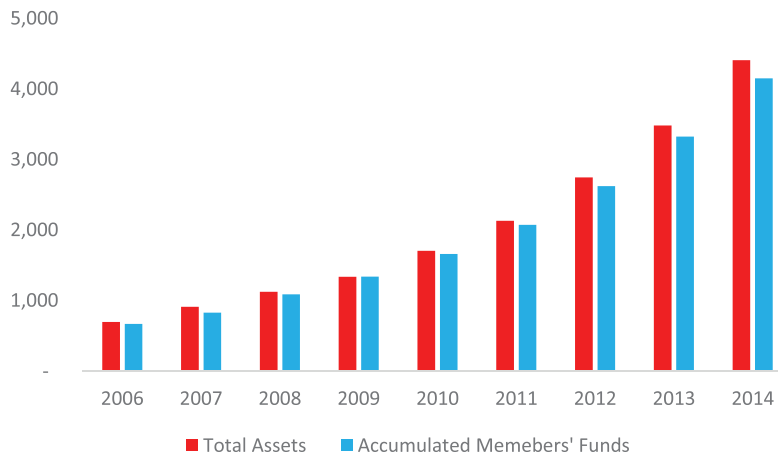
CFF could be important for effective implementation of infrastructural projects in the country and should follow the government's financing and debt strategy to avoid speculation by the spending agencies and the contractors. A case in point is the Katosi road in Mukono district. Unless the CFFs are under highly concessional terms, it is preferable for MoFPED to continue to focus on public investment management reforms to address cash-flow issues and to increase the resources available through the established budget process by scaling up borrowing through traditional means and directly from international capital markets.

Given that private financial mobilization attracts commercial as opposed to the more affordable concessional terms, there are risks that the cost of infrastructure might be unreasonably high. Already, there are concerns that the Electricity from Uganda's flagship PPP project – Bujagali – whose sale price is \$0.11 per kilowatt-hour, is very expensive due to the high cost of privately sourced financing. Going forward, privately financed projects should be reserved for projects that have an intrinsic ability to pay without distorting the social and public gains.

##### Pension Funds

Pension funds can potentially be an important source of private capital for financial investment in infrastructure. The value of assets and member contributions at Uganda's leading pension fund – National Social Security Fund (NSSF) – has grown tremendously over the past 10 years (Figure 6). It is estimated that member contributions reached UGX 6.7 trillion in 2015. This amount is the equivalent of approximately 7 per cent of GDP. Although this figure

**Figure 6: NSSF total assets and member contributions, Billion UGX**



Source: NSSF financial statements 2006–2015

is small by international comparisons, it represents tremendous growth in the pension sector.

Discussions with key stakeholders revealed that the NSSF has an appetite for investing in brownfield projects in particular. Although the NSSF institutional investment policy provides for investment in infrastructure bonds, the government has not established systems to use this channel for financing infrastructure. The advantage of borrowing from pension funds is that the government will be able to pay the loans in domestic currency, and the risk of fluctuating interest rates that comes with deprecating exchange rates for foreign currency denominated loans would be mitigated.

With the recent reforms in which the government aims at improving the coverage and efficiency of the pension sector, the growing pension funds could be a potential substitute for the high cost of externally borrowed funds for infrastructures investments. Investing a proportion of pension funds in national development would allow for matching funds of long-term infrastructure that are best financed in local currency. With the provision of guarantees and other credit improvements, pension funds could help develop local and social infrastructure while providing safe, healthy financial return for pensioners.

Pension funds seek assets that provide long-term, stable, and inflation-adjusted returns. For this reason, the electricity sector would be an attractive venture for the pension funds because of the assured returns.

Returns in the transport sector can also be guaranteed when there are legal requirements for private payment, such as through road tolls. Already, the NSSF is the lead investor in UMEME, Uganda’s largest electricity distribution company, and would consider investments in electricity generation projects if the right business investment models were agreed upon. In addition, NSSF is an active investor in the Real Estate Sector. However, past corruption scandals and the fact that NSSF handles retirement funds always invoke emotions within NSSF’s key stakeholders – the savers. If NSSF continues to improve its image as a credible institution, there are great opportunities for high-return investments in public infrastructure.

### Remittances and Diaspora Bonds

Remittances could be a feasible window for improving Uganda’s external financing flows in the country. Available data indicate that personal remittances reached approximately USD 1 billion in 2015 from slightly above USD 200 million in 2000 (Figure 7). Despite the potential for remittances to finance domestic development, there are no established mechanisms or strategies to harness these resources for development.

Discussions revealed that it might not be feasible to issue diaspora bonds in the short term given the lack of critical mass of solvent diaspora members because members of the Ugandan Diaspora community are not registered and cannot easily be reached. Furthermore, the Central Bank has yet to establish the financial instruments for investing in diaspora bonds. It was

therefore recommended that a three-phase approach be executed: 1) initially attract the Diaspora to ordinary government securities. 2) Issue a local bond with a diaspora component. 3) Following the realisation of a critical mass to subscribe fully to a diaspora bond, consider issuing a pure diaspora local currency bond.

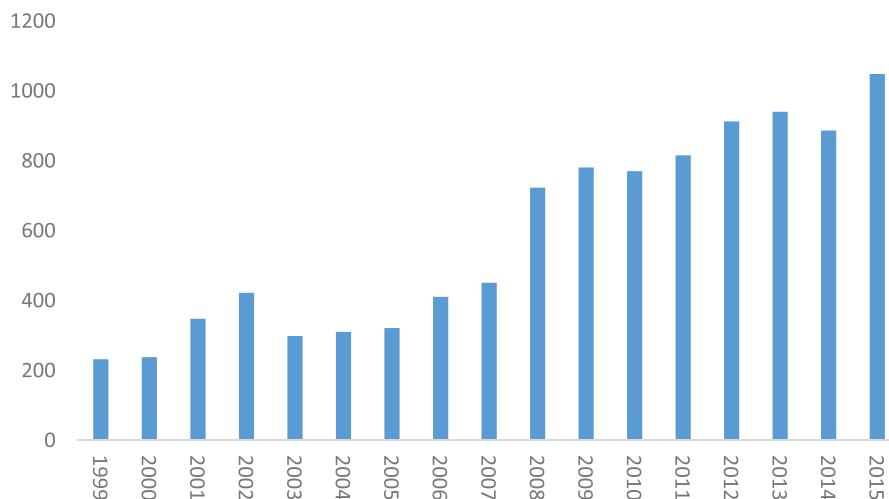
To benefit from the remittances, the Central Bank should conduct sensitization visits to the diaspora forums (such as international conventions and national forums). This action would provide information on the availability of investment opportunities in the GoU Treasury debt securities (bonds and bills), establish facilities to attract the diaspora remittances for investment in the treasury securities, and encourage the diaspora to open bank accounts.

Uganda can draw lessons from Ethiopia, which successfully issued a diaspora bond in 2011 to finance the grand renaissance dam (Box 3). This experience shows that Diaspora bonds could be an important fundraising vehicle critical to the successful mobilization of revenues for infrastructure investments. However, selling such bonds would require intensive marketing and publicity to entice investors and reduce perceived risks.

### Sovereign Bonds/ Eurobonds

A Eurobond is a government bond, issued on international markets, in a currency other than that of the issuer. The structure varies, but most SSA Eurobonds issued to date have been of 5-year or 10-year maturity, pay fixed interest coupons, and provide a ‘bullet’ repayment of the principle (i.e., there is no amortization, with the principle repayment simply being made in a single sum on the maturity date). Between 2007 and 2014, eleven Eurobonds were issued to approximately 7 countries in SSA, ranging from USD 200,000 to USD 1 billion and totalling approximately USD 6.5 billion (Langford and Namanya 2014). This issuance has been largely driven by supply side factors including borrowing space created by debt relief, large borrowing needs (particularly for infrastructure investment), historically low borrowing costs, and increased flexibility for non-concessional external borrowing under IMF programmes, among others. On the demand side, international investors have been attracted to SSA issues by improved debt sustainability prospects, attractive yields and the opportunity for portfolio diversification. There is evidence that demand amongst international investors would be sufficient to make issuing a Eurobond a feasible option for Uganda and that sufficient investor interest will remain even as global interest rates begin to normalize.

Figure 7: Personal remittances, received (current million USD)



Source: World Bank Development Indicators

Source: World Bank Development Indicators



**Box 2: The challenge of units costs: the case of the Kampala-Entebbe expressway**

*When Egypt blocked Ethiopia's access to international financing for developing a dam on the Nile, the country resorted to other innovative sources of financing. The Grand Renaissance Dam bond was issued in 2011 to finance the construction of the 5,250 megawatt Grand Renaissance Dam. The dam is the largest in Africa and the seventh largest in the World at the time of construction. To ensure success, the government engaged in far-reaching marketing and awareness-raising campaigns. In addition, the bond was offered in affordable denominations of about USD to ensure the participation of as many Ethiopians as possible. Certain features of the bond made it attractive. First, it was possible to use the bond as collateral in Ethiopia. Second, the government, through the commercial bank of Ethiopia, met any remittance costs associated with the purchase of the bonds. The project cost was estimated at USD 4.8 billion.*

Uganda's credit rating at B2, compared with countries such as Ghana and Zambia at B+, barely meets the minimum preconditions for Eurobond Issuance. Before considering the possibility of issuing a sovereign bond, it is important to consider the full range of benefits, costs and risks associated with this form of borrowing, to consider carefully the required preparations, timing, and returns on the use of proceeds, and to weigh the net benefits relative to those of alternative financing options (Langford and Namanya 2014). Some considerations include whether issuing Eurobonds would allow access to a much wider pool of capital than would be available from concessional financing and domestic savings; whether Eurobonds could help finance desired infrastructure projects more rapidly; whether Eurobonds could provide a source of foreign exchange for import-intensive expenditures for major infrastructure projects without the need to tap existing reserves or risk weakening the Shilling; and whether Eurobonds could mitigate domestic debt issuance.

Although sovereign bonds are potential sources of external funding for public investments, this study cautions that Uganda should proceed slowly with any plans to engage sovereign bonds for financing public investments. Uganda's unfavourable credit rating would attract high interest rates. The government recognizes that sovereign bonds are expensive and contracting them can raise public debt to unsustainable levels, particularly during currency depreciation, thus increasing bond yields. Repayment risks are also associated with sovereign

bond financing. Given the capacity challenges GoU continues to face with respect to appropriate project design and timely implementation, as reflected in the high stock of undisbursed loan commitments, the risk involved would be too high.

Although it is considered a risk in Uganda's case, other African countries have benefited from recent Eurobond issuances in amounts varying from USD 200 million to USD 1 billion. A good example is Ghana, which has received two Eurobonds since 2007 totalling USD 1.75 billion. It is important for Uganda to make necessary preparations before the issuance of the Eurobond; for example, the MoFPED must implement a transparent and credible medium-term financing strategy and involve sectors in the design and implementation of the project. For this purpose, attention might have to be directed towards developing the capacity to conduct cost-benefit analyses and prepare feasibility studies.

The best option available for tapping into private financing would entail the government developing a mechanism to tap into the domestic market. An innovative approach would be to provide Ugandans an investment vehicle to channel excess funds into a special purpose infrastructure bond. This interesting innovation has been successfully implemented in Ethiopia, in which a diaspora bond was floated to raise finances for the construction of the Grand Renaissance Dam as discussed earlier. This option has the potential to raise sufficient long-term financing domestically, including from institutional investors such as the NSSF,

considering the high appetite for credible investments<sup>1</sup>.

## 5.5 Natural resource revenues

Uganda joined the list of African countries that have discovered significant oil deposits in the recent past. Exploration efforts, which have primarily concentrated in the Albertine Graben, have confirmed the existence of significant oil reserves, estimated at 6.5 billion barrels, with approximately 1.4 billion barrels confirmed as recoverable. This oil find is large and will surely place Uganda among the large oil producers in Africa. The government of Uganda has taken the strategic decision to invest in the development of a small refinery in the Albertine Region near the oil exploration areas, which creates opportunities for private sector engagement in the development of forward linkages to other spin-off industries that straddle the oil and gas value chain. In addition, Uganda has abundant non-oil mineral resources. Unfortunately, a large proportion of these vast mineral resources have not been quantified. Consequently, a small portion of the minerals is exploited by micro and small household-based artisanal enterprises.

The development of the oil and gas sector in Uganda provides a great opportunity to grow and transform the economy. In particular, the government expects to raise significant revenues to promote sustainable economic development and poverty reduction expenditures. However, there are significant risks associated with natural resource revenues. First, they are volatile in price and volume, which creates challenges for the implementation of fiscal policy. Second, significant inflows of revenues can distort the macroeconomic environment. In particular, exchange rate appreciation can occur, leading to the Dutch disease phenomena – annihilation of the domestic non-oil tradable sectors. Third, natural resources tend to crowd out institutional development, leading to underinvestment in social, economic, and physical infrastructures, which might explain why oil revenues have had minimal development effects in resource rich countries such as Nigeria and Angola.

These challenges notwithstanding, oil revenues

<sup>1</sup> Recent initial public offerings by UMEME, Stanbic Bank and Safaricom were oversubscribed, showing the high appetite for alternative investment mechanisms.

provide the opportunity to address some of the long-standing constraints to growth and competitiveness. In particular, given the large infrastructural deficits in Uganda, allocating oil revenues towards infrastructure development will boost the productivity of the economy by unlocking the productivity of capital and labour. Indeed, prioritizing investments in infrastructure development has been argued to work against the Dutch disease in low-income countries that can harness idle productive capacity to unlock the productive potential of the economy and satisfy any resource-induced demand (Collier 2011). Such prioritization would require that Uganda focus on building the appropriate institutions, ensure strict adherence to the rule of law, and eliminate rent seeking and political and elite capture to ensure transformative gains from natural resources wealth as detailed in Maweje and Bategeka (2013).

In addition, there is an urgent need to strengthen Uganda's public expenditure efficiency as previously discussed in detail. Furthermore, oil should not provide an illusion that negates the urgent need to strengthen Uganda's DRM because oil revenues are not sustainable in the long term. Moreover, experiences from elsewhere have shown that in the absence of strong institutions, natural resource revenues tend to crowd out domestic resource mobilization efforts (Botthole et al., 2012).

Botswana is among the few countries that have exploited natural resources wealth to transform infrastructural developments. In general, Botswana adopted an investment drive that favoured investments in physical infrastructure across a range of assets, as shown in Figure 8, the largest three of which included electricity and water (21 per cent), housing and urban infrastructure (15 per cent), and roads (12 per cent). Such investments ensured that investments in reproducible capital were prioritized. The composition of spending gradually changed once the infrastructure deficit was gradually addressed and the need for new infrastructure accordingly reduced.

*The policy adopted towards mineral revenues in Botswana broadly follows the approach that favours investments in other forms of capital that can generate inter-generational income streams.*

*The public finance policy framework specifies that revenues derived from minerals, because they are derived from the sale of an asset, should be used to finance investment in other assets. The intention is twofold: first, to preserve the country's overall asset base; and second, to provide the basis for the generation of income that can replace mineral income when it eventually declines – AfDB 2016.*

Following such investment paths would help Uganda to leverage its natural resources wealth to finance deficits in infrastructure development.

## 6. CONCLUSIONS AND POLICY RECOMMENDATIONS

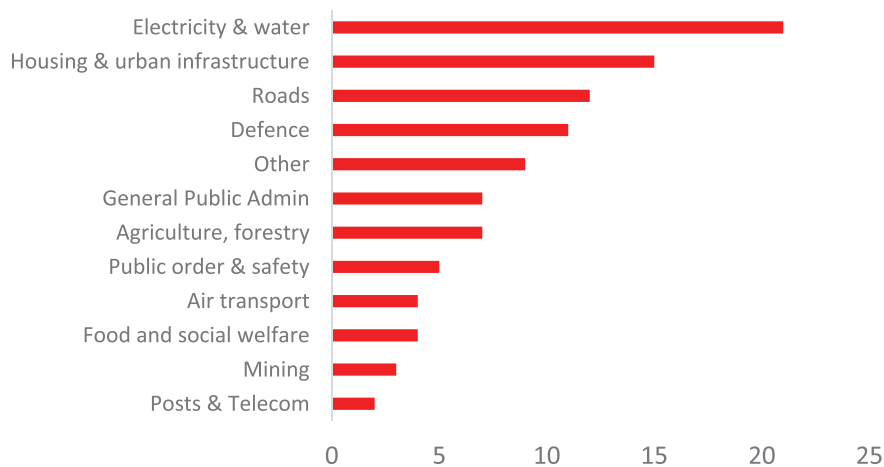
Uganda aspires to reach the middle-income category by 2040 as stipulated in both the NDP II and Vision 2040. Adequate and timely provision of quality infrastructure is an important input into Uganda's development agenda. Although Uganda has made progress in infrastructure development, the country still faces huge deficits across all sectors, including in the transport, energy, water and information technology sectors, which require financing beyond the public budget ceilings. These gaps in infrastructural provision affect the business climate and increase the cost of doing business, with implications for enterprise growth and jobs. In addition, infrastructural deficits

exacerbate poverty and inequality and could therefore hinder the attainment of development outcomes. Consequently, over the last decade, the country has prioritized spending on infrastructure as a means of unlocking productivity in the economy and improving competitiveness.

Traditionally, Uganda has relied on external development assistance to deliver crucial public investments. However, the increased discourse on financing infrastructure investments in Uganda must be cognizant of the changing global dynamics with respect to global cooperation. Traditional development assistance from members of the Organisation for Economic Co-operation and Development's Development Assistance Committee (OECD-DAC) has gradually decreased as developed western economies begin to have a more inward-looking focus due to challenges with the global economy, terrorism and immigration issues. However, there are now other emerging sources of development assistance – non-DAC donors, such as China and India, and the potential role of new modes of private finance such as infrastructure bonds and pension funds.

This study explored the available innovative options for financing the scaling up of infrastructure development in Uganda. This exploration was accomplished through a review of the literature and analysis of key stakeholder perceptions. Findings indicate that the prioritisation

**Figure 8: Botswana's allocation of development spending, excluding education and health, 1983/84–2014/15, %**



Source: AfDB 2016

Source: AfDB 2016

of domestic revenue mobilization efforts remains the primary available option for financing infrastructural development in Uganda. Therefore, efforts to improve domestic revenue mobilization should be scaled up. These efforts include, among others, decisively addressing weaknesses in the legal, regulatory, and institutional frameworks; expanding the tax base; unlocking the potentially large contributions from the informal sector; and reducing tax exemptions. Of particular importance, the study highlights the urgent need for curtailing capital flight and leveraging the contributions of non-tax revenues to boost domestic revenue mobilization.

With respect to external development financing, Uganda should carefully examine the options offered by non-DAC donors such as China, South Korea, Turkey and India. In the new financial landscape, Uganda will be able to enjoy a larger pool of development partners and a higher threshold for borrowing. New partners such as China are willing to provide Uganda with the funds required for major developments significantly beyond what the traditional partners have been willing to provide. Moreover, with the renewed interest of other new partners, Uganda has an opportunity to negotiate for better loans by leveraging its larger pool of development partners. However, Uganda should be cognisant of the increasing vulnerabilities of debt stress and the constraints posed by the East African Community macroeconomic convergence requirements.

The mobilization of private financing continues to attract little attention from the government despite the existence of the requisite policy and law to facilitate the design, construction, maintenance, and operation of infrastructures and services under PPP arrangements. Many countries in Africa have experimented with Eurobonds with mixed results. Ethiopia floated a diaspora bond during the construction of the Renaissance Dam. These examples provide critical learning examples for Uganda.

Pension funds are another source of long-term domestic private financing. In particular, investing a proportion of pension funds in national development would allow for matching funds of long-term infrastructure that are best financed in local currency. Other sources of

private capital for financing infrastructure investments include the domestic capital market and infrastructure bonds. However, leveraging such domestic private financing would require a thorough review of the institutional, legal and regulatory instruments to create an enabling environment with appropriate checks and balances to avoid misappropriation. In addition, the study cautions the government on mobilising domestic private financing because of the high cost of borrowing, particularly at a time when Uganda's credit rating is unfavourable, signifying increased perceived risk.

Finally, the study briefly discussed the role of natural resource revenues. The GoU has already stressed the importance of spending oil and gas revenues on investments rather than consumption. This intention is an encouraging commitment, given that spending on productive public investments, including on infrastructure, is one means of avoiding the Dutch disease effects. However, Uganda should continue focussing on building institutions, ensure strict adherence to the rule of law, and eliminate rent seeking and political and elite capture to ensure prudent use of natural resources wealth.

## REFERENCES

- Adam, C., Bevan, D., and Ohlenburg, T. (2014). "Public Investment and Growth in Uganda", International Growth Centre
- AfDB (2016). "Botswana's Mineral Revenues, Expenditure and Savings Policy: A case study", African Development Bank, African Natural Resources Center. Abidjan
- AICD (2008) "Financing Public Infrastructure in Sub-Saharan Africa: Patterns and Emerging Issues", The Africa Infrastructure Country Diagnostic, The World Bank
- Arezki, R., Rota-Graziosi, G., and Lemma W. Senbet, L.W. (2014), "Natural Resources and Capital Flight: A Role for Policy?" in Ajayi, S. I. and Ndikumana, L. (Eds.) "Capital Flight from Africa: Causes, Effects and Policy Issues", Oxford: Oxford University Press
- Bothole, T., Asafu-Adjaye, J. O. H. N., and Carmignani, F. (2012), "Natural Resource Abundance, Institutions and Tax Revenue Mobilisation in Sub-Sahara Africa". South African Journal of Economics, 80(2): 135-156
- Boyce, J.K., and Ndikumana, L. (2012), "Capital Flight from Sub-Saharan African Countries: Updated Estimates, 1970 - 2010", Political Economy Research Institute, University of Massachusetts, Amherst
- Calderón, C., & Servén, L. (2010). "Infrastructure and economic development in Sub-Saharan Africa", Journal of African Economies, 19(suppl 1), i13-i87.
- Cohen, I., Freiling, T., and Robinson, E. (2012). "The economic impact and financing of infrastructure spending", College of William and Mary, Thomas Jefferson Program in Public Policy, Williamsburg, Virginia, USA, and Research Report prepared for Associated Equipment Distributors.
- Collier, P. (2011), "Managing Uganda's Oil Discovery," Centre for the Study of African Economies, Department of Economics, Oxford University
- Collier, P. (2014), "Attracting international private finance for African infrastructure", Journal of African Trade, 1(1), 37-44.
- Collier, P., and Cust, J. (2015), "Investing in Africa's infrastructure: Financing and policy options", Annual Review of Resource Economics, 7(1):473-493.
- Collier, P., Kirchberger, M., and Söderbom, M. (2015). "The cost of road infrastructure in low and middle income countries", The World Bank. Policy Research Working Paper No. 7408
- Davies, F.; Long, C. and Wabwire, M., (2015). "Age of Choice: Uganda in the New Development Finance Land Scape", Over Seas Development Institute.
- Ehlers, T. (2014). "Understanding the challenges for infrastructure finance. Bank for international settlements", Monetary and Economic Department. Working paper No. 454
- GOU (2015). Second National Development Plan (NDPII) 2015/16 – 2019/20.
- Greenhill, R., Prizzon, A., and Rogerson, A. (2013). "The age of choice: developing countries in the new aid landscape", Overseas Development Institute, Working Paper #364.
- Gueye, C., Sy, A. (2015). "Beyond aid: how much do African countries pay to borrow?", Journal of African economies 24(3): 352 - 366
- Gutman, J. Sy, A. and Chattopadhyay, S. (2015). "Financing African infrastructure: Can the world deliver?", Brookings. Global Economy and Development
- Kedir, A.M. (2014), "Tax evasion and capital flight in Africa", in Ajayi, S. I. and Ndikumana, L. (Eds.) "Capital Flight from Africa: Causes, Effects and Policy Issues", Oxford: Oxford University Press
- Lakuma and Lwanga (forthcoming). "Linking plans to budgets: the case of Uganda's National Development Plan", Economic Policy Research Centre: Kampala
- Langford, B. and Namanya, A.C. (2014), "Financing Fiscal Deficits in Uganda: Options and Strategy", International Growth Centre.
- Lindsay, J.M. (2012) "Compulsory Acquisition of Land and Compensation in Infrastructure Projects," PPP Insights, 1(3):1-10
- Maweje J, Munyambonera E, and Bategeka L (2013) Powering ahead: the reform of the electricity sector in Uganda. Energy Environ Res 3(2):126-138
- Maweje, J. (2013), "The business climate in Uganda: implications for job creation", Economic Policy Research Centre, Policy Brief, Issue No. 37.

- Maweje, J. and Bategeka, L. (2013) “Accelerating growth and maintaining intergenerational equity using oil resources in Uganda”. Economic Policy Research Centre: Kampala. Research Series No. 111
- Maweje, J. and Munyambonera, E. (2016). Tax Revenue Effects of Sectoral Growth and Public Expenditure in Uganda. Research Series No. 125. Economic Policy Research Centre: Kampala.
- Maweje, J. and Okumu, I.M. (2016) Tax evasion and the business environment in Uganda. South African Journal of Economics Volume 84, Issue 3, pp. 440-460.
- Maweje, J., Lakuma, P.C., Birabwa, E. (2016), “Summary of lessons learned from the four years of Uganda Business Climate Surveys”. The Uganda Business Climate Index, Special Issue 1. Economic Policy Research Centre: Kampala.
- MPED (2015). Medium Term Expenditure Framework. Ministry of Finance Planning and Economic Development. Kampala.
- MOWT (2014). Annual Works and Transport Sector Performance Report for Financial Year 2013/14, Ministry of Works and Transport, Republic of Uganda.
- Musisi, A and Richens, P. (2014), “Uganda’s Public Sector Borrowing Requirements, Financing Options and the Implications for Economic Performance”, Ministry of Finance, Planning and Economic Development working paper, Economic Development Policy and Research Department, Kampala.
- Okoboi, G. and Maweje, J. (2016), “Electricity peak demand in Uganda: insights and foresight.” Energy, Sustainability and Society, 6(29):1-16
- Olabisi, M. and Stein, H. (2015). “Sovereign bond issues: do African countries pay more to borrow?” Journal of African Trade, 2:87 – 109.
- Platz, D (2009). “Infrastructure finance in developing countries—the potential of sub-sovereign bonds”, United Nations Department of Economic and Social Affairs (DESA). Working Paper No. 76.
- PSFU (2010). Private Sector Platform for Action: A synopsis of Uganda’s private sector growth challenges and proposals for policy reform. Private Sector Foundation Uganda. Kampala.
- Ranganathan, R., and Foster, V. (2012). “Uganda’s infrastructure: a continental perspective”, The World Bank. Policy Research Working Paper 5963.
- Ratha, D., Mohapatra, S., Plaza, S. (2008). “Beyond Aid: New Sources and Innovative Mechanisms for Financing Development in Sub-Saharan Africa”, World Bank Policy Research Working Paper No. 4609
- Romeo, L. and Smoke, P. (2014), “The Political Economy of Local Infrastructure Planning”, International Center for Public Policy, Working Paper 14-17
- Tukahebwa, G.B(2012) “The Political Context of Financing Infrastructure Development in Local Government: Lessons from Local Council Oversight Functions in Uganda”, Economic Policy Research Centre, Research Series No.97
- Uganda Bureau of Statistics (2015). Statistical Abstract. Kampala
- UNECA (2015) “Innovative Financing for the Economic Transformation of Africa”, United Nations Economic Commission for Africa
- Wentworth, L., and Makokera, C. G. (2015). “Private sector participation in infrastructure for development”, South African Journal of International Affairs, 22(3): 325-341.
- World Bank (1994). Infrastructure for development. World development Report
- World Bank (2013), World Bank Enterprise Survey for Uganda, available at <https://www.enterprisesurveys.org/data/exploreeconomies/2013/uganda>
- World Bank (2014). World Development Indicators. Washington DC
- World Bank (2016). Uganda Economic Update. Seventh Edition. Unleashing the power of public investment management
- Yepes, T., Pierce, J. and Foster, V. (2008). “Making Sense of Sub-Saharan Africa’s Infrastructure Endowment: A Benchmarking Approach.” Working Paper 1, Africa Infrastructure Country Diagnostic. Washington, DC: World Bank.

## APPENDIX

### List of persons consulted

| No. | Names                      | Designation   | Institution  |
|-----|----------------------------|---|--|
| 1   | Jean-Pascal Nguessa Nganou | Senior country economist                            | The World Bank   |
| 2   | Keith Muhakakinizi         | The permanent secretary / Secretary to the Treasury | Ministry of Finance, Planning and Economic Development |
| 3   | Albert Musisi              | Commissioner, Macroeconomic Policy Department       | Ministry of Finance, Planning and Economic Development |
| 4   | Mathew Rukaari             | Chief Investment officer                            | National Social Security Fund                          |
| 5   | Gerald Paul Kasaato        | Investment officer                                  | National Social Security Fund                          |
| 6   | Joseph Muvawala            | Executive Director                                  | National Planning Authority                            |
| 7   | Jermiah Mutonga            | Resident Representative                             | African Development Bank Group                         |
| 8   | Daniel M. Isooba           | Infrastructure Specialist                           | African Development Bank Group                         |
| 9   | Sebastian O. Okeke         | Country programme officer                           | African Development Bank Group                         |
| 10  | Vera Kintu Oling           | Senior Macroeconomist                               | African Development Bank Group                         |
| 11  | Hon. Lawrence Bategeka     | Vice chairperson, Committee of the National Economy | Parliament of the Republic of Uganda                   |
| 12  | Martin Nsubuga Anthony     | Director Supervision and Compliance                 | Uganda Retirement Benefits Regulatory Authority        |
| 13  | Benjamin Mukiibi           | Senior Research Officer                             | Uganda Retirement Benefits Regulatory Authority        |
| 14  | Clara Mira                 | Resident Representative                             | International Monetary Fund                            |
| 15  | Ntumwa Caroline Akishule   | Macroeconomist                                      | International Monetary Fund                            |
| 16  | Hon. Amos Lugoloobi        | Chairperson, Budget Committee                       | Parliament of the Republic of Uganda                   |

## EPRC RESEARCH SERIES

Listing of Research Series published since 2010 to date. Full text format of these and earlier papers can be downloaded from the EPRC website at [www.eprc.or.ug](http://www.eprc.or.ug)

| Series No. | Author(s)   | Title  | Date           |
|------------|---|--|----------------|
| 129        | Isaac M.B. Shinyekwa,<br>Miriam Katunze   | Assessment of the Effect of the EAC Common External Tariff Sensitive Products List on the Performance of Domestic Industries, Welfare, Trade and Revenue | September 2016 |
| 128        | Isaac M.B. Shinyekwa<br>Alex Thomas IJJO  | Determinants of Domestic Food Price Differentials in Uganda:<br>The Potential for and Constraints on Intra-County Trade                                  | August 2016    |
| 127        | Musa Mayanja Lwanga<br>Annet Adong  | A Pathway to Financial Inclusion: Mobile Money and Individual Savings in Uganda  | March 2016     |
| 126        | Gemma Ahaibwe<br>Corti Paul Lakuma<br>Miriam Katunze<br>Joseph Maweje               | Socio Economic Effects of Gambling:<br>Evidence from Kampala City, Uganda  | January 2016   |
| 125        | Joseph Maweje<br>Ezra Francis Munyambonera  | Tax Revenue Effects of Sectoral Growth and Public Expenditure in Uganda  | January 2016   |
| 124        | Tilak Doshi<br>Fred Joutz<br>Paul Lakuma<br>Musa Mayanja Lwanga<br>Baltasar Manzano | The Challenges of Macroeconomic Management of Natural Resource Revenues in Developing Countries: The Case of Uganda                                      | October 2015   |
| 123        | Ssewanyana N. Sarah<br>Ibrahim Kasirye  | Progressivity or Regressivity in Uganda's Tax System: Implications for the FY2014/15 tax proposals   | June 2015      |
| 122        | Gemma Ahaibwe<br>Ibrahim Kasirye  | Creating Youth Employment through Entrepreneurship Financing:<br>The Uganda Youth Venture Capital Fund   | May 2015       |
| 121        | Ezra Munyambonera<br>Musa Mayanja Lwanga  | A Review of Uganda's Public Finance Management Reforms (2012 to 2014):<br>Are the Reforms Yielding the Expected Outcomes?                                | April 2015     |
| 120        | Joseph Maweje<br>Musa Mayanja Lwanga  | Inflation Dynamics and Agricultural Supply Shocks in Uganda  | March 2015     |
| 119        | Munyambonera F. Ezra,<br>Corti Paul Lakuma,<br>Madina Guloba                        | Uganda's Tea Sub-sector: A comparative Review of Trends, Challenges and Coordination Failures  | September 2014 |
| 118        | Sarah N. Ssewanyana and<br>Ibrahim Kasirye  | Uganda's progress towards poverty reduction during the last decade 2002/3-2012/13: Is the gap between leading and lagging areas widening or narrowing?   | June 2014      |
| 117        | Mayanja Lwanga Musa and<br>Maweje Joseph  | Macroeconomic Effects of Budget Deficits in Uganda: A VAR-VECM Approach  | June 2014      |
| 116        | Adong Annet, Muhumuza Tony<br>and Mbowa Swaibu                                      | Smallholder Food Crop Commercialization in Uganda: Panel Survey Evidence   | June 2014      |



| Series No. | Author(s)   | Title  | Date           |
|------------|---|--|----------------|
| 115        | Barungi Mildred, Wokadala James and Kasiry Ibrahim                    | Implementing Universal Secondary Education Policy In Uganda: How Has The Public-Private Partnership Performed?                               | May 2014       |
| 114        | Mwaura Francis, Okoboi Geoffrey and Ahaibwe Gemma                     | Determinants of Household's Choice of Cooking Energy in Uganda   | April 2014     |
| 113        | Maweje Joseph   | Tax Evasion, Informality And The Business Environment In Uganda  | December 2013  |
| 112        | Shinyekwa Isaac & Othieno Lawrence                                    | Trade Creation And Diversion Effects Of The East African Community Regional Trade Agreement: A Gravity Model Analysis.                       | December 2013  |
| 111        | Maweje Joseph & Bategeka Lawrence                                     | Accelerating Growth And Maintaining Intergenerational Equity Using Oil Resources In Uganda.  | December 2013  |
| 110        | Bategeka Lawrence et ; UN Wider                                       | Overcoming The Limits Of Institutional Reforms In Uganda   | September 2013 |
| 109        | Munyambonera Ezra Nampewo Dorothy , Adong Annet & Mayanja Lwanga Musa | Access And Use Of Credit In Uganda: Unlocking The Dilemma Of Financing Small Holder Farmers.   | June 2013      |
| 108        | Ahaibwe Gemma & Kasiry Ibrahim  | HIV/AIDS Prevention Interventions In Uganda: A Policy Simulation.  | June 2013      |
| 107        | Barungi Mildred & Kasiry Ibrahim                                      | Improving Girl's Access To Secondary Schooling A Policy Simulation For Uganda  | June 2013      |
| 106        | Ahaibwe Gemma, Mbowa Swaibu & Mayanja Lwanga Musa                     | Youth Engagement In Agriculture In Uganda: Challenges And Prospects.   | June 2013      |
| 105        | Shinyekwa Isaac & Maweje Joseph                                       | Macroeconomic And Sectoral Effects Of The EAC Regional Integration On Uganda: A Recursive Computable General Equilibrium Analysis.           | May 2013       |
| 104        | Shinyekwa Isaac   | Economic And Social Upgrading In The Mobile Telecommunications Industry: The Case Of MTN.  | May 2013       |
| 103        | Mwaura Francis  | Economic And Social Upgrading In Tourism Global Production Networks: Findings From Uganda.   | May 2013       |
| 102        | Kasiry Ibrahim  | Constraints To Agricultural Technology Adoption In Uganda: Evidence From The 2005/06-2009/10 Uganda National Panel Survey.                   | May 2013       |
| 101        | Bategeka Lawrence, Kiiza Julius & Kasiry Ibrahim                      | Institutional Constraints To Agriculture Development In Uganda.  | May 2013       |
| 100        | Shinyekwa Isaac & Othieno Lawrence                                    | Comparing The Performance Of Uganda's Intra-East African Community Trade And Other Trading Blocs: A Gravity Model Analysis.                  | April 2013     |
| 99         | Okoboi Geoffrey Kuteesa Annette & Barungi Mildred                     | The Impact Of The National Agricultural Advisory Services Program On Household Production And Welfare In Uganda.                             | March 2013     |
| 98         | Adong Annet, Mwaura Francis & Okoboi Geoffrey                         | What Factors Determine Membership To Farmer Groups In Uganda? Evidence From The Uganda Census Of Agriculture 2008/9.                         | January 2013   |
| 97         | Tukahebwa B. Geoffrey   | The Political Context Of Financing Infrastructure Development In Local Government: Lessons From Local Council Oversight Functions In Uganda. | December 2012  |

| Series No. | Author(s)  | Title   | Date           |
|------------|--|---|----------------|
| 96         | Ssewanyana Sarah & Kasirye Ibrahim                             | Causes Of Health Inequalities In Uganda: Evidence From The Demographic And Health Surveys.  | October 2012   |
| 95         | Kasirye Ibrahim  | HIV/AIDS Sero-Prevalence And Socioeconomic Status: Evidence From Uganda.  | October 2012   |
| 94         | Ssewanyana Sarah and Kasirye Ibrahim                           | Poverty And Inequality Dynamics In Uganda: Insights From The Uganda National Panel Surveys 2005/6 And 2009/10.  | September 2012 |
| 93         | Othieno Lawrence & Dorothy Nampewo                             | Opportunities And Challenges In Uganda's Trade In Services.   | July 2012      |
| 92         | Kuteesa Annette  | East African Regional Integration: Challenges In Meeting The Convergence Criteria For Monetary Union: A Survey.   | June 2012      |
| 91         | Mwaura Francis and Ssekitoleko Solomon                         | Reviewing Uganda's Tourism Sector For Economic And Social Upgrading.  | June 2012      |
| 90         | Shinyekwa Isaac  | A Scoping Study Of The Mobile Telecommunications Industry In Uganda.  | June 2012      |
| 89         | Maweje Joseph<br>Munyambonera Ezra<br>Bategeka Lawrence        | Uganda's Electricity Sector Reforms And Institutional Restructuring.  | June 2012      |
| 88         | Okoboi Geoffrey and Barungi Mildred                            | Constraints To Fertiliser Use In Uganda: Insights From Uganda Census Of Agriculture 2008/09.  | June 2012      |
| 87         | Othieno Lawrence Shinyekwa Isaac                               | Prospects And Challenges In The Formation Of The COMESA-EAC And SADC Tripartite Free Trade Area.  | November 2011  |
| 86         | Ssewanyana Sarah,<br>Okoboi Goeffrey &<br>Kasirye Ibrahim      | Cost Benefit Analysis Of The Uganda Post Primary Education And Training Expansion And Improvement (PPETEI) Project.                                       | June 2011      |
| 85         | Barungi Mildred & Kasirye Ibrahim                              | Cost-Effectiveness Of Water Interventions: The Case For Public Stand-Posts And Bore-Holes In Reducing Diarrhoea Among Urban Households In Uganda.         | June 2011      |
| 84         | Kasirye Ibrahim & Ahaibwe Gemma                                | Cost Effectiveness Of Malaria Control Programmes In Uganda: The Case Study Of Long Lasting Insecticide Treated Nets (LLINs) And Indoor Residual Spraying. | June 2011      |
| 83         | Buyinza Faisal   | Performance And Survival Of Ugandan Manufacturing Firms In The Context Of The East African Community.   | September 2011 |
| 82         | Wokadala James, Nyende Magidu, Guloba Madina & Barungi Mildred | Public Spending In The Water Sub-Sector In Uganda: Evidence From Program Budget Analysis.   | November 2011  |
| 81         | Bategeka Lawrence & Matovu John Mary                           | Oil Wealth And Potential Dutch Disease Effects In Uganda.   | June 2011      |
| 80         | Shinyekwa Isaac & Othieno Lawrence                             | Uganda's Revealed Comparative Advantage: The Evidence With The EAC And China.   | September 2011 |
| 79         | Othieno Lawrence & Shinyekwa Isaac                             | Trade, Revenues And Welfare Effects Of The EAC Customs Union On Uganda: An Application Of Wits-Smart Simulation Model.                                    | April 2011     |





**51, Pool Road, Makerere University Campus,  
P. O. Box 7841 Kampala, Uganda**  
**Tel: +256414541023/4 Fax: +256414541022**  
**Email: [eprc@eprcug.org](mailto:eprc@eprcug.org),**



[www.eprcug.org](http://www.eprcug.org)



[TWITTER:@EPRC\\_official](https://twitter.com/EPRC_official)



[www.facebook.com/EPRCUganda](https://www.facebook.com/EPRCUganda)



[eprcug.org/blog](http://eprcug.org/blog)