



Development Innovations Group

## **Payment systems in Uganda and their impact on the urban poor**

Paper prepared to inform preliminary visit to Uganda

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# 1 Introduction

The Development Innovations Group (DIG) is developing transformative methods that will contribute to the reduction of urban poverty in Africa and Asia in a measurable and sustainable way. With resources from the Bill and Melinda Gates Foundation and through its Urban Advisory Program DIG aims to: (a) provide strategic guidance to the Foundation on high-impact, scalable opportunities for city-level projects that directly benefit the urban poor in Africa and Asia; (b) identify projects that address urban market failures, improve the access to and quality of basic services, and/or generate financing for community infrastructure and other priorities of the poor; and; (c) support partners in each city to design innovative projects that result in more targeted and efficient municipal resources to enhance the quality of life of the urban poor.

This brief paper has been prepared to help provide background information for a fact-finding visit to Uganda planned by DIG in February 2012.

## 2 Country context

### 2.1 Key features and development trajectories

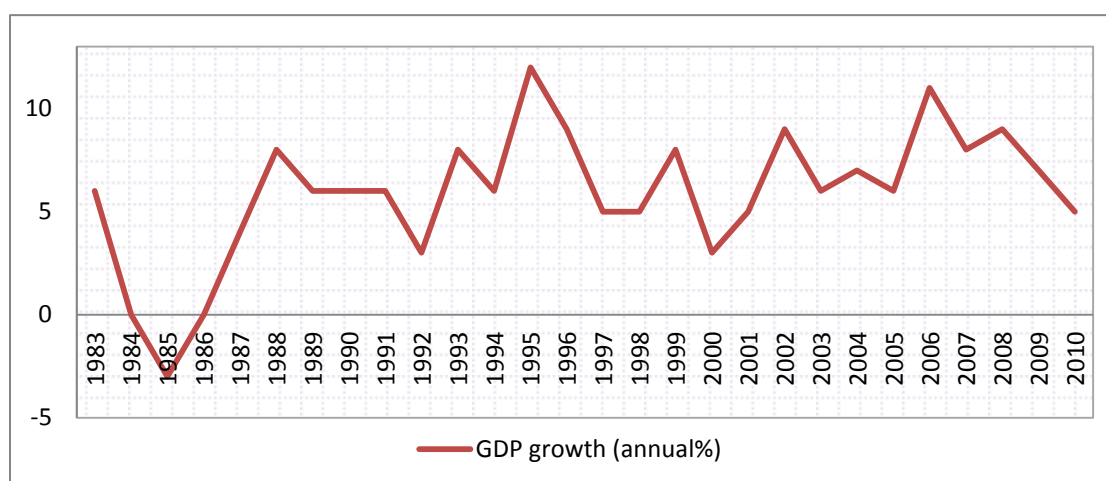
Uganda is a landlocked country bordered to the east by Kenya, to the north by South Sudan, to the west by the Democratic Republic of the Congo, and to the south by Rwanda and Tanzania. Subsistence farming is the main source of household income for the majority of Ugandans. Agricultural products currently still supply nearly all of Uganda's foreign exchange earnings. However significant crude oil and natural gas reserves are currently being developed. Uganda has an estimated population of approximately 30.7 million and at 3.3%, a very high population growth rate. Half of the population is below 15 years of age. Some population growth models project that the population will reach 110 million by 2050.

#### 2.1.1 Economic growth and poverty reduction

Since 1986 GDP growth has been high averaging approximately 7 per cent and has contributed to a significant drop in poverty levels. The percentage of the population living below the poverty line declined from 56 per cent in 1992 to 44 per cent in 1997, to 31 per cent in 2005 and 24.5 per cent in 2007. However, key challenges remain that threaten to undermine further growth. These include; the current global economic down turn, a rapidly growing population, poor value addition, low growth in key sectors, ineffective capital markets ( in terms of intermediating capital), a poorly skilled and ill equipped labour force and inadequate supporting infrastructure including energy, water supply and transportation. There is also evidence that levels of income inequality are rising sharply. The Gini co-efficient rose from 0.365 to 0.4 between 1992 and 2006.

Figure 1 illustrates GDP growth rates between 1983 and 1986.

Figure 1 GDP Growth (Annual %) recorded for Uganda from 1983-2010

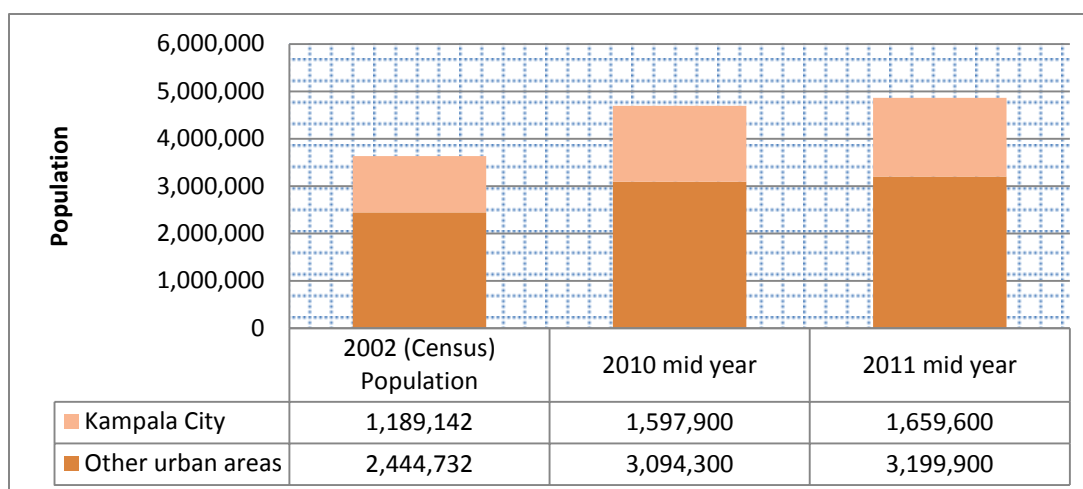


Source: World Bank

## 2.1.2 Urban growth and issues

The urban population <sup>1</sup> in Uganda has been growing since 1980 and stood at 4.69 Million in 2010, representing 13 per cent of the total population<sup>2</sup> and was projected to be 4.86 million by 2011. In the regional context however, the rate of urbanization is still considered low (Tanzania and Kenya are 26 per cent and 22 percent respectively, whilst Ethiopia is at 18 percent). The proportion of the national urban population in Kampala the capital city is about 34 percent.

Figure 2 Urban population in Kampala and a proportion of the total population



Source: Uganda Bureau of Statistics (UBOS, 2010)

<sup>1</sup>Now defined by the Local Government Act as population in gazetted cities, municipalities and town councils (2000). Earlier census by the Uganda Bureau of Statistics (UBOS) included ungazetted trading centers with more than 1000 people being included in the urban population

<sup>2</sup> Source: World Bank <http://data.worldbank.org>

*Gender:* Between 2005 and 2009, the National Household Survey showed an increase in the proportion of female headed<sup>3</sup> households in urban areas from 29.3 percent to 34.5 percent. Between the same survey periods, the proportion of male headed households reduced from 70.7 percent to 65.5 percent. Eighty two percent of the households constitute nuclear family members (parents and their biological children). Whilst rural-urban migration is recognized as one of the most significant factors responsible for rapid urbanization, data on the composition of the migrants (for instance whether the entire family migrated, or just the bread winner) are not readily available.

Given the extremely high levels of population growth and growing pressures on natural resources, particularly land, rates of urban growth can be expected to rise significantly over the next ten years as poor people from rural areas will continue to migrate to urban areas in search of economic opportunities. Urban poverty is therefore likely to be a growing issue.

### **2.1.3 Description of the urban poor**

In the context of the last two decades, urban poor include the elderly, retrenched civil servants, or internally displaced persons experiencing difficulties in obtaining regular employment. Many of these live in substandard and temporary housing located on swampy, unplanned, poorly serviced public land or on the streets.

In 2009, there were up to 387,036 urban people below the urban poverty line<sup>4</sup>. No Kampala specific figures were readily available to estimate persons below the poverty line. However, as a proxy, for the quality of life at the household level, the breakdown of access to sanitation is important. Eighty seven point four percent of the households in Kampala use ordinary pit latrines for excreta disposal, 7.6 percent use ventilated improved (VIP) latrines and 1.8 percent (approximately 30,000 households) have no toilet at all. 3.2 percent have water closets or flush toilets<sup>5</sup>.

Whilst the number of people who live “on the street” is not known this is thought to be a relatively small number compared with many other cities in the region. However it is a growing phenomenon particularly in terms of unaccompanied children and women migrating from parts of the country to beg on the streets of Kampala from areas that have suffered from drought or are still recovering from conflict and associated population displacement

The urban poor in response to limited income and opportunities tend to cope by engaging in petty trade or taking up activities in the informal sector characterized by low pay, irregularity and unreliability including work as taxi touts, bar maids, house maids, prostitutes, street children or beggars. Economists argue that this is concealed unemployment.

*Housing:* In many sections of urban areas, the low and high income households live in adjacent unplanned and poorly serviced neighborhoods. By 2009, it was estimated that there were up to 2.5 million<sup>6</sup> people living in slum dwellings in Uganda, of these about 1.3 million people lived in Kampala.

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<sup>3</sup> Defined as “the one who manages the income earned and the expenditure incurred by the household”

<sup>4</sup> Source: World Bank, defined as poverty head count ratio at urban poverty line

<sup>5</sup> Source: Uganda National Household Survey (UBOS,2010)

<sup>6</sup> Source: National Slum Upgrading Strategy

*Land tenure:* Approximately half of the national urban population in Uganda lives on land that they do not own. All four tenure systems (private mailo, leasehold, customary and freehold) in Uganda and the multiple frameworks (both formal and informal) within which they are applied exist in poor urban areas as a result of gradual expansion and urbanization into areas that were initially rural.

The main land tenure in Kampala are public land managed directly by the Uganda Land Commission, private (mailo) land over which the municipal authority has no jurisdiction to grant leases, and freehold land belonging to institutions including the church, mosques, schools etc. which is owned in perpetuity. There are sub-categories within these land tenure systems such as customary tenure on mailo land through which a tenant has legitimate interest. About 55 percent of all the land within Kampala City is public land. The remaining 45 percent is private mailo and freehold land<sup>7</sup>.

A study on land ownership carried out by the Ministry of Lands, Housing and Urban Development in sampled slum settlements in 2008 revealed that on average 57.1 percent households claimed they owned and had bought the land they were living on. Twenty five percent claimed that they had recently settled onto the land, 17.5 percent claimed that they had inherited the land. Of those that claimed that they owned land, 66.2 percent had a purchase agreement to confirm ownership, 18.3 percent did not have any documentary proof of ownership.

Land transactions in urban poor areas can be highly problematic. Understandably, this has resulted in reluctance by the private sector to construct housing in these areas, instead preferring to construct in the up-market zones where the tenure is fairly straight forward (predominantly leasehold). This effectively marginalizes lower income groups in terms of owning or renting in standard housing and in living in well planned and serviced neighborhoods. It is important to note that the urban poor, particularly those who have migrated from rural areas, may own the physical dwelling in which they live but do not necessarily have any rights over the land on which it stands, even tenancy rights.

#### **2.1.4 Inadequate institutional capacity**

The rapidly growing urban population has not been matched by commensurate institutional capacity to plan and manage the development and provision of basic urban infrastructure and services. Municipal agencies face significant technical, human and financial resource constraints. As a result, physical infrastructure such as roads and housing, and social amenities are inadequate in most urban areas. A direct result has been overcrowding, poor use of available infrastructure, poor sanitation and unplanned developments.

## **2.2 Key government policies and instruments**

*Poverty Eradication Action Plan (PEAP) and the National Development Plan (NDP):* Overall Government attempts to eradicate poverty were set out in the PEAP. This was the main framework through which governments development objectives within all sectors were articulated between 1997 and June 2009. The PEAP was replaced by the National Development Plan (NDP). The theme of the NDP is “Growth, Employment and Prosperity”. The NDP’s development objectives are focused on wealth creation rather than poverty reduction.

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<sup>7</sup> Source: Norstrand (1992)

*MTEF:* The resource needs and expenditure required to meet the NDP objectives are set out in the Medium Term Expenditure Framework (MTEF). The MTEF is a three-year rolling budget framework used to guide public-sector resource allocation, including aid. These allocations are articulated in the Budget Framework Papers (BFP), which represents the Government's medium term budget strategy. The Government budget is resourced through revenue collected at the national level and on budget aid provided by a number of development partners in the form of general or earmarked budget support. Key service delivery sectors have seen their sector allocations either maintained or slightly rise over the last few years in real terms. However there are significant concerns about the efficiency and effectiveness of public expenditure and the high costs of public administration.

*Decentralization:* has been a cornerstone of government policy. It was legislated for under the Local Government Act of 1997. The Act established a system of local government based on districts. Districts have extensive powers and responsibilities to plan and deliver all basic services at that level although it is important to note that the majority of funding comes through the provision of conditional grants from central Government, with only limited discretionary resources. In theory districts also have the power to raise a proportion of their own revenue through local taxation. In practice this is often very difficult.

Kampala City, and other municipalities and town councils are classified as urban areas. All other areas are classified as rural. All district headquarters are classified as town councils. The formation of new districts has resulted in the creation of new town councils. Kampala, the capital, is the only urban area formally classified as a city. In March 2011 the former Kampala City Council was replaced by the Kampala Capital City Authority (KCCA) which is under the direct control of central Government. This development follows years of difficulties in urban planning and management in the city. However many argue that KCCA was also created as a political instrument by the ruling party in response to the fact that the former City Council was dominated by the opposition.

*Privatization and utility reform:* When the current government took power in 1986 the major utilities were under state ownership and control. From the 1990's onwards a fundamental shift occurred with water, electricity supply and telecommunications all undergoing fundamental reforms with increased private sector participation and, in the telecoms sector in particular, private sector ownership largely replaced public sector management.

## **2.3 Governance and resource management**

*Development assistance:* Uganda has been a leading recipient of international development assistance in Africa since the mid 1990's. The development of and government's commitment to the PEAP was one of the factors behind the commencement of high levels of donor development assistance. By 1999 donor contributions financed more than half of the Government budget. However, increasing concerns over political governance in recent years has resulted in a fall in both on and off budget development assistance from traditional donors although levels of aid and investment from China are growing. Government itself became increasingly concerned about its own level of dependence on aid and took steps to address this. Government revenue now supports about 71 per cent of the Government budget. For financial year 2011/2012 the overall anticipated resource envelope is USD 4.2 billion with key spending sectors being Infrastructure (25%), Education (14.4%), Health (10.3%), Security (7%), Justice (5.6%) and Agriculture (4.5%).

*Impact of perceived high levels of corruption:* Growing unease over levels of corruption and the management of public resources and services have also dampened donor and investor confidence and are perceived by both the general public and private sector to be major issues that impact on their confidence in public services. On paper Uganda has an impressive array of legal and institutional frameworks established to fight corruption but despite this, corruption severely impacts the development process in Uganda. In the Afro-Barometer survey of 2008, 74 percent of urban respondents believed that central Government was doing badly or very badly in handling corruption and 72 percent of urban respondents felt that it could not be guaranteed that local government revenues were being used for public services and not for private gain<sup>8</sup>.

*Oil resources and their potential impact:* Oil finds in the Albertine Rift in western Uganda offer the potential of significantly growing government and private sector revenue which could bring important pro-poor benefits if used prudently. Oil related revenues such as exploration licenses (approximately USD 428 million) accounted for 12 per cent of resources available for the national budget in financial year 2010/2011. However there is widespread concern that oil resources could further fuel corruption and be a source of conflict and societal tension if effective systems are not put in place to ensure that revenue generated is used effectively and transparently. There are also concerns of the emergence of Dutch disease in terms of impact on investments in other sectors and exchange rates/market prices.

## 2.4 Service delivery to the urban poor

Poor people in urban areas, unlike their rural counterparts, generally do not have problems with geographical access to basic services. However there are a number of other barriers which are likely to affect access. These include:

- Ability ( including cash flow problems) and willingness to pay by the potential / consumer
- Inadequate capacity by service providers to identify innovative ways to reach the poor, fuelling perceptions amongst providers that service provision to the poor would be un-economical in terms of revenue base and viable means of revenue collection.
- Ability of service providers to secure physical access necessary to extend services (e.g. water supply) in areas of unplanned high population density, as a result of poor urban planning and weak enforcement of planning procedures and regulations.

For the purpose of this paper a number of sectors have been identified. These are water supply, sanitation, electricity supply, solid waste management, education, health and transport. These were selected on the basis that they represented a mixture of services that;

- a) They are managed either by national or local government or the private sector,
- b) that they represent a wide variety of types of service,
- c) That they are services to which access by the urban poor tends to be constrained by a number of factors.

Details of each of these sectors in terms of; urban coverage, delivery mechanisms and models, cost, and issues affecting access for the poor, are presented at Annex 1.

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<sup>8</sup> Afro Barometer, 2008 Uganda survey – summary results



## 3 Payment and Revenue Collection Systems

### 3.1 Historical context

Until a few years ago payment systems throughout Uganda, including in urban areas were almost exclusively based on direct physical payment and revenue collection by representatives of the service provider with almost exclusively manual paper based records of users kept. Payment either took place door to door or users were required to visit cash offices maintained by the service provider. This presented a number of problems to both service providers and service users, particularly to the urban poor.

**Table 1: Implications of issues with payments and revenue collection for service providers and users**

Issues for providers	Issues for users (particularly the poor)
<ul style="list-style-type: none"> <li>Major cost and administrative inefficiencies to the provider as it involved the maintenance of significant numbers of personnel and offices.</li> <li>The potential for significant financial losses in the payment chain from the point of collection to the payment actually appearing on a collection or other account due to fraud and the addition of other informal charges by staff or other agents acting on behalf of the supplier.</li> <li>Delays in revenue being available in a consolidated account which sometimes caused significant liquidity issues – this was connected with inherent billing inefficiencies</li> <li>Significant risk of theft and personnel security due to the fact that transactions were largely cash based. These risks were present in both offices and during cash in transit.</li> </ul>	<ul style="list-style-type: none"> <li>Offices for payments were frequently widely dispersed offering major challenges to the poor in terms of geographical access meaning that considerable time would need to be spent completing a simple transaction and significant transport costs incurred in doing so.</li> <li>Reluctance of service providers to even allow those with low incomes and informal employment to even gain initial access.</li> <li>Poor billing efficiency also meant that the poor often accumulated substantial debts and were unable to spread payments over time – frequently resulting in loss of service as a result of failure to pay outstanding amounts and additional reconnection fees.</li> </ul>

In addition to the above, high costs and inefficiencies in revenue collection and payment systems would frequently result in poor people being more likely to resort to illegal connections or unofficial service provision for which the poor would often pay more per unit consumption (in the case of electricity and water) and which would result in a loss of revenue for the service providers.

In some cases issues related to the inability to provide services which were accessible to the poor and to collect sufficient revenue to maintain services has led to situations where essential services are simply unavailable to significant numbers of people.

### 3.2 System and platform evolution

Policy and procedural developments: In an attempt to improve payment systems and reduce cash transactions the Bank of Uganda formed a National Payment System Secretariat (NPSS) in 1998. This sought to address barriers to the greater use of electronic and non cash based payments and introduced mechanisms such as;

- Electronic cheque clearance
- Electronic funds transfer
- Real time gross settlement

One result of these developments was that the commercial banks developed agreements with some of the key utility providers (water and electricity) enabling the payment of user charges at banks. These developments therefore helped pave the way for more efficient payment services. However the extent to which this has impacted on the poor, the majority of whom do not have commercial bank accounts is unclear, although in theory they could go into banks and make cash payments.

Emergence of new technologies and platforms: Two technological developments have had major social and economic impacts in the country over the last few years.

First, the introduction of GSM mobile phone networks in 1993 revolutionized the way that people communicated and conducted business. Whilst when they were introduced they were a luxury item purchased by the wealthy by 2009 over 10 million people owned a mobile phone with many more having access. All urban areas in the country now have access to more than one network provider.

Secondly, the introduction of faster and more widespread internet connectivity including mobile broadband and 3G networks and the falling costs of access have opened up new opportunities for the poor, particularly the urban poor, to gain access to the internet but has also resulted in the potential for synergy and inter-linkages to be developed between GSM applications and other networked systems and devices. This has led to the development of new platforms and systems for revenue collection, billing, payments and relatively reliable data connections within and between urban centers. Some of these are highlighted in the table below.

**Table 2: Examples of use of new technology platforms in revenue collection and payment processes in Uganda**

Platform	Description and features
Individual financial transfers by GSM network	<p>Four out of the five GSM providers operating at national level have introduced mobile transfer payment systems. All have a growing number of consumers using these services which have proved particularly popular with poorer urban dwellers who wish to send money back to their families in other parts of the country at low cost. Traditional money transfer providers (such as Western Union and Money Gram) have slashed their service charges as a result. It is estimated that USD 208 million a month is now transferred across the MTN network in Uganda. Many people have also begun using these services in order to save money and there are more mobile phone money accounts within the East Africa Region than savings accounts held in Banks.</p> <p>Most GSM providers are expanding the range of options available on these platforms to include the ability to pay for a variety of services including water, school fees and interconnectivity with fixed ATM machines. However it can be argued that in terms of these types of application they are probably still largely utilized by higher income earners and are yet to fulfill their considerable potential amongst the poor in terms of coverage or products.</p>

Platform	Description and features
Payment kiosks linked to GSM networks / internet connections	<p>One supplier “Pay Way” who originated in Russia offers payment kiosks and mobile point of service agents or retailers (who use a handheld device) to collect payments and produce both printed receipts and payment confirmation by mobile phone. Payway works on three platforms; the self-service kiosk, the mobile Point of Sale and the web interface. Currently it is possible to pay for TV connections, mobile phone airtime and other services using this.</p> <p>Again it is currently appealing to the high end of its potential consumer base but has the potential to provide a wider range of services that are of major interest to the poor and in locations that are accessible to them.</p>
Development of applications for mobile phones linked to databases	<p>The rapid expansion of the mobile phone network and the falling cost of handsets using android or other operating systems which allow greater handset functionality have resulted in the emergence of a number of groups working on the development of specific applications for a broad range of users, including lower income groups. These include work on issues related to improved market information and trade. There is still considerable scope to think of ways that these types of applications might be used to improve access to more efficient payment systems for the poor and revenue collection for suppliers.</p> <p>Examples of these groups include the Grameen Foundation and Makerere University College of Computing and Information Technology.</p>

### 3.3 Trends and impacts

In Section 3.1 the implications of inefficient systems for revenue collection and payments on both service providers and the poor were highlighted. So have the new technologies and platforms available led to the adoption of more effective approaches which have had positive impacts on the urban poor? In the case studies presented below it is demonstrated that the picture is mixed.

Down the drain – solid waste collection in Kampala City
<p><i>Context:</i> The population of Kampala is approximately 2 million. It has been estimated that each person generates around 0.7kg of solid waste per day. In wealthier neighborhoods people pay private sector providers to collect waste from their doorsteps up to three times a week and remove it to a designated land fill site approximately 20km north of the City. In poorer neighborhoods solid waste collection services are managed by the Municipal authorities and are based on a network of refuse trucks that are contracted to remove waste.</p> <p>Municipal services are supposed to be financed for by the levying of local taxes including petty trading and other business licenses and property rates. The collection and management of revenue generated by these is extremely poor and is one of the reasons why municipal solid waste collection in Kampala is a major problem.</p> <p><i>Impact:</i> Of the 1,400MT of solid waste that it is estimated is generated every day in the city only 800MT (57%) is being delivered to the designated land fill site. Whilst some waste is being recycled at community level a significant proportion of the remaining 600MT is being dumped in drainage channels, vacant land or is being burnt at household level. This is causing</p>

public health risks associated with rodents and insect infestation, toxins polluting the water supply and soil and increased risk of flooding due to the blockage of drainage channels, which also increases maintenance costs.

### Improving the flow – water sector reforms and improved efficiency

*Context:* The water sector has undergone major structural reforms since 1999 coupled with significant investment in improvements to both infrastructure and management and administration. A component of comprehensive structural reforms has been attempts to improve the efficiency of revenue collection and payments (including billing efficiency) by NWSC. Turnover increased to USD 47 million in 2010 up from USD 43 million in 2009 and USD 11 million in 1999. A significant proportion of revenue has been invested in improvements in coverage and service quality, including to the poor with extensions of piped water to network of kiosks and yard taps. Improvements in revenue collection systems have included the widening of payment options via mobile phone networks. Meter readers have also been provided with networked PDA devices on which they can provide immediate print outs of bills to consumers which clearly detail payment options.

*Impact:* Overall coverage, including to the urban poor (measured as % of people within 200M of an improved water source), has increased over this period and now stands at 66% (from approximately 30% in 1999 and 51% in 2005). There is also evidence to suggest that improvements in service delivery including in the efficiency of revenue collection systems have led to major improvements in public perceptions of the service. The Afro Barometer survey of 2008 found that only 12% of people reported having to ever pay a bribe or give a gift to obtain the provision of water or sanitation services. While directly comparable figures are not available for 1999 a sector status report written in the same year suggested that there was a high level of public dissatisfaction with water services and that informal payment seeking and illegal connections were a significant problem.

### Keeping the lights burning – electricity sector revenue collection and payments

*Context:* Up until 1999 electricity generation, transmission and distribution were managed by one state owned parastatal agency (Uganda Electricity Board). In 1999 under the auspices of the Electricity Act UEB was unbundled into a number of separate agencies responsible for generation, transmission and distribution. The stated reasons for this were to improve efficiency and increase private sector investment. Sector regulation is performed by the Electricity Regulatory Authority. A rural electrification fund was also established. In urban areas coverage stands at 40% of the population. Revenue collection remains largely postpaid using individual meters at household level or bulk meters for small scale industries and commercial centers.

*Impact:* Despite some efficiency gains many urban poor are still unable to access mains power supply particularly in areas of high population density. The cost of connection remains relatively high and illegal connections and tariffs based on meter bypasses, whilst not cheaper in terms of unit costs, are often more financially accessible to the poor as they offer a means for people to spread payments and pay for supply when they most need it. There is arguably limited interest in supplying poorer sections of community by the provider due to perceptions of difficulty with revenue collection/willingness and ability to pay. Lack of access increases security risks at night and constrains small business activity/options. Revenue collection and payments systems have not significantly evolved and are still heavily reliant on a manual billing process which is often subject to lengthy delays and errors. While it is possible to now make payment within banks the sector has yet to develop options for making payment through other platforms and has been very slow to try out new innovative means of improving efficiency. For example UMEME received a report in 2007 on prepaid metering but only began a pilot project to test feasibility in 2011.

## 4 Conclusions

Technological advances in ICT, increased coverage and reliability and falling costs, in relative terms, of data transfer have created new opportunities for the creation of a wide variety of new products and services, including those involving revenue collection and payments. The huge success of mobile money transfers highlights that when emergent technology identifies a need and market gap that it can and will be adopted and widely used, including by the poor.

Achievements in the water sector suggest that it is possible to turn around a service/sector which is performing poorly and in which there is low public confidence and to improve service delivery, efficiency and its public image. It also suggests that it is possible to do this whilst providing better services to poor people and there is at least some evidence that if a service is perceived to be effective and more transparent that this increases people's willingness to pay. Improved efficiency in terms of payment and revenue collection systems and the use of available new technologies can be important elements of a change strategy within such services. However the experience in the water sector also suggests that developments in payment and revenue collection have to be seen as components of an overall and integrated reform process if they are to realize their full potential.

Reform processes by themselves will also not realize their potential in the absence of an organizational culture and incentive framework that proactively promotes innovation and the development of new ideas and is willing to push for both short term gains whilst also taking a medium-long term view of performance improvement and service/market expansion. Arguably one of the problems in the electricity sector is that this is not in place to the extent that it needs to be.

The case study on solid waste disposal highlights that there are still huge issues to be addressed in terms of improving revenue collection in some areas, particularly within local government. However it also highlights the significant potential gains that could be made in terms of service delivery to the poor if this could be realized. For example; would it be possible for emerging platforms and technology to be used by the municipal authorities to more effectively and transparently improve revenue collection processes for trading and other licenses in a way that would increase revenue and enable traders to be provided with PIN numbers or electronic licensing which would also benefit them? If this were achieved revenues generated could be used to significantly improve solid waste collection as well as other services.

With this in mind it would be useful to further explore:

- Factors underlying the apparent lack of development of more efficient revenue collection and payment systems by municipal authorities that make maximum use of new technologies and platforms available.
- Develop a means of producing a cost analysis in relation to selected services that could demonstrate potential efficiency savings and increased revenue projections for the service provider but that would also provide estimates of the economic cost to the poor of current inefficiencies in payment systems – including in the use of their time.
- To further consider what new products and systems could be developed to respond to potential market gaps and how these might be promoted and taken forward in an incremental way.

## Annex 1: Summary of features and issues for selected basic services

Service	Features and issues
Safe water	<p><b>Urban coverage</b><sup>9</sup>: estimated to be at 67% in urban areas across the country (defined as % people within 200M of a safe supply). While relatively high important to note that this means 33% of the urban population lack access. This equates to over 1.3million people and is significant in terms of public health risk in urban environments</p> <p><b>Delivery models</b>: State parastatal (NWSC) in large towns, licensed private sector operators in smaller towns, some provision by municipal authorities</p> <p><b>Delivery mechanisms</b>: various – includes piped and metered water in higher level dwellings, public stand posts/kiosks and yard taps.</p> <p><b>Cost</b>: Approximately \$8 cents/cubic meter</p> <p><b>Methods of payment</b>: Metered postpaid billing and pay as you fetch at public access</p> <p><b>Access issues for the poor</b>: Cash flow difficulties. Manual revenue collection systems often have poor collection efficiency resulting in poor revenue base for operations, maintenance and system expansion. Short contractual terms for private providers constrain willingness to invest, and access to finance – impacting on maintenance and system expansion.</p>
Sanitation	<p><b>Urban coverage</b>: estimated to be 81% in urban areas (defined as % households with access to improved sanitation).</p> <p><b>Delivery models</b>: Sewage through NWSC, private “on plot” sanitation systems including septic tanks and pit latrines and public/communal latrines in specific locations owned by Municipal authorities or other institutions.</p> <p><b>Delivery mechanisms</b>: NWSC, Municipal councils, institutions, NGOs. Private Sector.</p> <p><b>Cost</b>: NWSC sewage (as component of water bill). On plot systems use private contractor for construction and maintenance</p> <p><b>Methods of payment</b>: NWSC sewage as component of water bill, private contractors directly (charges vary depending on distance)</p> <p><b>Access issues for the poor</b>: Land availability/space for siting, capital and maintenance costs</p>
Mains electricity supply	<p><b>Urban coverage</b>: 41% of the urban population<sup>10</sup>.</p> <p><b>Delivery models</b>: Central generation fed into a national grid although some outlying towns have independent mini-grids).</p> <p><b>Delivery mechanisms</b>: Private Sector generation and distribution.</p> <p><b>Cost</b>: USD 22c /KwH (compared with Kenya USD 13c and Tanzania USD 8c)</p> <p><b>Means of payment</b>: Postpaid using individual meters at household level or bulk meters for small scale industries and commercial centres.</p> <p><b>Access issues for the poor</b>: Geographical access to a power line in areas of high population density cost of installation and legal tariff when illegal connections and tariffs based on meter bypasses are cheaper. Low interest in supplying poorer sections of community by provider due to perceptions of difficulty with revenue collection/willingness to pay. Lack of access increases security risks at night and constraints small business activity/options.</p>
Solid waste disposal	<p><b>Urban coverage</b>: 57% of people have access to safe and appropriate solid waste management. The remainder resort to burning, burying, and dumping in drainage channels or other locations with significant implications for public health and the environment.</p> <p><b>Delivery models</b>: Private Operators and Municipal Department with some sub-contracting.</p>

<sup>9</sup> Source: Water and Sanitation Sector Performance Report (2011), Ministry of Water and Environment

<sup>10</sup> Source: East African Community Strategy to Scale up Access to Modern Energy Services

Service	Features and issues
	<p><b>Delivery mechanisms:</b> Household collection by private operators at higher level dwellings, municipal collection in bulk using positioned skips.</p> <p><b>Cost:</b> Approximately USD 1.3 per household per week</p> <p><b>Means of payment:</b> Local service tax on small businesses collected annually as part of License fees. Household payments collected door to door by agents working for Municipal authorities</p> <p><b>Access issues for the poor:</b> Geographical distance to skip and ability/willingness to pay and problems with efficiency of revenue collection led to almost total collapse of solid waste services in poorer areas.</p>
Education	<p><b>Urban coverage:</b> 44.9% children in urban areas complete primary education<sup>11</sup></p> <p><b>Delivery models:</b> Public and private primary and secondary schools licensed by the MoES.</p> <p><b>Delivery mechanisms:</b> As above</p> <p><b>Cost:</b> In theory primary education is free but in reality significant hidden costs associated with scholastic materials, uniform etc. Cost of secondary education is up to USD 800 per child/year.</p> <p><b>Means of payment:</b> Fees paid through Banks, and recently introduction of payment by money transfer using mobile phone services.</p> <p><b>Access issues for the poor:</b> Cost of both fees and scholastic materials and to some extent transport.</p>
Health	<p><b>Urban coverage:</b> 72.7%<sup>12</sup> of people in urban areas have access to at least a primary care clinic.</p> <p><b>Delivery models:</b> Private sector and Government facilities. Despite the abolition of user fees for basic care at Government facilities the majority of people frequent private clinics as Government facilities frequently lack drugs and personnel.</p> <p><b>Delivery mechanisms:</b> As above</p> <p><b>Cost:</b> Dependent on treatment (in or out-patient status) received, transport costs and availability of medicines.</p> <p><b>Means of payment:</b> Direct cash payments to providers, some insurance schemes (but these are largely inaccessible to the poor except for certain specialized services such as HIV/AIDS care)</p> <p><b>Access issues for the poor:</b> Affordability</p>
Transport	<p><b>Urban coverage:</b> Coverage over 69% in Kampala<sup>13</sup></p> <p><b>Delivery models:</b> Majority of people use private mini-buses (known as taxis) and small motorcycles for hire (bodabodas) and private bicycles.</p> <p><b>Delivery mechanisms:</b> As above</p> <p><b>Cost:</b> USD 1.3C/km</p> <p><b>Means of payment:</b> Cash to provider</p> <p><b>Access issues for the poor:</b> Affordability, time (often multiple journeys involved in reaching one destination).</p>

<sup>11</sup> Source: Uganda National Household Survey , UBOS (2010)

<sup>12</sup> Source: Uganda National Household Survey, UBOS (2010)

<sup>13</sup> Source: Uganda National Household Survey , UBOS (2010)

## References

Afro Barometer (2008) *Uganda Round 4.5.2 Pre-Election Survey*, [www.afrobarometer.org](http://www.afrobarometer.org)

ERA (2009) Electricity Sector Performance Report, Electricity Regulatory Authority, Kampala

ERA (2011) *Study On Distribution System Losses and Collection Rates by UMEME Ltd, Final Report* by Parsons Brinckerhoff Africa Electricity Regulatory Authority, Kampala

MHLUD (2008) *National Slum Upgrading Strategy and Action Plan*, Ministry of Housing Lands and Urban Development

Ministry of Water and Environment (2011) *Uganda Water and Environment Sector Performance Report 2011* Ministry of Water and Environment, Kampala

Ndiwalana, A and Popov, O (2008) Mobile Payments: A Comparison between Philippine and Ugandan Contexts, Technical Paper, Makerere University Kampala

NWSC (1999) *The 100-Days Programme to Improve NWSC Services*, National Water and Sewerage Corporation Management, Kampala

Okure, M (2008) *EAC Strategy to Scale-Up Access to Modern Energy Services*, Uganda Country Report and Implementation WorkPlan, Arusha

Population Secretariat (2007), *The State of Uganda Population Report, Planned Urbanization for Uganda's Growing Population*, Population Secretariat, United Nations Population Fund Uganda, Kampala

The Republic of Uganda (2010) *The National Development Plan (2010/11-2014/15)*, Government of Uganda, Kampala

The World Bank (2012) <http://databank.worldbank.org/ddp/home.do>

WaterAid Uganda, NWSC, WSUP and CIDI (2011) *Solid Waste Management Study in Bwaise II Parish, Kawempe Division: Final Report* Water Aid Uganda, Kampala