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Equipment Leasing as a Financing Mechanism for Sustainable Solid Waste and Sanitation Services in Kampala

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Dedication

I dedicate this report to Lucy, Andersen and Alvin.

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Abbreviations

UNICEF	United Nations International Children's Fund
WHO	World Health organisation
GOU	Government of Uganda
DWD	Directorate of Water Development
MoH	Ministry of Health
KCC	Kampala City Council
PEAP	Poverty Eradication Action Plan
NWSC	National Water and Sewerage Corporation
MAPET	Manual Pit Latrine Emptying Technology
AMCOW	African Ministers Council on Water
MDGs	Millennium Development Goals
ILO	International Labour Organisation
NGOs	Non Governmental Organisations
CBOs	Community Based Organisations
FIs	Financial Institutions
UBOS	Uganda Bureau of Statistics
CEA	Cesspool Emptiers Association
DFCU	Development Finance Company of Uganda
NUDJV	Nabugabo Updeal Joint Venture
UML	Uganda Microfinance Limited
EADB	East African Development Bank
LC	Leasing Companies
ES	Equipment Suppliers
FSP	Formal Service Providers
ISP	Informal Service Providers
F	Frequency of responses
FCA	Full Cost Accounting
OBA	Out-put Based Aid

Abstract

The motivation for the study was the challenge in the delivery of solid waste and sanitation services in Kampala city due lack of appropriate equipment by formal and informal service providers who use very old vehicles for transportation of solid and liquid wastes to secondary collection points and/or to disposal sites.

The main objective of this study was therefore to assess the potential of leasing equipment as an innovative financing mechanism for sustainable solid waste and sanitation services in Kampala.

The researcher conducted field work in Kampala by collecting data from officials of leasing companies, equipment suppliers and the secretary of the Kampala Cesspit Emptiers Association through use of interviews. The researcher also collected data from officials of Kampala City Council as well as formal and informal solid waste and sanitation service providers by use of questionnaires. The data collected by the researcher was clustered into frequencies of responses for each category of respondents and analysed. The researcher also analysed secondary data from respondent organisations.

The findings of the study show that equipment leasing has the potential as a financing mechanism for sustainable solid waste and sanitation services. The findings also show that leasing is not used by service providers because the solid waste and sanitation market is not developed due to failure of KCC to play the role of regulator. There is potential for commercial viability which can be unblocked through proper regulation of service provision so that service providers and leasing companies find reason to invest in solid waste and sanitation equipment.

The researcher concludes that Kampala City Council, service providers and leasing companies have to work together in order to make leasing a useful financing product for the purchase of solid waste and sanitation equipment. It is however important to acknowledge that promoting leasing for its own sake does not make leasing an attractive equipment financing option; a developed solid waste and sanitation market is a key driver for the development of leasing products for service providers as well as solid waste and sanitation equipment markets.

The researcher recommends use of smart subsidies such as Out-Put Based Aid in urban sanitation service delivery, developing a leasing product for solid waste and sanitation service providers, leasing of equipment and managing it based on management contracts, allowing for long term solid waste and sanitation contract periods and improving the regulation, promotion and marketing of solid waste and sanitation services. The researcher recommends further research on how the legal and regulatory framework that recognises the role played by informal service providers in service provision should be provided so that they are recognised by leasing companies and also researching more on how to improve the regulatory role of Kampala City Council in the delivery of solid waste and sanitation services.

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Chapter 1 Introduction and Background to the Study

1.0 Introduction

Leasing is a contract which enables one party (lessee) to have the right to use equipment by payment of small instalments to another party (lessor) with ownership rights of the equipment(Deelen et al., 2003) Financing through leasing is widely used in developed countries. Developing countries have witnessed spectacular growth of leasing especially to medium and large enterprises. In developing countries, the reported growth of leasing has benefited commercial enterprises with a regular income to pay the lease instalments but not public service providers whose cash flows are usually inconsistent. According to Kisaame (2003), the leasing industry is still new in Uganda and represents less than 1% of private sector capital formation or 5% of total private sector credit as compared to the average of 14% in emerging markets and 31% in United States of America. It should also be noted that conventional capital intensive solid waste and sanitation systems are not appropriate for the vulnerable poor communities in the cities of developing countries in several respects(Mehta and Knapp, 2004). Therefore, the challenge of providing sustainable solid waste and sanitation services can better be dealt with through equipping local operators with the equipment necessary to deliver solid waste and sanitation services that respond to local needs of urban residents. It should however be noted that local operators, private companies and local governments lack the financial resources to out-rightly purchase the equipment which forms the bulk of investment in solid waste and sanitation services delivery.

1.1 Background of the study

Leasing is not a new phenomenon in developed countries with one third of private investment being achieved through leasing vehicles, equipment and machinery but it is relatively new in most developing countries (Deelen et al, 2003 and Westley, 2003). Financing for SMEs in developing countries has often focused on commercial trading activities with the capacity to generate regular income. It is therefore important that microfinance institutions take on leasing as equipment finance is an unavoidable component of the portfolios of microfinance institutions(Westley, 2003).

According to Kisaame (2003), leasing services target Small and Medium Enterprises (SMEs) which make up 90% of all Ugandan businesses, provide 50% of the employment and contribute two-thirds of the national income. The development of leasing is not only spearheaded by leasing companies but also through Government programmes to modernise agriculture through leasing using grants provided by development partners(Kisaame, 2003). Leasing maintains an upward trend with allocations going to sectors like agriculture, transport, construction, manufacturing, education and health among others (BOU, 2003).

At global level, multilateral and donor agencies are promoting a shift from financing sanitation through grants and subsidies to leveraging market based resources and promotion of sanitation(Mehta and Knapp, 2004) which is more sustainable as it captures the needs of service users and encourages lasting involvement of all stakeholders in service delivery. In slums and areas of the city that are not well served, local groups do not only have the potential but are also involved in the provision of solid waste and sanitation services which are tailored to meet the needs of the local communities in a more responsive and appropriate manner at an affordable fee(Salifu, 2001). The main issue is that these service providers lack equipment which is needed for them to provide effective and efficient services.

1.2 Statement of the problem

In dealing with the challenges of solid waste and sanitation in Kampala, the city authorities and the formal private sector play a great role. However, the role played by the informal local operators is invaluable especially with regard to providing affordable solid waste and pit latrine emptying services to poor households. One of the greatest challenges in the delivery of solid waste and sanitation services in Kampala city is lack of appropriate equipment (Nyakaana et al., 2006)by formal and informal service providers yet these are important in the delivery of efficient, effective and quality services in a timely and hygienic manner. The solid waste service providers use very old vehicles for transporting of liquid and solid wastes to secondary collection points and later to disposal sites. Overall it should be noted that service providers do not have appropriate equipment needed to facilitate delivery of solid waste and sanitation services. The cesspool emptiers are too old to serve the purpose for which they are meant and there is lack of equipment suitable for use in slums where the pit latrine emptying and solid waste trucks cannot reach. This situation is brought about by lack of capital most of which is meant for investment in equipment to provide effective, efficient and quality services. The city authorities, the private companies and informal local operators involved in delivery of solid waste and sanitation services lack their own capital and/or collateral needed in order to secure loans to invest in appropriate equipment to improve solid waste and sanitation services delivery. The implication for this is the need to devise innovative financing mechanisms to enable the solid waste and sanitation service providers in Kampala to deal with the problem of solid waste and sanitation equipment finance in a sustainable manner.

1.3 Justification of the study

It is important that this study was carried out because of the following reasons;

a) The study highlights the potential of leasing as an innovative tool for leveraging market and private resources in the provision of solid waste and

sanitation services in Kampala City. The study will therefore showcase the role that financing institutions and equipment suppliers/ manufacturers can play in turning around the solid waste and sanitation situation in Kampala through the provision of leasing services to the service providers.

b) The study has added new knowledge to existing literature as it will highlight leasing as an avenue of leveraging market and private resources for solid waste and sanitation improvement in Kampala City not through traditional borrowing mechanisms but through generating cash flows through the use of equipment.
c) The study has given recommendations for leasing services and analysed critical constraints to the socio-economic and legal dimensions of leasing.
d) The study is also a requirement in order for the researcher to fulfil the requirements for the award of a Masters Degree in Urban Management and Development.

1.4 Research objective

To assess the potential of equipment leasing as an innovative financing mechanism for sustainable solid waste and sanitation services in Kampala.

1.5 Research questions

1. What are the types of equipment used to provide solid waste and sanitation services in Kampala?
2. What is the quality and performance of the equipment used to provide solid waste and sanitation services?
3. What are the financing options used to purchase solid waste and sanitation equipment and what are the experiences of service providers with leasing?
4. What are the positive and negative perceptions on leasing solid waste and sanitation equipment by the service providers in Kampala?
5. What is the trend, extent of demand for leasing services and performance of lessees who are solid waste and sanitation service providers in Kampala?
6. What are the requirements that have to be fulfilled by a prospective lessee in order to qualify for a lease product?
7. What should be done in order to promote leasing as a financing option for the purchase of solid waste and sanitation equipment in Kampala?

1.6 Hypothesis

Leasing is a financing mechanism that increases access to and use of appropriate solid waste and sanitation equipment.

1.7 Structure of the thesis

This research report consists of content which is presented in six chapters as indicated below;

Chapter one consists of the introduction and background to the study and justification of the study. Also presented under this chapter is; the objectives of the study, research questions and the hypothesis.

Literature review is presented in chapter two. The literature presented is mainly on what has been researched about leasing equipment and the current practices in financing solid waste and sanitation services.

Chapter three consists of description of the research area. This includes the population of the research area, information on solid waste management, sanitation, excreta disposal system, drainage system, environmental management and land use planning of Kampala city among other key issues.

Research methods are presented in chapter four of this report. This includes information on interviews, questionnaires and secondary data sources used by the researcher to collect data.

Chapter five presents the discussion of findings of the study. These are presented in relation to the sequence of research questions for all categories of respondents.

Chapter six presents the conclusions drawn by the researcher based on the findings discussed in chapter four. Finally recommendations on how to promote the use of leasing in purchasing solid waste and sanitation equipment and suggestions for further research are made.

Chapter 2 Literature Review

2.0 Introduction

Review of existing literature started in March 2007 by reading materials relating to leasing found in textbooks, journals, magazines, newspapers and the internet among other sources. The reading materials were accessed through extensive use of libraries of the Institute of Housing and Urban Development Studies, Erasmus University and WASTE. The literature presented in this chapter enabled the researcher to know what has been researched on in the area of leasing and what the findings were. This therefore enabled the researcher to use the study to fill the missing gap in the available literature.

Definition of leasing

Leasing is a contract through which the lessee uses equipment owned by the lessor on payment of regular specific installment to the lessor(Deelen et al., 2003). Leasing is a contract arrangement benefiting lessors and lessees given the fact the lessee generates cash flow from the use of the equipment while the lessor receives income without loosing the right to own the equipment. The separation of the right to use equipment from ownership of the equipment is a key characteristic of leasing. The main advantage of leasing is that the lessees benefit from using equipment before they really own it since they realise an income during the lease term. Leasing is also unique in the sense that it is a form of financing which has no or very few collateral requirements that provides a launch pad for many potentially successful SMEs whose loan applications are often rejected due to lack of collateral. Unlike other forms of credit, with leasing the risk of diverting funds is prevented since the lessor directly purchases the equipment to be used by the lessee. It should however be noted that collateral can be a requirement depending on the size of investment at stake (Kisaame, 2003).

Types of leasing

According to Deelen et al (2003) leasing is defined in four different ways based on the kind of contractual obligations agreed upon between the lessor and the lessee and these different meanings may also differ from country to country. These include; finance lease, operating lease, hire purchase, and sale/lease back lease.

In case of a finance lease the total of the lease payments over the lease period are set to cover the cost of the equipment, interest and profit of the lessor and at the end of the lease term, the lessee may chose to purchase the equipment on payment of a nominal fee.

For an operating lease the lessor purchases and owns the equipment with the intention of making profits by renting it out to different lessees who are usually interested in using the equipment for a limited/short period. In this arrangement the lessor bears the risks related to the residual value and obsolescence of the equipment.

Hire-purchase is a way to finance the purchase of equipment just like with financial leasing only that it is used to purchase small items. In the case of hire-purchase, ownership is transferred gradually from the lessor to the lessee with each payment and the lessee takes full ownership on payment of the final installment.

The sale and lease-back is also like a financial lease only that the lessee is the initial owner of the equipment but sells it to the lessor and then signs a leasing contract to lease back the equipment through making regular payments to the lessor.

2.1 The challenge of providing solid waste and sanitation services

A cause of poor health in many households in Africa is inadequate sanitation where coverage is lower than on any other continent. In fast growing urban areas, poor households are increasingly exposed to greater risks with the percentage of households with access to sanitation services declining considerably(WHO and UNICEF, 2000). In Uganda, poor urban planning has resulted in persistent poor sanitation which makes extending the sewerage network to the scattered settlements very costly and difficult(GOU, 2005). The few connections to the sewerage network and limited expansion which undermines efforts aimed at extending the sewerage system to outer lying areas of Kampala. The majority of households predominantly use pit latrines there by contributing to contamination of ground water aquifers. The Government of Uganda has responded to challenges posed by the poor sanitation situation using different strategies. One of these approaches is the construction of more pit latrines and promoting the use of dry toilets by the Directorate of Water Development (DWD), Ministry of Health (MoH) and Kampala City Council (KCC). However increasing pit latrine coverage is not an end in itself as this only provides a solution for temporary treatment and storage of human excreta. A big challenge remains with regard to the transport and disposal of human excreta as the majority of households are not connected on the conventional sewerage network. These households need pit latrine emptying services which do not seem to feature in the scope of activities of the National Water and Sewerage Corporation (NWSC) and KCC to the desired extent.

The Government of Uganda identified sanitation as one of the key issues facing the water and sanitation sector and recommended more policy attention towards

environmental sanitation. The Poverty Eradication Action Plan (PEAP) therefore identified sanitation as a key priority area at the national level. However key responsibilities for sanitation lie with MoH, Ministry of Education and Sports (MoES) and the Ministry of Water and Environment (MWE). The urban local governments have minimum resources for solid waste management and do not have budgets dedicated to liquid waste management yet they are directly responsible for dealing with sanitation problems in urban areas where the majority live under life threatening unsanitary conditions. There is limited institutional involvement in sewerage and solid waste management as functions overlaps between the ministries and local government responsibilities with municipalities providing inadequate solid waste and disposal services. Solid waste management services are a key responsibility of local governments and the private sector while sewerage treatment and disposal is a responsibility of the NWSC(Thomson, 2004). On the other hand, conventional urban sanitation technologies cannot solve the sanitation problems of poor households who cannot afford to pay for the services(Salifu, 2001). Salifu (2001) therefore proposes dealing with the sanitation challenge through identification and understanding the incentives that can stimulate demand for improved sanitation amongst the poor urban settlements. It should also be noted that the use of a neighbourhood centred sanitation demand responsive approach to sanitation provision and management has demonstrated that "unbundling and decentralised approaches are financially and technically feasible and manageable (Wright, 2005). Studies have shown that decentralised approaches led to demand responsive services tailored to local conditions, allow for a wide range of technical options, minimise free rider problems, allow for incremental improvements and clearly shows the difference between the private and public good segments of the sanitation service provision (Rees, 2006).

According to Cairncross (2004), from 1992 onwards, the coverage of septic tanks and pit latrines kept pace with the growth of Kampala city's population. Unfortunately increase in sewerage connections and access to pit emptying services has remained insignificant. For communities which lack sanitation, simple latrine systems can be a major improvement in health but Cairncross (2004) does not mention the need for equally affordable decentralised sewer empting services as opposed to the conventional systems adopted from developed countries which are too costly for the city authorities and residents. Cairncross continues to argue that marketing sanitation is aimed at ensuring that the consumers get the benefits they want and producers get the profits(Cairncross, 2004), but he limits this argument to the supply of household pit latrines and not the provision of excreta removal and transport services which are crucial with regard to supply of sanitation services to densely populated settlements and slums where there is no room for construction of new pit latrines.

In Uganda, sanitation is the responsibility of institutions in several sectors, and interventions appear to be given secondary priority within all institutions involved.

According to Williamson et al (2003), the water sector does not appear to have the political power to tackle this lack of priority in other sectors. This actually brings into question the fundamentals of linking the sanitation sector to safe water supply. Usually water and sanitation services are delivered at a higher cost than necessary. Few inputs of the sector go to financing service delivery and when this is done, usually inappropriate and costly technical solutions are embraced as opposed to adoption of approaches which facilitate incremental upgrading of existing services when necessary. The low priority to sanitation can be directly traced to the institutional structures which are fragmented at different levels of government. This often brings to mind the necessity to de-link sanitation from the water sector and take it under the direct control of the Ministry of Finance or the Local Government(Williamson et al., 2003).

According to MoFPED (2007), there is a general lack of financial resources needed to provide public services to the residents of Kampala city. The majority of city residents cannot afford to pay for the services they need. Endeavours by the city authorities to enforce by laws on hygiene have far reaching implications on household incomes. The central government makes transfers to local governments for provision of public services based on the night time population. These funds are insufficient as KCC supports almost twice its night population during day (MoFPED, 2007). The commuter traffic during working hours is overwhelming and the city authorities do not have the necessary resources to provide satisfactory services to the city residents and visitors. Further, the few resources realised are not put to effective use due to bickering amongst the politicians and city bureaucrats which further makes service delivery in Kampala complex.

According to WASTE (2001) and EPA (1997) integrated waste management helps to minimise costs, maximise recovery and conservation of energy and materials as well as minimising negative environmental effects. Unfortunately integrated solid waste management is still in its infancy in Kampala city and as a result it is still difficult to understand the costs of different solid waste management approaches. Understanding the costs of different services in a solid waste management system can be realised through Full Cost Accounting (FCA) by considering the costs of activities such as waste collection, operation of transfer stations, transport of wastes, waste processing and disposal as well as sale of by-products. Understanding the costs of all activities in a waste management system is necessary in order to make a decision for local governments to provide the services themselves or to contract out service delivery(EPA, 1997). It is however not possible to understand the community accounting systems, organisational relationships, inventories of vehicles, structures, personnel and the profile of solid waste management system of Kampala city. With FCA, establishment of the cost of solid waste management service is achieved and this would certainly be the basis of a sound economically viable public service activity. It is therefore advisable for solid waste and sanitation service departments of

local governments to analyse service delivery costs and assess the necessary fees to be paid as service delivery is continually being shifted from the public to the private sector(WASTE, 2001). A key feat yet to be realised is the costing of the different activities in the solid waste and sanitation system of Kampala city which could greatly hider the sector from benefiting from financing by financial institutions (FIs) which attach importance on business entities with steady cash flow and well developed accounting systems. Understanding all costs and activities associated with municipal waste management is a way through which measurement of the performance of solid waste and sanitation systems would be done in order to make informed financing and investment decisions(UNEP, 2005).

2.2 The potential of formal and informal solid waste and sanitation service providers

In Kampala, the majority of households using flush toilets use on site solutions such as septic tanks (GOU, 2005)which are emptied by cesspool emptiers which transfer the sludge to the sewage treatment plant or in most cases disposal directly into the environment. Given the role played by the private sector, several international initiatives have highlighted the need to unlock the private sector's potential in the delivery of sanitation services to the urban poor as a result of failure of government and donor funding to generate appropriate resources needed for improvement of service delivery(Mehta and Fugelsnes, 2006). The authors observe that the strategies currently in place are aimed at financing service delivery systems that are not appropriate for the urban poor who form the majority of African city residents keeping in mind that informal actors are more suited to deliver affordable and appropriate solutions to the service needs of the urban poor an argument which is also recognised by Salifu (2001). Unfortunately all expedited interventions have not satisfactorily brought the private sector to the agenda of reforms in the service delivery sector.

According to Thomson (2004), the scope of responsibilities for solid waste and sanitation service provision does not show the importance of the role played by the local operators yet it is these who meet the demands of the poor in a sustainable manner. Only 10% of the population has access to sewerage services thus the majority rely on on-site sanitation for which there is no clear policy and budget for financing with sanitation given low priority by urban authorities. Thomson (2004) shows the need to finance sanitation for the urban poor with no access to sewerage services. He observes that poor planning regulations have resulted into pressure on space leading to over crowding of housing without access to pit latrines or toilets and that it is possible to have demand creation through social marketing and participatory approaches through government extension system(Thomson, 2004). It should be noted however that the author does not acknowledge that service delivery can be improved through the use of minimum resources by engaging local operators and

community groups as opposed to the use of the usually bureaucratic and resource consuming government extension systems.

Salifu (2001) is of the view that stakeholders have not committed adequate financial, material and human resources to match population growth with the provision of sanitation services a task which calls for diverse solutions. Poor households do invest in new human excreta management systems for reasons of dignity, status, privacy and convenience rather than for benefits of health of improvement alone(Salifu, 2001). However Salifu does not identify the aspect of income generation since on-site solutions need extensions onto a public system through transport of the waste to secondary treatment sites and eventual reuse or disposal a role which can be played by small service providers at a fee. Given the reluctancy of households to handle excreta due to cultural and safety considerations, small local operators have the potential to provide the excreta management services at affordable rates. This may be realised through leveraging resources from households and communities through strong linkages with wider financing systems(Mehta and Knapp, 2004). Leveraging market based resources may be achieved through investments done by the private sector, special institutional arrangements and cash flow backed market borrowing from banks, which is the focus of this study with emphasis on the potential for leasing to finance solid waste and sanitation equipment.

According to Cairncross (2004), sanitation market development is the sustainable approach to meet the demand for sanitation and that this should be central to sanitation improvement programmes. This is because disposal of human excreta has been achieved through the supply of sanitation services by the private sector to individual homesteads. More than half of the population in developing countries still lack basic sanitation with most of the progress being achieved through the market mechanism. The author intimates that in addition to improvements in health, access to sanitation is prioritised by households in terms of convenience, comfort, privacy, safety, as well as dignity and status. However, the author does not mention income generation as one of the motivators for people to keep access to and use of sanitation services sustainably. Social marketing could therefore be constructive not only in popularizing the use of pit latrines but also availability of affordable pit latrine emptying services and solid waste collection services within poor communities. This could thus be a way of promoting pit emptying services as well as marketing transporting of liquid and solid wastes as key linkages to community initiatives in solid waste and sanitation services provision. Cairncross (2004) shows the need for the public sector to develop a vibrant sanitation industry and regulation as well as coordination of transporting and disposal of liquid and solid wastes. He argues that micro credit lenders give loans for investments which generate incomes and this excludes sanitation. However this assertion is not necessarily true as provision of pit latrine emptying services by MAPET operators in Tanzania provides an income(Muller, 1997) and this approach is a promising intervention to dealing with

sanitation related challenges in low income settlements in cities of developing countries.

According to AMCOW (2006), the key issues to consider in order to improve water and sanitation systems include implementation of sanitation master plans for Kampala and 14 other towns coupled with sanitation promotion techniques. The report shows the need to promote small operators/entrepreneurs involvement in the construction of sanitation systems, excreta/sludge/solid waste transport and disposal in environmentally friendly dumping sites, and waste treatment in urban areas as well as building their capacity as appropriate. Further, there is need to increase financial flows in the sanitation sub-sector to reach the MDGs from both on-and off- budget sources, and allow cost recovery/ funds transfer to cover the costs of managing and expanding urban sanitation and also promoting social marketing(AMCOW, 2006).

According to ILO (2005), the urbanisation rate in developing countries is far higher than the rate at which local authorities are able to provide services to the urban population. This has resulted in 50% to 70% of urban areas in developing countries being reminiscent of inadequate services, over crowding and dirty working and living conditions. In such settlements poor sanitation and solid waste management are of great concern especially in as far as public health is concerned. Since the public service delivery system cannot meet the solid waste and sanitation needs of people in these settlements, the existing demand for these services presents a chance for employment creation. Thus as a result urban authorities are turning to partnerships with the private sector and community groups in order to improve service delivery. There are deliberate efforts aimed at recognising the role played by local operators and community based enterprises in providing employment and delivering services appropriate and accessible to the urban poor. In Uganda solid waste collection is an undertaking of municipal staff and contracted large enterprises but studies show that potential for greater improvement through the involvement of small enterprises and local operators and experimenting with contracting to community based enterprises is going on with promising success(ILO, 2005). The existing demand for sanitation is based on the peoples' desire and requirement to live in clean environments. The small community based enterprises and local operators are better suited to respond to demand for sanitation by the poor. Through such approaches the business sector would be a key partner in the effort towards achieving the MDG on sanitation as this sector can better meet the sanitation needs of both the poor and rich more than the public sector does(Imhasly et al., 2004).

Imhasly et al (2004) further argues that onsite sanitation will be the most appropriate technology in most of the rapidly urbanising urban areas in the developing world in the coming decades. This is due to the fact that the majority of urban residents are not likely to be able to connect to a sewerage system yet the transfer of the latrine sludge to the final disposal site is a responsibility of individual households. More families

increasingly depend on the costly privately offered pit latrine emptying services by cesspool emptiers and with increased coverage this service is apparently very profitable(Imhasly et al., 2004). It should however be noted that this service is not affordable for the urban poor. The cost is highly dependent on distance to the disposal site, accessibility to the pit latrine, type of pit latrine and income level of the household. Studies have also shown that pit latrine emptying by cesspool emptiers has a high commercial viability if the structuring of the pit latrine emptying market is put in order because increased competition will lower the service charges and make the service more affordable to poor households(Biesinger and Richter, 2007).

2.3 Repackaging financing of solid waste and sanitation services

It involves high capital costs in extending the sewerage network and high tariffs are associated with connecting to the sewerage system(GOU, 2005). Although the financial handicap is known for both the service providers and service users, the NWSC is expediting plans of extending the sewerage network which could be a solution for the well to do who may afford it but not the majority who are the urban poor. As a result, there is need to narrow the financing gap along other reforms in the utilities sector in developing countries. The reforms are mainly aimed at stimulating financial viability which is critical if service providers are to access private finance(Mehta and Fugelsnes, 2006). Unfortunately this endeavour has targeted the water sector and neglected to greater extent sanitation on the assumption that access to water means good sanitation. Promoting washing hands control rates of infection and transmission of diseases but it does not prevent epidemics that are likely to occur as a result of failure of households to empty pit latrines in settlements where the water table is too high. It is unfortunate that lots of financing goes to increasing coverage of water supply systems while a minimum goes to facilitating the transfer of pit latrine sludge to the final environmentally sound disposal sites.

There exists a wide funding gap to meet the MDGs and it would be useful to use more demand responsive approaches and through sound planning and risk management to access market based resources(Mehta and Knapp, 2004). However, apart from national budgets, donor assistance and NGOs, other potential local in-puts are not recognised or neglected. Since benefits of on-site sanitation are mainly localised at the community level leveraging the resources within this sphere makes economic sense through full or partial cost sharing, user fees and sanitation related taxes. The individual households are willing to pay for the benefits of a pit latrine but the sewerage network and pit emptying services, treatment and disposal are considered a public good making public sector involvement necessary for their management(Cairncross, 2004). Cairncross makes sound marketing arguments for the necessity of households to have appropriate individual human excreta primary storage and treatment systems but does not link the publicly controlled components which have not had enough attention yet their management is continually being

passed on to the private sector. Also issues of demand for sanitation should be balanced with the supply side if sanitation markets are to be developed in a sustainable manner.

2.4 A case for leasing in financing solid waste and sanitation services

Access to market financing as a stimulant of external institutional, regulatory and internal management reforms since access to market finance is promoted by financial sustainability thereby leveraging sustainable improvements in service provider performance(Mehta and Fugelsnes, 2006). Therefore to attract the interest of FIs, innovative financing instruments and technical assistance have to be guaranteed in order to facilitate the meaningful competition between donor funding and market finance in order to achieve meaningful transactions in the sanitation market. In order for market borrowing to be successful with regard to urban sanitation, the municipal sector has to be relatively stable, have a good management and financial capacity and banking institutions and other community based financing institutions have to be reasonably sound. This can be done by ensuring that the sanitation related sectors generate direct revenues and that there is an appropriate way in which general revenues are allocated(Mehta and Knapp, 2004).

According to Thomson (2004), the investment needs far exceed resource flows to the urban sanitation sub-sector and the existing financing gap could be reduced through adoption of cost effective approaches thus the need to encourage off budget financing. There is a possibility to reduce overall investment in sanitation if cost effective best practices are developed and implemented particularly with regard to the non-piped household sanitation for poor households(Thomson, 2004). The author shows the need to increase the scope of financing from non public sources through local tax revenues, micro credit, and the private sector, NGOs, communities and donors but does not make suggestions for the potential of leasing of solid waste and sanitation equipment as a possible financing mechanism. There is need to promote extension of credit to promising entrepreneurs who provide solid waste and sanitation services in order for them to expand(Cairncross, 2004). Faced with the collateral problem enumerated earlier, the author does not show innovative ways through which credit can be made affordable for the small service providers which is the scope of this study. The author intimates that lack of adequate pit emptying is a key challenge to the use of pit latrines as it limits their life time, a major cause of sanitation related diseases and a source of pollution of the environment. Thus marketing of pit emptying and other sanitation related services by local operators as a linkage to household sanitation facilities is a suitable goal for the realisation of the Millennium Development Goal on sanitation.

In cities like Dar es Salaam where the MAPET and Vacutug systems have been tried out sanitation professionals and local leadership has realised the need to link on site

sanitation with the desire to transfer and treat pit latrine sludges at appropriate sites in order to improve public health and hygiene by preventing pathogen transmission and contamination of underground aquifers. Unfortunately the MAPET and vacutug approach has not been used sustainably because of a series of constraints which need to be dealt with and these methods have the highest potential of delivering pit latrine sludges from inner inaccessible areas to the public sludge transfer station. The constraints could be dealt with by planning for sludge transfer stations, making sanitation master plans, adopting the use of appropriate latrines, developing mobile transfer solutions, developing cost recovery mechanisms and instituting smart pro-poor subsidies. The equipment challenge can be handled by providing asset financing through development leasing fleet operations even for small investments by community enterprises and local operators in order to sustain service delivery(Rijnsburger, 2005).

2.5 Experiences with leasing

In 1992, the Grameen bank started an experimental leasing programme which by 1997 had enabled 1214 clients to complete a leasing contract and own assets. This achievement excited the clients of Grameen bank and this made the leasing products of Grameen bank to be popular as indicated by the expansion of the out reach program of the bank. The success of Grameen bank's leasing products was based on various factors which include; involvement of bank officials in the purchase of the lease item and the bank monitoring the usage of the leased item. There is no group tax in leasing as it is seen by the clients as a hidden levy that effectively increases the cost of borrowing and the leasing amount is not fungible and the members are given a product instead of cash to ensure that the item is used strictly for productive purposes thereby reducing the probability of default of the lease contract. Also the applicants for a lease are chosen such that they have other sources of income and have the ability to store the leased item which is not the case with other loan products. Usually the leasing term is for more than a year and with a grace period of one month whereas for other loan products, the installment payment has to start in the second week after the disbursement of the loan. It is also important to note that a lessee can payoff the loan amount prior to the expiry of the lease contract, and the instalments can be fixed or varied depending on seasons. It should be noted that the leased item is insured to protect the lessee and the lessor from undue risk(Dowla, 1998). Box 1 presents experience of leasing from Bangladesh.

Box 1: Leasing a baby taxi by Laila Khatoon

Laila Khatoon was born on 21 March 1957 in the village of Taburkhil under Raozan Thana in Chittagong District, Bangladesh. She had a rough childhood and due to poverty her parents could not afford to send her to school. At the mere age of 15 she was married to an older man who already had a wife. Subsequently she became mother of two more sons and two daughters. Her husband died leaving behind five young children and a mountain of debt. She was at a loss, as she could not meet the basic needs of her five children. She took a job as a housemaid in one of the rich households in the village.

Laila Khatoon became interested in leasing after hearing about it in the one-day workshop for Centre Chiefs. She learned that if some member of the family had experience and skill to manage business activities, the bank would provide the required amount of financing for buying the item through a lease contract. She was further encouraged by the fact that the lessee will own the item after the full payment of the loan. At that time her eldest son was a licensed baby taxi driver and he used to operate someone else's baby taxi. Since her son had prior experience, she qualified to lease a baby taxi. Thereafter in a special meeting of the Centre her leasing proposal was approved unanimously.

Her eldest son drives the baby taxi as per the regulation the mother and the son is responsible for maintaining the taxi in good working condition. The following is a description of income-expenditure and net profit from leasing the baby taxi.

Khatoon's Cash Flow

Description	Daily	Weekly	Monthly
Total Income	350	2450	10500
Total Expenditure	100	700	3000
Bank's Instalments	172	1200	4800
Net Profit	78	550	2700

As seen above, the leasing program has provided Laila Khatoon and her family with a stable source of income. The leasing program is self financed, and the lessee is able to pay the instalments from the income streams generated by the leased item. Laila was paying all bank instalments on time and she was sure to become a proud owner of a baby taxi. The mother and the son team did not encounter any major problem with the lease contract and did not miss any payments to the bank. However, during a strike when the son was unable to operate the taxi they had to withdraw money from the savings account to make payment to the bank. Sometimes her son had to pay money to the toll takers (chandabaz). If there was any mechanical problem with the taxi, the son tried to fix it first and if it failed he then took it to a mechanic. The baby taxi was in good physical condition and the engine was in good condition as well.

Laila Khatoon, who used to live like a draught animal is among the few privileged people in her village. Her rags to riches story raised eyebrows among the upper class members of the society. They could not understand how a landless woman who used to be a housemaid and did not own any asset to be used as collateral became the proud owner of a baby taxi.

Source: (Dowla, 1998)

According to Kisaame (2003), the leasing is a fairly new in Uganda and has to overcome a multitude of challenges. The current legal framework enables leasing to

take place based on the Income Tax Act (1997), VAT statute and Common Law as there is no Leasing Act in Uganda. However, some aspects of the legal and regulatory issues need to be revised in order to promote growth leasing in Uganda. The commercial courts need to improve capacity to facilitate the enforcement of legal contracts in order to save time and money lost in contract disputes between lessees and lessors. It is also important to note that the limited or absence of local leasing expertise in the market is a key constraint to the growth of leasing in Uganda. Despite the legal and regulatory challenges, leasing companies have improved their operational competencies through provision of innovative solutions to meet the equipment needs of the SME market. This has been achieved through sourcing suitable financing and awareness creation on the advantages of leasing through different approaches. DFCU which controls 80% of the leasing market in Uganda has not only its business but also helped many SMEs to understand different financing options. To sustain the achievements and further improve the capacity of the leasing industry, DFCU has a policy of recruiting staff from different professions such as agriculture, engineering, statistics, economics and accounting and on-job training is a preliquisite in order to keep abreast with developments in the leasing market(Kisaame, 2003).

2.6 Conceptual Framework

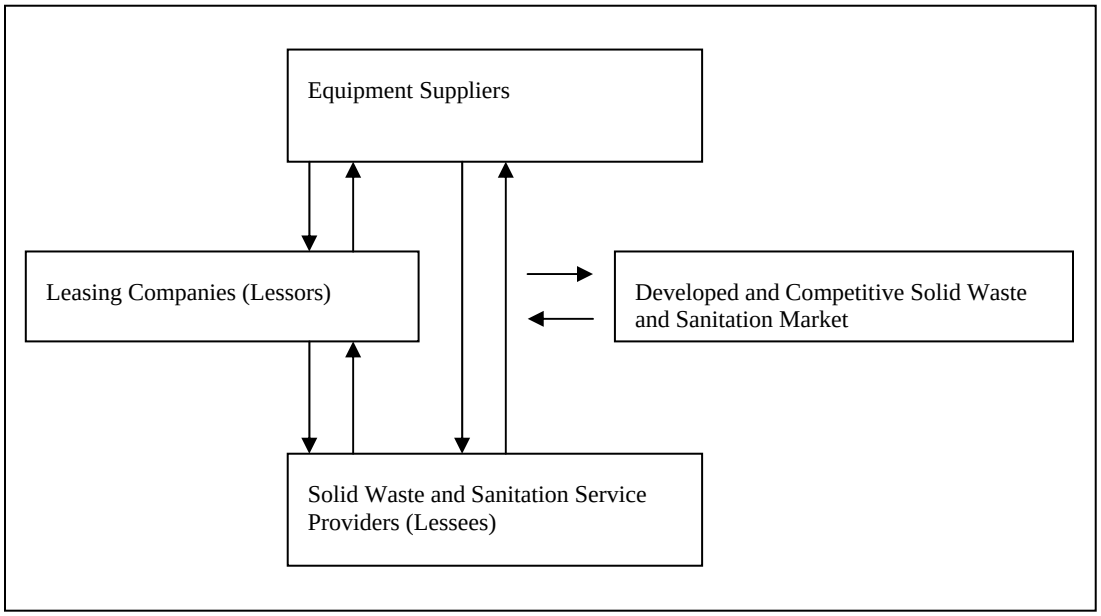
For leasing to make sense for solid waste and sanitation service providers, they should be able to generate a profit from which they are able to pay up on a timely basis to the leasing companies. This means that there needs to be a well developed and competitive solid waste and sanitation market. This is important because at the end of the day, the leasing companies are not interested in repossessing equipment from failed lessees but good business to support future growth and development of competitive equipment markets. This would be backed by equipment manufacturers/suppliers with the capacity to supply equipment and also who are willing to work closely with the leasing companies.

On the other hand there also needs to be an appropriate regulatory framework in which leasing is clearly understood as different from other forms of credit. In cases where leasing companies do not take deposits then it would be important that their regulation is at a minimum and that repossession of equipment from failed leases should be as simple as possible(Havers, 1999). This is what constitutes an enabling environment for leasing companies.

The availability of the enabling environment should be a stimulant for the need to invest appropriately in the solid waste and sanitation sector by the service providers since this would make business sense. But due to lack of collateral, these service providers cannot afford bank loans to purchase equipment. This therefore leads to demand for equipment finance which can be supplied by the leasing companies.

Financing through leasing would then enable the solid waste and sanitation service providers to acquire equipment which they need to improve service delivery. Details of the relationships between the lessees, lessors and leasing companies are indicated in the Figure 1.

Figure 1: Conceptual framework for the study



Prepared by the researcher based on the standard lease operation (Deelen et al., 2003)

Chapter 3 Description of Research Area

3.0 Introduction

Kampala is the capital city of Uganda located approximately 45 kilometres north of the equator (Map 1) covering an area of approximately 197km². Kampala started as an indigenous city when the king of Buganda established the Kibuga as an administrative centre of Buganda kingdom. Later, the rate of urbanisation of the city increased when the colonialists established their administrative centre in Kampala leading to mass movement of people from rural areas to come to the city to benefit from the economic opportunities that the city offered. This urban growth led increased demand for services that the city was not able to offer to the residents. As a result, Kampala city is in a state of poor environmental health characterised by low quality of housing, poor drainage, poor solid waste management and poor sanitation services. The bad political regimes during the 1970s and 1980s led the city to experience a collapse of the economy which led to further deterioration of the living environment within the city. Kampala city is made up of five divisions namely Rubaga, Kawempe, Nakawa, Makindye and Central (Map 2). Being the capital city it is more developed relative to other urban areas. The high rate of urbanisation and industrialisation has led to a multiplicity of environmental problems such as pollution and congestion among others. This has over the years resulted in decline in the quality of housing, basic infrastructure services and sanitation facilities. The decline in sanitation services delivery is responsible for the rampant cholera out breaks in Kampala city(MoH, 2005). As a way to deal with environmental problems, KCC hinges all development programmes on resource conservation, environmental protection and regeneration as well as environmental management(NEMA, 1997).

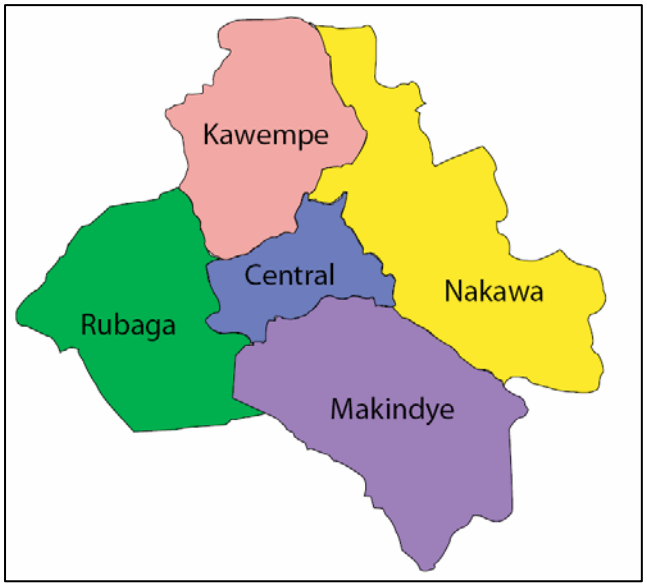
3.1 Population

Kampala city has a night population of 1.2 million people(UBOS, 2002) presented in Table 1 and a day time population of 2.5 million people(Kiribakka, 2005). The high population has resulted into pressure on natural resources leading to the recognition of the need for sustainable development in all the city's development plans. The city also serves the commercial needs of neighbouring towns of Mpigi, Mukono and Wakiso which greatly increases the administrative challenges faced by the KCC. Rapid urbanisation and rising population density has resulted into pressure on the city's natural resources which is characterised by unsustainable consumption of resources, encroachment on wetlands and poor waste management among others. The unregulated settlements development has had negative implications for development and environmental protection which results from unsustainable use of the urban resources.

Map 1: Map of Uganda showing the location of Kampala

Source: The World Fact Book – Uganda

Map 2: The five divisions making up Kampala city



Source: Kampala, the Capital City of Uganda, 2005

Table 1: Kampala's population trends and projections (1969 – 2015)

Parameter	1969	1980	1991	2002	2006	2010	2015
Population	330,700	458,503	774,241	1,208,544	1,479,741	1,811,794	2,400,000
Growth rate	0.00	3.20	4.76	5.61	5.60	5.60	5.60

Source: National Population Census Reports 1969 – 2002 and Projections.

3.2 Planning of Kampala city

The land tenure systems have negatively impacted on the land use planning of Kampala city. A lot of informal sub division of land has resulted into difficulty in the provision of the necessary infrastructure and service systems water supply, sewerage network and waste management among others. As a result, most households rely on septic tanks and pit latrines for liquid waste disposal resulting in the pollution of ground water. Onsite disposal of pit latrine sludge has been a common practice but it is becoming increasingly impossible due to lack of space. There is equally no space for construction of new pit latrines when old ones fill up. The appropriate option seems to be pit latrine emptying by use of cesspool emptiers although there is no sufficient access to enable trucks to reach the households and the service is not affordable for the urban poor. Kampala City Council is responsible for development control and making development plans for road networks, water supply, electricity but the planning endeavours of the city authorities have not been effective due to a multiplicity of reasons. As a result it is difficult to enforce building rules and regulations which has led to the deterioration of the sanitary conditions and proliferation of slums and informal settlements.

3.3 Social services, infrastructure and industry

The provision of social and infrastructural services plays a vital role in supporting accelerated and sustainable social, political and economic development. Although the social and physical infrastructures in Kampala city are relatively more developed than in other areas most of these have been used beyond their lifespan. Passenger transport is managed by private operators and the through railway network is almost non functional. The manufacturing sector in Uganda is dominated by small-scale industries. The city authorities are greatly challenged with the issue of regulating and promoting a productive small-scale entrepreneurship in the informal sector as the main employment generating sector in the city.

3.4 Environmental health and environmental management

The level of hygiene in human settlements especially in slums and informal settlements is very poor and characterised by shared sanitary facilities which are considered unsafe for human use. Open and underground sources of water are highly polluted due to over use of pit latrines and poor latrine sludge disposal practices as well as pollution from industrial wastes. In order to sustainably deal with environmental management issues, there is increased environmental awareness which is spearheaded by various stakeholders such as CBOs, NGOs, CSOs and women groups among others. These stakeholders are involved in sorting and recycling of wastes and greening activities among other environmentally sound activities. Such efforts are complemented by institutions such as NEMA and the Institute of Environment and Natural Resources of Makerere University.

3.5 Housing and Sanitation

The quality of housing is largely dependent on the sanitation services associated with the house itself. The nature of a dwelling unit, its structure, spacing, size and ownership of the houses affects the quality of health of its occupants. Poor city residents reside in single rooms built with almost no space between them with the little space available being used as a corridor or verandah. Even for households with a sizable open area, it is often in use by the whole community as a foot path, meeting point or children's play area. The single roomed houses serve the function of kitchen, store, sitting room, bedroom and sometimes urinal during the night and such homesteads are characterised by a high occupancy rate of four more people in a single room. Usually the houses are made from poor construction materials, with poor ventilation and with no privacy of one household from the others(MoFPED, 2007).

The housing facilities are very poor with most households using shared pit latrines. Only 6% of the households have water borne toilets inside the house, while 2% of the population does not have any form of toilet facility. Sixty percent of the households use shared bathrooms, 14% have none at all. 12% have inside bathrooms shared between households, and 11% have outside bathrooms not shared. One striking feature about Kampala's population is that 70% of the households have no kitchens but cook either in the open or in the houses where they reside. The unsanitary living conditions are a threat to public especially for the urban poor living in slums. The fast urbanisation rate has out-stripped KCC's capacity to provide societal needs, leading to high levels of unemployment, malnutrition, poor housing as well as social services and infrastructure. Within the settlements, it is common to find improper disposal of solid and liquid waste. Stagnant water and sullage around homesteads provides an excellent habitat for disease causing organisms and is responsible for the occurrence of many preventable diseases.

There is a strong relationship between sanitation and spread of disease in Kampala given that the most common diseases like typhoid, diarrhoea, and cholera result from unsanitary living conditions. Unsorted heaps of wastes are a common site within the settlements and this has negatively impacted on the environment. Most households do not have 'private toilet facilities' forcing some households without these facilities to dispose human excreta in the open drains or together with other household wastes. Most of the settlements of the poor are located within flood plains where drainage channels are not well maintained. Poor waste disposal practices often results the blockage of the drains leading to occasional flooding in addition to presenting good breading environment for disease causing vectors(MoH, 2006).

3.6 Solid waste management

The Engineering department of KCC is responsible for solid waste management which is big challenge to the city authorities. The sprawling residential old and new settlements have over stretched the capacity of KCC to deliver efficient and effective solid waste management services. Kampala City Council has the capacity to transport approximately 25% of the 25,000 tons of solid waste produced monthly. Almost 80% of the households do not get the solid waste management service and densely populated areas are not served due to poor accessibility. As a result solid waste management is almost absent and households have individual arrangements for waste disposal such as burning, burying and dumping at unauthorised sites leading to environmental pollution. It should be noted however that most of the solid waste generated by the city's abattoir is used as a fertiliser while private organisations use the horns and hides in the crafts industry. On the other hand, health facilities lack proper methods of disposal of their waste yet it has a high potential of spreading contagious and dangerous infections. The only incinerator at Mulago hospital is unable to handle all the waste leading to careless disposal of medical waste such as expired drugs, syringes and water bottles.

Poor refuse disposal is a significant feature of slums as the standards of waste management are generally very low which makes poor waste management to be viewed as the biggest challenge to KCC. The majority of city residents just litter in an irresponsible way which leads to continuous sea of decaying solid wastes around households and along the streets (Photograph 1). The failure of Kampala's waste management system is due to poor societal attitude and technical problems. This is due to the fact that regardless of the scarcity of resources, even areas which have been adequately serviced by the city's waste collection system are still a site of poor waste management. The city authorities lack the resources to run a sound waste management system especially lack of equipment which is also a major problem for the private solid waste service providers. The hardware and software problems of solid waste and sanitation service provision are getting more complex and diverse with the fast increasing urban population.

Photograph 1: Irresponsible dumping of solid wastes

Adopted from MoFPED (2007)

3.6 Excreta Disposal

The standard of hygiene and excreta disposal is an influential aspect in the prevalence of diseases and their spread. The peri-urban areas and slums are usually characterised by generally low standards of hygiene and excreta disposal(Kalanzi, 2002). According to Kalanzi (2002) 32% of the households in Mulago slum area in Kampala City did not have a private pit latrine. A study by Kamya (2001) identified the rampant sharing of toilets as the main challenge in keeping them clean and safe to use. Most of the pit latrines are raised and shallow due to water logging in especially the low lying areas. Human excreta disposal therefore presents a big challenge since many households do not have sanitation facilities. Where sanitation facilities exist most of them are of poor standards as the settlements are located in low lying areas that are water logged and can therefore not allow deep pit latrine construction(Kamya, 2001). The continued use of pit latrines has led to increased contamination of the underground water aquifers and as a result virtually all springs and wells in Kampala are contaminated(MoFPED, 2007) yet these continue to be the only source of water for poor households (Photograph 2).

3.7 Water Supply, pollution and health

Kampala's poor use less water than they actually need because they are not able to pay for water and as a result most of them use spring and well water yet these constitute high risk sources of contamination due to over use of pit latrines and poor waste disposal practices.

Photograph 2: A pit latrine and poorly dumped solid wastes in a slum

Adopted from MoFPED (2007)

The average water consumption per capita per day is 20 litres, which also falls far below the standard requirement of 50 litres per capita per day in urban centres. There is also rampant shortage of water within the city which makes households to devise ways of storing the available water. Most households store their water inappropriately in places like bedrooms or sitting room(KCC, 2000) which could also be a cause of contamination during storage. According to UBOS (2005), there is a great risk of health hazards given the poor quality of housing and the associated high occupancy rates. The composite sanitation gap of 36.6% exists between the expected standards and the current reality with implication that there is a short fall of 69.4% to the expected level of water consumption. The major types of water pollutants are microbes from domestic sewerage, organic wastes from domestic and industrial wastes, toxic and hazardous wastes from industry and nutrients from agricultural activities. All surface water bodies are heavily polluted with domestic and industrial effluents. Raw water at the city's water works is highly polluted as a result of exposure to various pollutants. Water-borne diseases are transmitted through the consumption of water contaminated with human excreta leading to infections such as cholera, typhoid and dysentery among others(UBOS, 2005).

3.8 Drainage system of Kampala

One of the key constraints in the construction of appropriate sanitary facilities is location of settlements in low lying flood prone areas. In such areas, the drainage system is so poor and the water table is too high leading to the construction of shallow pit latrines which also fill up in a short time. The residents cannot afford the services of the few cesspool emptiers if their homes are accessible to these sludge collection trucks. As a result, it is a common practice to let sludge from filled up pit latrines to flow into open drainage channels. The drainage problem is further

complicated by indiscriminately dumping of refuse into the drains resulting in avoidable stagnation of water and therefore creating a conducive living environment for disease causing organisms in addition to flooding due to drain blockage. The flood prone areas have continued to attract the growth of settlements of the poor in the face of ineffective land use control and their unattractiveness to affluent city residents as they are usually flooded(NEMA, 1997). The regular flooding in low lying areas is responsible for the prevalence for preventable diseases such as cholera and dysentery among others. Disease transmission results from washing pit latrine sludge back to people's homes by flood water.

Chapter 4 Research Methods

4.0 Introduction

This section presents the different methods that the researcher used to collect, analyse, present and discuss the findings of the study. This includes details on the research strategy, the different categories of respondents and how the data was collected during fieldwork. Also the ways through which the different data sets were analysed and presented is discussed.

4.1 Research Type and Strategy

The researcher used a case study approach to carry out a descriptive survey of stakeholder perceptions on equipment leasing as an innovative financing mechanism for sustainable solid waste and sanitation services in Kampala. The researcher used both qualitative and quantitative methods of research as these are complimentary and will facilitate the realization of meaningful results. In this case, a descriptive study enabled the researcher to precisely estimate the attributes and attitudes of stakeholders towards equipment leasing and how this financing option can be used to facilitate delivery sustainable solid waste and sanitation services in Kampala.

4.2 Data Collection

Primary and secondary data was collected in Kampala City and this constituted the major activity of the fieldwork period from 2nd July 2007 to 5th August 2007. Secondary data consists of information that the researcher got from performance reports, investment and expenditure profiles as well as any other relevant literature on selected respondent organisations. The researcher collected the data personally given the desire to have an in-depth understanding of how each respondent articulates issues relating to leasing as a financing option and its linkage to financing solid waste and sanitation equipment. Before commencing data collection, the researcher piloted the interview schedule and interview guide in order to measure the extent to which these instruments would generate the required data. Where it appeared necessary to disclose the respondents' identity, the researcher inquired from the respondents during the interviews if they have no problem with disclosure of their identities.

The researcher used a survey population of 26 respondents who were selected by purposive sampling. This was because these respondents were directly involved in matters relating to leasing and/or use of equipment in their day to day activities. The respondents included 6 officials from KCC with 1 solid waste management official from each of the 5 city divisions and the solid waste engineer, 3 officials from leasing

companies, 3 officials from equipment suppliers, the secretary of the cesspit emptiers association, 3 formal and 10 informal solid waste and sanitation service providers details of the composition are provided in Tables 2, 3 and 4. The number of respondents was limited to 26 because the subject of leasing is mainly of interest to equipment users/service providers and leasing companies but not service users. In addition, a bigger number of respondents was not possible given the financial and time limitations as the fieldwork was conducted in only five weeks.

Table 2: Respondents from leasing companies and equipment manufacturers/suppliers

Category	Organisation	Number of Respondents
Leasing Companies	DFCU Leasing	1
	EADB	1
	UML	1
Equipment Manufacturers/ Suppliers	Al Malik Group	1
	Cheema Motors Ltd.	1
	Yuasa Investments Ltd.	1

Table 3: Respondents from Kampala City Council

Category	Organisation	Number of Respondents
KCC	Nakawa Division	1
	Makindye Division	1
	Central Division	1
	Lubaga Division	1
	Kawempe Division	1
	Solid Waste Engineer	1

Table 4: Respondents from formal and informal solid waste and sanitation services

Category	Organisation	Number of Respondents
Formal Private Providers	Home Klin	1
	Norema Services	1
	NUDJV	1
Informal Service Providers	Identified in the field	10
The Secretary	CEA	1

4.3 Instruments used

The researcher used three methods of data collection. These included a combination of in-depth interviews and questionnaires as well as analysis of secondary data. In the case of interviews and questionnaires, the researcher conducted a measurement of respondents' attitudes towards leasing. The researcher was able to collect empirical data which was free from subjectivity in which reliability and validity of findings was reasonably higher. The probing was characterised by closed and open ended questions to allow for a deeper understanding of respondents' real attitudes for all questions to which they responded.

4.3.1 Interviews

Interviews were used to collect data from the secretary of the Cesspit Emptiers Association, officials of leasing companies and equipment suppliers who were selected by purposive sampling. This method enabled the researcher to understand in-depth concerns of officials who are directly involved in provision of leasing services and supply of equipment and the level of their motivation for leasing public service delivery equipment. The researcher was also able to get the general perceptions of the private sanitation service providers from the interview with the secretary of the Cesspit Emptiers Association through an open discussion. To generate reliable and valid data, the researcher conducted a face to face interview with the respondents (see interview guides in Annexes I and II). This was done because some respondents may not have had time to fill out forms, the information may be very sensitive and complicated and the interview schedule had open ended questions which required raising questions in line with earlier responses from the respondents(Burns, 2000). This approach helped the researcher gather information related to equipment leasing from respondents which spans a longer period of time within a short time. The interview schedule was first piloted in order to minimise ambiguity, and make adequacy checks on response categories.

4.3.2 Questionnaires

Questionnaires (attached in Annex III) were used to collect data from officials of Kampala City Council and respondents from formal and informal solid waste and sanitation service providers who were selected by purposive sampling. These respondents gave data on the equipment investment priorities of their organisations and their issues of concern with regard to leasing for financing public services such as solid waste and sanitation services. The researcher used a mixture of open ended, close ended questions while at the same time allowing for intensity and richness of individual perceptions by not completely restricting the content of responses. The researcher used this method because it is flexible as it facilitates the capture of in-depth knowledge of the respondents, promotes respondent cooperation and allows the interviewer to understand the actual beliefs of the respondents(Burns, 2000).

4.3.3 Secondary Data

The researcher made in-depth scrutiny of official reports, guides and all leasing documentation which was availed by organisations from which the respondents were selected. For leasing companies and equipment suppliers, the researcher was mainly in the look out for trends in financing by leasing versus equipment lease financing for solid waste and sanitation equipment. With regard to the solid waste and sanitation service providers, the researcher's focus was on the leases taken before or ongoing and the positive outcomes as well as challenges in managing the leases by the formal and informal service providers.

4.4 Data Quality

For the study to be useful it is important that the data collected is appropriate. In order to collect appropriate data, the researcher took different measures to ensure that the data collected is of high quality, reliable and valid.

4.4.1 Objectivity

In order to ensure objectivity, the researcher always tried to capture second opinions from a cross section of respondents including officials from Kampala City Council, leasing companies, equipment manufacturers/suppliers and formal and informal private sector. Objectivity was further be achieved by avoiding designing interviews and questionnaires with leading and ambiguous questions. Therefore the questions were neutral and precise to the maximum degree possible.

4.4.2 Validity

The researcher ensured validity through the use of the triangulation technique of using interviews, questionnaires and secondary data analysis concurrently and this was done through piloting of the data collection instruments before they were used to collect data. The data collection instruments were designed in such a way that they measure attitudes and opinions of respondents towards leasing to the maximum degree possible.

4.4.3 Reliability

Data reliability is a cornerstone of making a successful and meaningful study. In order to collect reliable data, the researcher designed the interviews and questionnaires through an elaborate procedure which involved a series of revisions

under the guidance of the study supervisors to ensure that fieldwork was conducted by use of high quality data collection instruments.

4.5 Data Analysis

Analysis of data encompassed determination of frequencies of key variables of the study. This was done by clustering the data into categories. Data analysis was done by quantifying the variables of interest to the researcher in terms of frequency of occurrence (F). This was done in relation to the study objectives, research questions and the hypothesis. The findings of the study were then displayed in form of tables, pie-charts and figures where appropriate.

4.6 Variables, indicators and units of analysis

This section discusses the study variables, indicators and units of analysis for the study. The units of analysis included leasing companies, equipment manufacturers/suppliers and solid waste and sanitation service providers including KCC, formal and informal service providers.

4.6.1 The study variable

The variable under study were leasing as a tool for financing solid waste and sanitation equipment. The variables and indicators were operationalised through the development of a theoretical framework for the study. To do this, the researcher undertook an in-depth review of literature relating to the area of study. These indicators were used by the researcher to check for the validity of the variables to be studied. The relationships between the variables and indicators are laid out in Table 5.

Table 5: Variables and Indicators

Hypothesis	Variable	Indicator	Data Source
Leasing is a financing mechanism that increases access to and use of appropriate equipment to improve the effectiveness, efficiency and quality of solid waste and sanitation services	Need for equipment finance	Lack of capital to purchase equipment	Solid waste and sanitation service providers
	Potential for leasing as an innovative financing mechanism	Ability of service providers to generate steady cash flow	Solid waste and sanitation service providers
	Viability of market for leasing products	Involvement of equipment suppliers and availability of sound equipment markets	Equipment suppliers and solid waste and sanitation service providers

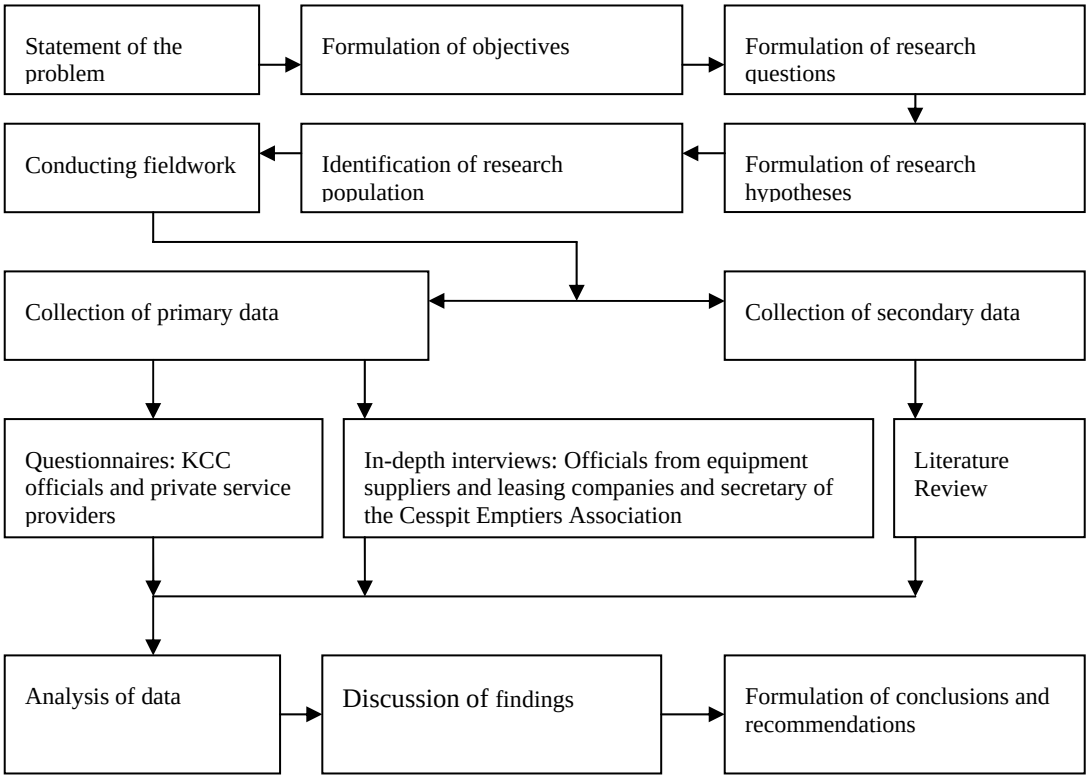
4.6.2 Units of analysis

The researcher used three units of analysis. The first unit of analysis included solid waste and sanitation service providers who were interested in using appropriate equipment to do their work. The other unit of analysis included leasing companies and equipment manufacturers/suppliers that facilitate the leasing process by providing financing and equipment respectively. The third unit of analysis was Kampala City Council as the regulator and also provider of solid waste and sanitation service providers. In case of the solid waste and sanitation service providers, the main problems to be addressed by the questions included; problems with equipment, purchasing/financing equipment and the perceptions about leasing equipment. For the leasing companies and equipment manufacturers/suppliers the main problems to be addressed by the questions included; perception of leasing to solid waste and sanitation service providers, trend of demand for leasing and how to increase demand for leasing services.

4.7 Research Design

The research design provides guidance on the chronological order through which the researcher conducted the study. These stages are diagrammatically represented in Figure 2.

Figure 2: Research Design for the Study



4.8 Limitations to the study

The researcher encountered a number of problems during fieldwork which included the following;

The respondents took their time to decide on the day and time of the interview and when they finally decided, they never kept time for appointments.

There was also a problem of finances since more money was spent on telephone calls as the researcher resorted to telephone interviews for respondents whom he failed to meet face to face.

Most of the respondents did not provide official documents to be analysed by the researcher.

4.9 Changes made to the proposal

Before conducting fieldwork, the researcher piloted the questionnaire on a group of senior colleagues and the outcome necessitated having a question on whether respondents had ever purchased equipment through leasing instead of asking in

general if the respondents had used other options of financing. This enabled the researcher to collect only relevant data.

The researcher also increased the number of respondents from 25 to 26 when he found out that he would get valuable information from the secretary of the Kampala Cesspit Emptiers Association (CEA).

The researcher also added more content on the literature review chapter of the proposal.

4.10 Structure of the thesis

This research report consists of content which is presented in six chapters as indicated below;

Chapter one consists of the introduction and background to the study and justification of the study. Also presented under this chapter is; the objectives of the study, research questions and the hypothesis.

Literature review is presented in chapter two. Literature which enabled the researcher to know what has been researched on in the area of leasing and what the findings were is presented.

Chapter three consists of description of the research area. This includes the population of the research area, information on solid waste management, sanitation, excreta disposal system, drainage system, environmental management and land use planning of Kampala city among other key issues.

Research methods will be presented in chapter four of this report. This will include information on interviews, questionnaires and secondary data sources which were used by the researcher to collect data.

Chapter five will consist of the discussion of research findings of the study. This will presented in relation to the sequence of research questions for the categories of respondents.

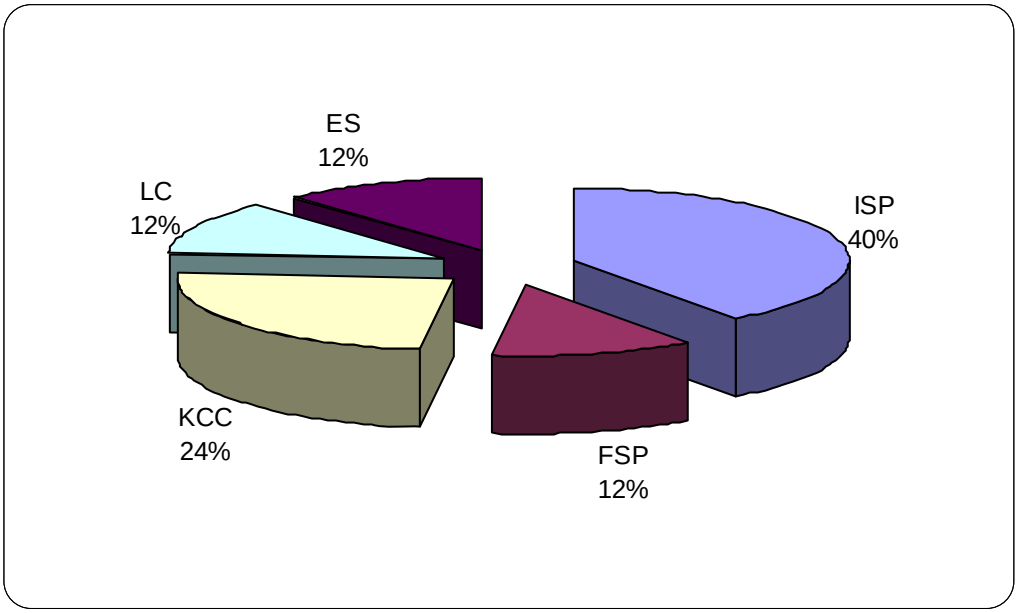
Chapter six contains conclusions drawn by the researcher based on the findings discussed in chapter four and finally recommendations on how to promote the use of leasing to purchase solid waste and sanitation equipment as well as suggestions for further research.

Chapter 5 Presentation and Discussion of Research Findings

5.0 Introduction

This section presents an in-depth discussion of these findings which were obtained by interviewing respondents in a fieldwork exercise which was conducted in Kampala city. The data collected was analysed by clustering the data sets into frequencies of responses and percentage for each response and/or summarising of interviews where appropriate. The sample was composed of; KCC officials (KCC), officials from leasing companies (LC), officials from equipment suppliers (ES), formal service providers (FSP) and informal service providers (ISP) in proportions as presented in Figure 3.

Figure 3: Composition of Sample



The majority (40%) of the respondents were informal service providers because it is these who are involved in extending affordable services to the poor who make up the majority in Kampala city. The second biggest category (24%) among the respondents was officials from KCC because much as there is increased participation of informal and formal service providers in delivery of solid waste and sanitation services, the city authorities still have a very big role to play if the desired outcomes in the delivery of solid waste and sanitation services are to be realised.

5.1 Types of equipment used by service providers.

The researcher was mainly interested in finding out the type, quality and performance of the equipment used in order to understand the equipment problems experienced by the service providers. The respondents revealed that they use different kinds of equipment depending on the kind of services they offer. The respondents informed the researcher that the kinds of equipment used do not have the capacity to satisfy their needs in terms of type, quality and performance. The formal solid waste service providers had mostly inappropriate and worn out equipment such as tipping trucks; skip loaders, back hoes, compaction trucks and ordinary pick-ups. On the other hand, the formal sanitation service providers had vacuum trucks, brushing machines, extractors, vacuum cleaners, sucking machines while the informal service providers had simple tools such as loading sticks, rubber force, pipe range spanners, hooks, jerry cans, buckets and drums among others which fit more into the category of hand tools but not solid waste and sanitation equipment.

5.2 Quality and performance of equipment used by service providers

The solid waste and sanitation service providers were asked by the researcher to rate the quality and performance of the equipment they use to deliver solid waste and sanitation services to their clients. The respondents further gave reasons as to why they were using the kind of equipment they had at the time the researcher conducted fieldwork.

5.2.1 Quality and performance of equipment used by service providers

Overall, the findings show that the service providers are not satisfied with the equipment they are using to provide solid waste and sanitation services. With regard to quality of equipment, most of the respondents (53%) rated their equipment as poor while 21% rated their equipment as good. Further details on quality of equipment are indicated in Table 6. Most of the poor equipment belonged to KCC while equipment rated as good belonged to private service providers.

Table 6: Quality and performance of solid waste and sanitation equipment

Response	Quality of equipment			∑	%
	ISP	FSP	KCC		
	F	F	F		
Very Good	-	-	-	-	-
Good	2	2	-	4	21
Fair	4	1	-	5	26
Poor	4	-	6	10	53
TOTAL	**10**	**3**	**6**	**19**	**100%**
Response	**Performance of equipment**			∑	%
	ISP	FSP	KCC		
	F	F	F		
Very Good	-	-	-	-	-
Good	-	2	-	2	11
Fair	7	-	-	7	37
Poor	3	1	6	10	52
TOTAL	**10**	**3**	**6**	**19**	**100%**

With regard to performance, 52% of the respondents rated their equipment to be of poor performance while 11% regarded their equipment to be of good performance. Still most of the poorly performing equipment belonged to KCC and the best performing equipment belonged to the private service providers.

5.2.2 Reasons why service providers do not have appropriate equipment

The respondents revealed that they do not have appropriate equipment needed to provide services. The most significant reason for lack of appropriate equipment was lack of capital as indicated by 52% of the respondents. On the other hand, 5% of the respondents reported that they do not have appropriate equipment because there are no local equipment manufacturers and consistent equipment suppliers. More details on the reasons for lack of appropriate equipment are presented in Table 7.

Table 7: Reasons why service providers lack appropriate equipment

Response	ISP	FSP	KCC	∑	%
	F	F	F		
Lack of capital	10	3	6	19	52
Lack of access to asset finance	7	3	-	10	27
Lack of maintenance and expansion budget	-	-	6	6	16
Lack of equipment manufacturers/suppliers	2	-	-	2	5
TOTAL	**19**	**6**	**12**	**37**	**100%**

These findings were expected because the researcher noted that there is a general lack of local equipment manufacturing yet the supply of solid waste and sanitation equipment is also not well developed. Further the equipment suppliers who are brand new and used vehicle dealers indicated that they mostly import special vehicles on order since they do not have a fast moving market in Uganda.

5.3 Equipment financing options used by service providers

The respondents were requested to reveal how they purchased the equipment they are using and if they had experience with purchasing equipment through leasing. The researcher also inquired from leasing companies and equipment suppliers how they facilitate lessees to access the equipment they need.

5.3.1 How service providers purchase solid waste and sanitation equipment

The findings show that 45% of the respondents purchased their equipment using their own capital while only 3% which is equivalent to 1 respondent purchased equipment through leasing. The researcher also noted that service providers also purchased equipment by use of loans or they got equipment as donations or as part of project funding details of which are presented in Table 8.

Table 8: Sources of financing for solid waste and sanitation equipment

Response	ISP	FSP	KCC	∑	%
	F	F	F		
Own capital	10	3	-	13	45
Loans	-	2	-	2	7
Leasing	-	1	-	1	3
Donors	-	1	6	7	24
project	-	-	6	6	21
TOTAL	**10**	**7**	**12**	**29**	**100%**

The findings in Table 8 were expected by the researcher because leasing is a new financing product in Uganda which has not been widely used by solid waste and sanitation service providers. It is also well known that KCC lacks the financial resources to purchase equipment and as a result most of the equipment is acquired through donations or as part of project financing. The findings also indicate that informal service providers do not benefit from donations or project funding yet they play an invaluable role in service delivery especially to the urban poor. This may be attributed to the several requirements which have to be fulfilled by service providers in order for them to benefit from donations or project finance.

5.3.2 Purchasing equipment through leasing by service providers

The researcher requested the respondents to reveal if they had ever used leasing to purchase equipment. The results of the study show that 95% of the respondents have never used leasing to purchase equipment while 5% of respondents corresponding to 1 respondent had ever used leasing to acquire equipment. Details of this finding are presented in Table 9.

Table 9: Service providers who have ever used leasing to purchase equipment

Response	ISP	FSP	KCC	∑	%
	F	F	F		
Yes	-	1	-	1	5
No	10	2	6	18	95
TOTAL	**10**	**3**	**6**	**19**	**100%**

These findings were expected because as noted earlier leasing is a new product in Uganda and as a result very few SMEs have tried to use it to acquire capital assets. As

a new product on the market it is still costly for most of the formal and informal solid waste and sanitation service providers.

5.3.3 Collaboration between leasing companies and equipment suppliers

The researcher asked the respondents if their companies were collaborating with other companies in order to easily provide leasing services to prospective lessees. The officials from leasing companies revealed that they have informal collaborations with equipment suppliers. The reason for this according to respondents was that the lessees are responsible for identifying the equipment that meets their needs which is then purchased by the leasing companies. The leasing companies only recommend suppliers on request from the prospective lessee.

On the other hand officials from equipment suppliers intimated that they have formal collaborations with FIs in order to supply vehicles on loan schemes initiated by banks where by the FIs pay the full cost of the vehicle on behalf of their clients. The officials from equipment suppliers also revealed that they have informal collaborations with leasing companies who recommend them to prospective lessees who wish to acquire vehicles of good quality.

5.4 Perceptions of service providers, leasing companies and equipment suppliers on leasing solid waste and sanitation equipment

The researcher was interested in finding out the perceptions on leasing of solid waste and sanitation service providers, leasing companies and equipment suppliers. The researcher was mainly interested in the positive perceptions, negative perceptions for both service providers who had ever used leasing as well as those who had not. The researcher was also interested in knowing if those who had used leasing were willing to enter into a new leasing contract. In addition, the researcher also was interested in finding out the position of leasing companies and equipment suppliers with regard to leasing equipment to formal and informal solid waste and sanitation service providers.

5.4.1 Perceptions of service providers who have ever used leasing

The researcher interviewed 1 respondent who had purchased equipment through leasing. This is an indication that leasing has not been exploited by solid waste and sanitation service providers to purchase appropriate equipment needed to deliver services to their clients.

5.4.1.1 Positive perceptions on leasing by service providers who have ever used leasing

The respondent revealed that leasing equipment is an easy way to acquire equipment and promotes the use of insurance as well as providing appropriate maintenance to equipment. These findings were expected because it is a standard practice that leasing goes hand in hand with insuring and maintaining of equipment. The respondent also intimated that leasing is one of the innovative ways through which business enterprises can acquire capital intensive equipment. However the respondent did not point out that leasing instils financial discipline and proper record keeping.

5.4.1.2 Negative perceptions on leasing by service providers who have ever used leasing

The respondent reported that leasing companies in Uganda require the lessee to provide collateral in addition to the leased equipment acting as the primary collateral. The respondent further mentioned that the collateral requirement makes leasing to have the same requirements as a loan which makes it inaccessible to most SMEs. This finding was not expected as collateral in the literal sense is not one of the requirements for a prospective lessee to lease equipment. In principle, it is the leased equipment which acts as the collateral and which is repossessed in case the lessee fails to meet his or her obligations. It should noted that few collateral requirements may be needed(Deelen et al., 2003) especially when leasing involves equipment which depreciates at a faster rate yet it does not have a high resale value and also if the investment at stake is so big (Kisaame 2003). However, the respondent indicated that from the experience of his organisation, collateral is a basic requirement to met by all prospective lessees in Uganda.

5.4.1.3 Future intentions to use leasing by service providers who have ever used leasing

The respondent intimated that his company has plans to enter into a new leasing contract but the collateral required by the leasing companies was still an issue they have to think through. This is because collateral makes leasing unnecessarily expensive and this financing option is eroded of its uniqueness from other financing options. The respondent revealed that his organisation needs to expand its capacity through acquiring equipment and based on their experience with leasing, they will take up a lease with a leasing company that offers the best terms especially with regard to collateral since it’s a requirement for all types of equipment.

5.4.2 Perceptions of service providers who have never used leasing

The researcher also found out the perceptions on leasing of solid waste and sanitation service providers who have never used leasing as a financing option. The researcher was mainly interested in finding out the level of awareness on leasing by solid waste and sanitation service providers who had never used leasing to purchase equipment.

5.4.2.1Why some service providers have never used leasing to purchase equipment

The researcher was interested in finding out the reasons as to why 95% of the solid waste and sanitation service providers had never taken on leasing contracts. The findings in Table 10 show that most of the respondents (30%) have never used leasing because of the difficulty in realising full cost recovery in delivering solid waste and sanitation services. The respondents reasoned that because of failure to make cost recovery, they would not be able to pay up instalments as stipulated in the leasing contract in a timely manner. The respondents attributed failure to realise cost recovery to unwillingness of people to pay for the service, and failure of KCC to meet its contractual obligations on time.

Table 10: Reasons for not using leasing to purchase equipment

Response	ISP	FSP	KCC	∑	%
	F	F	F		
It is too expensive in the long run	4	2	-	6	12
Difficulty in getting a lease	8	2	-	10	20
Lack of awareness on leasing	4	-	-	4	8
Leasing is a new product in Uganda	1	2	2	5	10
Don't know where to get leasing services	4	-	-	4	8
KCC lacks necessary arrangements	-	-	6	6	12
No cost recovery in service provision	7	2	6	15	30
TOTAL	**28**	**8**	**14**	**50**	**100%**

Also the results of the study show that some respondents lack awareness on leasing and that some of them do not know where to get leasing services each at 8% of the total number of responses recorded. These findings are partly justified by the fact that most literature shows that leasing a new financial product in developing countries Uganda inclusive. It should however be noted that an assessment of the statistics in Table 10 show that there is a good level of awareness on leasing only that most of the solid waste and sanitation service providers have not tried to use this financing option to purchase equipment.

5.4.2.2Positive perceptions on leasing by service providers who have never used leasing

Although the majority (95%) of the respondents had never used leasing, the researcher asked them if knew of some advantages of leasing equipment. The findings show that formal service providers had more knowledge about the advantages of leasing than the informal service providers as presented in Table 11.

Table 11: Positive perceptions by service providers who have never used leasing

Response	ISP	FSP	KCC	∑	%
	F	F	F		
Way of acquiring equipment easily	3	2	3	8	38
Helps in improving records management	2	2	3	7	33
Access to insurance and maintenance of equipment	2	2	2	6	29
TOTAL	**7**	**6**	**8**	**21**	**100%**

The findings of the study show that most respondents (38%) knew that leasing was one of the easiest ways through which business enterprises could acquire expensive equipment. In addition, the findings also show that leasing necessitates the need to have financial discipline through improved book keeping (33%) and use of insurance services and maintenance of equipment (29%). Overall these statistics show that the three advantages of leasing as revealed by the respondents are in agreement with existing literature on leasing. The researcher observed that the advantages mentioned are of equal importance to the respondents according to the closeness of proportions of the responses in Table 11.

5.4.2.3Negative perceptions by service providers who have never used leasing

The respondents were asked if they knew of any disadvantages of leasing equipment. The results showed that 78% percent of the respondents answered yes as opposed to 22% of the respondents answered no. The researcher further requested the respondents who answered yes to mention the disadvantages of leasing equipment that they were aware of and these are presented in Table 12.

Table 12: Negative perceptions by service providers who have never used leasing

Response	ISP	FSP	KCC	∑	%
	F	F	F		
Not accessible to the small service providers	6	2	2	10	28
Too expensive in the long run	4	2	-	6	18
There is lack of equipment to be leased	3	-	1	4	12
Limit on the choice of equipment to lease	5	2	1	8	24
Not responsive to changes in income of lessee	2	2	2	6	18
TOTAL	**20**	**8**	**6**	**34**	**100%**

The most significant disadvantage of leasing according to respondents who have never used leasing is that this form of financing is not accessible to small solid waste and sanitation service providers at 28% of all responses. It should also be noted that 12% of the respondents revealed that there is no equipment to lease on the market. The respondents reported that the market presents inappropriate equipment and that usually appropriate equipment has to be ordered before it is imported into the country. The researcher also noted that there is no equipment on the market suited to the needs and purchasing power of the small scale service providers. Overall the findings in Table 12 were unexpected but they are a manifestation of the fact that service providers do not have confidence in the financial sector as well as in the solid waste and sanitation sector. However it should also be noted that leasing is not necessarily cheap but it is a financing option which can easily enable solid waste and sanitation service providers to out rightly purchase capital intensive equipment.

5.4.3 Perceptions of leasing companies and equipment suppliers on providing leasing services to formal and informal solid waste and sanitation service providers

The researcher interviewed officials from leasing companies and equipment suppliers with the intentions of finding out the perceptions that they have on leasing equipment to formal and informal solid waste and sanitation service providers. The researcher was mainly on the look out for the issues that are significant if the benefits of leasing solid waste and sanitation equipment are to trickle down to service providers.

5.4.3.1 Policy of leasing companies and equipment suppliers on providing leasing services to formal solid waste and sanitation service providers

The respondents were asked to mention what their main area of focus is if service providers are to gain access to leasing services. The position of leasing companies and equipment suppliers is that leasing to private companies can be good business if

the market segment in which the lessees operate has commercial viability. The respondents also revealed that in order for leasing to be practical and profitable to all parties involved it would serve better if KCC withdraws from service provision and concentrate on promoting, marketing and regulating the solid waste and sanitation sector. This would in the long run enable private companies to generate cash flow which is a basic requirement for a client to be considered for a leasing contract. The respondents intimated that it is then that leasing would be useful in facilitating service providers to purchase expensive equipment.

5.4.3.2 Policy of leasing companies and equipment suppliers on providing leasing services to informal solid waste and sanitation service providers

The researcher requested the respondents to mention what their main area of focus is if informal service providers are to gain access to leasing services. The results of the study indicate that 67% of the respondents from leasing companies were of the view that leasing services can be extended to informal service providers by channeling credit lines through MFIs. In addition, 33% of the respondents from leasing companies were of the opinion that leasing services can be extended to the informal sector through the introduction of micro leasing services. These findings were expected because 67% of the officials who were interviewed were mainly from leasing companies that were mostly dealing with long term financing whereas micro leasing is likely to be more appropriate for informal service providers(Deelen et al., 2003).

On the other hand, all respondents from equipment suppliers were of the opinion that leasing services can be extended to informal service providers if there are formal transactions involving a financing institution. This finding was expected because the equipment suppliers in Kampala are actually equipment dealers who always aim at taking no risks. They are interested in transactions where all risks are taken care of by the FIs since it is these which pay off the equipment on behalf of the lessees.

5.5 The state of equipment markets and equipment suppliers according to leasing companies and equipment suppliers

The researcher was interested in knowing the level of development of equipment markets and equipment suppliers. In addition there was a desire to know the proportion of lessees who were solid waste and sanitation service providers, the trend of leasing, performance of lessees who are solid waste and service providers and rating of leasing as a solution to the equipment needs of solid waste and sanitation service providers.

5.5.1 Level of development of equipment markets and equipment suppliers according to leasing companies and equipment suppliers

All respondents from leasing companies and equipment suppliers revealed that there is a lack of well established solid waste and sanitation equipment markets as well as well established solid waste and sanitation equipment suppliers. They intimated that this was due to the fact that the solid waste and sanitation market is not well developed and as a result it is not able to attract specialised investors in solid waste and sanitation equipment. The researcher noted that the poor solid waste market and absence of specialised equipment suppliers in the solid waste and sanitation sector stems from failure of KCC to unblock the potential of the solid waste and sanitation market yet there is a ready market for these services if they packaged appropriately.

5.5.2 Statistics of clients who are providers of solid waste and sanitation services

The researcher requested the officials of leasing companies and equipment suppliers to indicate the proportion of their clients who are solid waste and sanitation service providers. The respondents were also requested to comment on the trend of leasing and performance of clients who are solid waste and service providers. All the respondents informed the researcher that they do not have disaggregated data on the proportion of clients of leasing companies and equipment suppliers who are solid waste and sanitation service providers. The respondents also did not have disaggregated data on the trend of leasing and performance of leasing contracts by solid waste and sanitation service providers. The respondents however noted that overall, leasing is increasingly becoming an attractive financial product for SMEs in Uganda and this could include solid waste and sanitation service providers in the long run.

5.5.3 The potential of leasing according to leasing companies and equipment suppliers

All respondents from leasing companies and equipment suppliers intimated that leasing is a financial product with commercial viability and that leasing is increasingly becoming an attractive financing option in Uganda because it facilitates SMEs to acquire expensive equipment which they cannot acquire by making cash down payments. The respondents revealed that one of the best ways to promote the use of leasing is through unlocking the potential of the solid waste and sanitation market in Kampala as this would increase the confidence of service providers, financial institutions and equipment suppliers in the solid waste and sanitation sector as a commercially viable and worth their investment plans.

5.6 Requirements to be met by service providers according to leasing companies and equipment suppliers

The researcher requested leasing companies and equipment suppliers to reveal the requirements that must be met by prospective lessees in order for them to be eligible for a lease. The leasing companies had a long list of requirements details of which are provided in Table 13. The findings show that for leasing companies, the most significant requirements are that; an applicant should have a viable business with steady cash flow, should open an account with the company and also have permanent business premises, each at 11% of the total number of responses. However, collateral which is a usual requirement as revealed by the solid waste and sanitation service providers does not appear on the list of requirements to be met by prospective lessees. This is an indication that the leasing companies do not have a transparent way of determining the collateral requirement. This makes prospective lessees not to feel secure enough to take on leasing contracts.

Table 13: Requirements to be considered for a leasing contract by leasing companies

Response	UML	EADB	DFCU	∑	%
	F	F	F		
Viable business with steady cash flow	1	1	1	3	11
Upfront payment 20%	1	-	-	1	3
Upfront payment 30% - 40%	-	1	1	2	6
Open an account	1	1	1	3	11
Permanent Premises	1	1	1	3	11
All sectors but mostly agriculture	1	-	-	1	3
Six months bank statement	-	1	1	2	6
Photos of 2 key directors	-	1	1	2	6
Business Tax Identification Number	-	1	1	2	6
Certified data on directors	-	1	1	2	6
12 months cash flow projection	-	1	1	2	6
Certified Memorandum & Articles of Association	-	1	1	2	6
Registered resolution to borrow	-	1	1	2	6
Audited accounts for 2 years	-	1	1	2	6
Certified certificate of Incorporation	-	1	1	2	6
TOTAL	**5**	**13**	**13**	**31**	**100%**

The least mentioned requirement is an upfront payment of 20% and eligibility of mostly clients from the agricultural sector, each at 3% of the total number of responses. These findings were expected because 2 of the three officials interviewed were from leasing companies working with mostly long term financing. The

researcher however noted that even in the case of micro leasing, most of the requirements as presented in Table 13 are required especially in the event that the prospective lessee is a registered business entity. It is a standard practice for leasing companies to turn down an application of a prospective lessee whose business lacks formal registration. These requirements are also supposed to be fulfilled if the value of equipment to be leased is very high.

The officials from equipment suppliers on the other hand revealed that for a client to be eligible he or she should meet the requirements of the financing institution and the prospective lessee has to be introduced to the equipment supplier by the financing institution. The respondents intimated that in the whole arrangement the role they play is to deliver the equipment and that all issues to do with requirements are handled by the FIs.

5.7 How to make leasing accessible according to service providers, leasing companies and equipment suppliers

Despite some negative perceptions that the respondents had on leasing, it was also noted that numerous advantages result from leasing. The researcher asked the service providers, leasing companies and equipment suppliers to mention from their point of view the approaches that should be used in order to make leasing an attractive financing option for the purchase of solid waste and sanitation equipment.

5.7.1 Suggestions by service providers on how to make leasing accessible to prospective lessees

The findings presented in Table 14 show that 20% of the respondents want KCC to withdraw from service delivery and concentrate on regulation and enforcement of sanitation standards in order to streamline and strengthen the solid waste and sanitation market. The respondents mentioned that this would strengthen the demand for services, increase demand for equipment and attract the attention of leasing companies. On the other hand, 8% of the respondents suggested that there is need to create more awareness on leasing so that service providers know about it and start to plan how they can make use of leasing services.

Table 14: How to make leasing attractive according to service providers

Response	ISP	FSP	KCC	∑	%
	F	F	F		
Develop leasing products for small companies	6	2	-	8	13
Create awareness on leasing	3	2	-	5	8
Remove collateral requirement	7	3	-	10	16
Widen choice of equipment	4	-	-	4	7
KCC should do better enforcement and regulation	3	3	6	12	20
Introduce micro leasing	10	-	-	10	16
Allow for longer contract periods (5-10 years)	-	3	3	6	10
KCC to lease and use management contracts	-	-	6	6	10
TOTAL	**33**	**13**	**15**	**61**	**100%**

The findings indeed show that failure to use leasing services is not to be blamed much on the leasing companies and solid waste and sanitation service providers but on the undeveloped and unpredictable solid waste and sanitation market. This is in agreement with the fact that leasing is based on the ability to generate cash flow through the use of equipment rather than owning equipment. Other significant approaches suggested by the respondents include scrapping the collateral requirement (16%), Introduction of micro leasing services (16%) and developing leasing products for small companies (13%) among others also presented in Table 14.

5.7.2 Suggestions by leasing companies and equipment suppliers on how to make leasing accessible to prospective lessees

The findings show that 60% of the responses from officials of leasing companies showed that in order to increase the use of leasing, there is need for KCC to promote and market sanitation services so that the sector presents incentives that attract investors which will in turn attract financing from leasing companies. Also 40% of the respondents from leasing companies echoed the need for increased interaction between FIs especially leasing companies and the solid waste and sanitation sector.

On the other hand, 60% of the responses from officials of equipment suppliers revealed that equipment suppliers should strengthen their working relations with FIs especially leasing companies while 40% of the responses indicated the need for equipment suppliers to get involved in providing in-house leasing services in future.

5.8 Findings from the interview with the secretary of the Cesspool Emptiers Association

One promising example of Private Operators is the cesspit emptiers in Kampala who are well organised(Biesinger and Richter, 2007) into an association called Kampala Cesspit Emptiers Association. The association is made up of 67 members using 35 vehicles with capacities ranging from 2000 to 10000 litres to remove sludge from septic tanks and pit latrines and dispose it at the NWSC's waste water treatment. The researcher conducted an interview with the secretary of this association on the experiences they have with financing the sanitation equipment the members use to deliver sanitation services. A summary of issues discussed during the interview is presented in Box 2.

Box 2: Summary of interview with the secretary of the Cesspit Emptiers Association

The sewerage system is a responsibility of NWSC while on site sanitation is a responsibility of KCC. Most of the city not connected to the sewerage network. The 1 cesspool truck from NWSC and 5 trucks from KCC are not sufficient. The private cesspool emptiers serve customers who can afford to pay for the service. The poor are not attended to yet they urgently need the service.

The services of cesspool emptiers are used by well to do clients and not in the low income areas where also the manual emptying services are not seen yet these would be affordable for the poor. Sanitation has low awareness and low priority for people and KCC as the regulator has not done its work well. Ineffectiveness of KCC has negative impact on the awareness, demand creation and marketing of sanitation which would in the long run lead to increased demand for financial services by service providers. The solid waste and sanitation sector is highly politicised and prone to political interference which has negative consequences on the involvement of leasing companies and investment decisions of the private sector.

Providing sanitation services involves high investment risks. There is also limited affordability due to high poverty level which has a negative impact on the willingness of service providers to take up loans or leases. The sanitation sector is designed in such a way that there is no cost recovery. Private providers are in a gambling business in a sector with a very high potential for commercial viability due to lack of political will and bad governance of the sanitation sector.

The leasing services are not tailored to the needs and requirements of providers of solid waste and sanitation services. The financial institutions charge high interest rates, have inflexible repayment schedules, and have high collateral requirements not only with regard to loans but also leasing services. The implication of this is that the potential demand for leasing due to lack of equipment does not translate into effective demand for leasing services. Leasing companies should help the provision of leasing services. There should be business development services to avail technical, financial and managerial skills to sanitation service providers and establishment of networking between service providers, their associations and leasing companies.

There is a need to develop the market for sanitation so that the market is the driving force creating promising and viable opportunities to service providers as this will be a push factor for service providers to demand for leasing and also a pull factor motivating the leasing companies to extend leasing services to sanitation service providers.

There is also need to reduce over emphasising the issue of collateral when providing leasing services. This will make leasing more attractive for service providers. In addition there is need for KCC to guarantee work for leased equipment as this will motivate the service providers to acquire the equipment as well as restrict leasing companies from focusing only on equipment with high resale value and good secondary market.

There is also need for increased outreach of leasing companies and collaboration with equipment suppliers to package affordable leasing products. The issue of long term relationship with leasing companies and acceptance of flexible schedules matching variations in cash flows of solid waste and sanitation service providers should be explored. This would help to take care of the uncertainties of incomes and probability of losses which increases in

the long run due to the informal nature of business operations as well as lack of knowledge and experience by leasing companies and service providers.

There is need for KCC to play a leading role in structuring the solid waste and sanitation market. This will involve comprehensive inspections of solid waste and sanitation facilities and ensure that people follow the law regarding public health and hygiene. There is need to carryout good physical planning so that the pit latrines can be reached by the cesspool emptiers. People also need to be trained on proper use of pit latrines as this will lower the time and cost of emptying as well as reduction in damage exposed to the pumping systems of cesspool trucks.

There is also need to popularise and avail low cost solutions such as the MAPET and vacutug systems on the market. Without these systems being known on the local equipment market, they cannot catch the attention of leasing companies and service providers. In the absence of such systems the local operators are only useful as agents of pollution or brokers for cesspool services. Even then such systems much as they improve the working conditions and quality of services offered by the informal local operators, it should be noted that they are not cost effective in the long run as a vacutug with a capacity of 200litres would have to empty its contents into a cesspool truck of 2000 litres 10 times. Such a procedure would be time consuming, highly polluting to the surrounding environment and will consume too much fuel.

The researcher computed the revenue potential of the pit latrine emptying service and found out that if well regulated pit latrine emptying as a sanitation service provided by formal and informal service providers would be profitable as presented in Box 3.

Box 3: The revenue potential for cesspit emptying services in Kampala

Kampala has a total of 306,200 households of which 66% use pit latrines which translates into 202,092 households.

Under normal circumstances a pit latrine should be emptied once in two years.

The cost of emptying a pit latrine using a 7,000 litre vacuum truck is 60,000UGX

Projected revenue in 2 years:

70,000 x 202,092 = 12,125,520,000UGX

= 6,736,400USD (1USD = 1800UGX)

Half of this amount (3,368,200USD) would be earned annually by service providers in the sector.

Most of this revenue potential has not been taped due to the sanitation market failure. KCC has not enforced laws on household sanitation and hygiene in addition to inaccessibility of some of the homesteads which urgently need the service. There is a high revenue generation potential if the sanitation and hygiene laws are enforced and the service provided at an affordable fee. If opportunities to do business increase, competition in the provision of the service would lead to lowering the cost of the service.

NOTE:

UGX = Uganda Shillings

USD = United States Dollars

Based on figures from the 2002 Uganda Population and Housing Census and data from Kampala Cesspit Emptiers Association

Chapter 6 Conclusions and Recommendations

6.0 Introduction

This section of the report presents the conclusions the conclusions made by the researcher after carefully studying the findings presented in the previous chapter. Towards the end of the chapter, the researcher presents recommendations to be tried out in order to make leasing an attractive equipment financing option for solid waste and sanitation service providers in Kampala city. The researcher envisages that these recommendations are also useful to leasing companies, equipment suppliers as well as solid waste and sanitation service providers in developing countries.

6.1 Conclusions

The kinds of equipment used by the solid waste and sanitation service providers do not have the capacity to satisfy their needs in terms of type, quality and performance. The formal service providers use inappropriate equipment most of which has outlived its useful life while the informal service providers especially sanitation service providers use what is not classified as equipment but hand tools. This shows that solid waste and sanitation service providers do not have access to appropriate equipment needed for them to improve the efficiency and effectiveness of service delivery.

The equipment used by solid waste and sanitation service providers is of poor quality. This indeed justifies the fact that the users regard their equipment to be of poor performance. This is due to the fact that most of this very old, not well maintained and the equipment is being used to provide a service for which it was not designed. As such the level of performance of the equipment is very low. The service providers do not have appropriate equipment because they do not have capital yet they also lack collateral needed for them to access loans.

Most of the solid waste and sanitation service providers purchase equipment using their own capital. The equipment purchased is that which service providers can afford even though it is not designed for the intended use. Leasing as an equipment financing option has not been widely explored by solid waste and sanitation service providers yet it has the potential to be a solution to their equipment needs.

Despite the fact that there is limited awareness on leasing, most of the solid waste and sanitation service providers know that leasing equipment is an easy way to acquire equipment and promotes the use of insurance services as well as motivating users to provide appropriate maintenance to equipment. The service providers have never

taken a lease because of the difficulty in realising full cost recovery in delivering solid waste and sanitation services which would make it difficult for them to pay up the instalments agreed upon with the leasing companies. Worse still is the fact that leasing companies have high collateral requirements in addition to the leased equipment being the primary collateral.

The policy of leasing companies and equipment suppliers is to provide leasing services to formal private companies in a market segment which has commercial viability which has to be demonstrated by a steady cash flow. The solid waste and sanitation market is not well developed and there is no linkage between it and the FIs. As a result of this the leasing companies and equipment suppliers have no interest in the solid waste and sanitation sector which is reflected in the lack of disaggregated data on the trend of leasing, extent of demand for leasing and performance of lessees who are solid waste and sanitation service providers.

It is a requirement that for prospective lessees to formalise their status if they are to fulfil the requirements needed for their lease applications to be considered by leasing companies. This puts especially the informal service providers at a disadvantage as they cannot meet requirements such having permanent premises, legal registration and above all the collateral requirement which features a lot in leasing contracts. Leasing services are not tailored to the needs and requirements of solid waste and sanitation service providers. Leasing services are characterised by high interest rates, inflexible repayment schedules and high collateral requirements even when they seem to be unnecessary. As a result the potential demand for asset finance due to lack of equipment does not translate into effective demand for leasing services.

There is need for KCC to completely withdraw from service delivery. This is because failure of KCC to effectively play the role of regulator of solid waste and sanitation service provision has led to failure of the solid waste and sanitation market. This has led to low awareness, no demand creation and marketing of sanitation. This cannot lead to increased demand for financial services by solid waste and sanitation service providers in the long run. There has been no development of the market for sanitation as a driving force which creates viable opportunities for solid waste and sanitation service providers. The conditions would stimulate service providers to demand for leasing services and also motivate FIs to extend leasing services to the solid waste and sanitation service providers. As such the solid waste and sanitation market has no incentives to attract increased investments from service providers and leasing companies. This is responsible for the absence of business interactions between FIs and the solid waste and sanitation sector in Kampala. The solid waste and sanitation sector is highly politicised and prone to political interference which has negative consequences on the investment decisions of FIs and private service providers. Lack of political will and bad governance of the sanitation sector makes it difficult for

service providers to cover their costs and also to register a profit. This makes it unattractive for them to take on leasing contracts.

The findings of the study are therefore a manifestation of the fact that KCC, service providers and leasing companies have to work together in order to make leasing a useful financing product for solid waste and sanitation service providers. It is however important to acknowledge that promoting leasing for its own sake does not make leasing an attractive equipment financing option; a developed solid waste and sanitation market is a key driver for the development of leasing products as well as solid waste and sanitation equipment markets.

6.2 Recommendations

Given the potential that leasing has as a financing option for solid waste and sanitation equipment, ways have to be devised to make it possible for service providers to benefit from leasing services. Based on the conclusions drawn as a result of studying the findings of the study, the following recommendations are suggested as some of the ways through which leasing services can be made attractive and accessible to solid waste and sanitation service providers.

Use of smart subsidies such as Out-Put Based Aid in urban sanitation service delivery

Financial institutions (FIs) are interested in entering into new market segments through doing business with well organised SMEs with opportunities to pursue commercially viable investments. Since providing equipment on loans and grants is not sustainable, donor organisations and government should consider channeling funds through leasing companies to leverage financing through leasing equipment based on the Out-Put Based Aid (OBA) mechanism. The financing would then be availed to solid waste and sanitation service providers who meet or exceed the targets set by the service regulator; in this case KCC and NWSC. On meeting the set targets the service providers would have their lease payments brought down accordingly under the OBA arrangement. This will greatly reduce the financial risks of solid waste and sanitation service providers as well as the leasing companies.

Developing a leasing product for solid waste and sanitation service providers

There is an urgent need to develop leasing products targeting solid waste and sanitation service providers. This will increase awareness about leasing amongst actors in the solid waste and sanitation sector. As a result the solid waste and sanitation service providers will be stimulated to try out leasing to acquire equipment that they need to work efficiently. Leasing companies have leasing products targeting particular market segments for example the solar lease and agro lease among others.

The solid waste and sanitation lease has equal potential for success as an asset finance product.

Leasing of equipment and managing it based on management contracts

Given the fact that KCC does not have the history of managing equipment effectively, it would be important to consider using management contracts to use and manage solid waste and sanitation equipment. The city authorities are mandated to source for financing which could be through equipment leasing among other options. In order to be able to use the equipment and fulfil the obligations in the leasing contracts, management contracts provide an avenue of making leasing useful in meeting the equipment needs of urban authorities. This is because under management contract, the equipment is used and maintained better than it would be if done by the urban authorities themselves.

Allow for long term solid waste and sanitation contract periods

Solid waste and sanitation equipment is capital intensive and in order for leasing to be helpful in meeting the equipment needs of solid waste and sanitation service providers, it would be necessary that these service providers are guaranteed enough time in which to pay up for the equipment and also make a profit. This is important because, usually tenders are awarded for a one financial year. This time is not enough for service providers to take on a leasing contract and pay up all instalments as agreed upon with the leasing companies. Therefore longer contract periods would be an incentive for solid waste and sanitation service providers to try their hand at leasing equipment.

Improve the regulation, promotion and marketing of sanitation services

A key challenge for solid waste and sanitation service providers is the challenge in making successful business in the solid waste and sanitation sector in Kampala city. Obviously failure to have a steady cash flow does not qualify a solid waste and sanitation service provider for a leasing contract. Therefore, it would be important for KCC to completely withdraw from service provision and concentrate on being the regulator of solid waste and sanitation service provision. Promoting and marketing solid waste and sanitation services would attract competition into the sector and lower the prices there by making it affordable even for the low income city residents. The resulting business opportunities would stimulate service providers to make use of leasing services there by transforming the potential demand for leasing into effective demand for asset finance.

Recommendations for further research

The findings and conclusions of the study show that leasing has a potential to finance the purchase of solid waste and sanitation equipment if the solid waste and sanitation companies have commercial viability. The scope of the study has mainly been on the potential of leasing to purchase equipment for the transport of solid and liquid waste. The researcher therefore recommends research in the following areas;

Research should be carried out on how to strengthen the role of urban authorities as regulators of solid waste and sanitation services which will result in unblocking the economic potential of the solid waste and sanitation market in cities of developing countries.

There is need to conduct an investigation into how to provide a legal and regulatory framework which will lead to the recognition of the roles and responsibilities of the informal service providers in the provision of solid waste and sanitation services as this will open up opportunities to use leasing services and other credit facilities from FIs.

In cases where urban authorities are the service providers, research should be carried out to see if use of management contracts and operating leases would be an approach in dealing with the equipment problems experienced by solid waste and sanitation service providers in developing countries.

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Annexes

Annex I. Interview guide - leasing companies

BACKGROUND INFORMATION

1. Name of respondent
2. Name of company
3. Position in the company and responsibilities of the respondent
4. Brief history of the company
5. Are there companies that you collaborate with in order to effectively deliver leasing services to clients?
6. Are there well developed equipment manufacturers/suppliers to meet the demand for leasing services?
7. Are there well developed equipment markets to support the increased growth and use of leasing services?

BLOCK 1 – PERCEPTIONS ON LEASING TO FORMAL AND INFORMAL SOLID WASTE AND SANITATION SERVICE PROVIDERS

8. What is the policy of your company with regard to extending leasing facilities to companies that provide public services?
9. What is the policy of your company with regard to extending leasing services to informal service providers?
10. Who of your clients are providers of solid waste and sanitation services?
11. What are the conditions that must be fulfilled by solid waste and sanitation providers in order for them to access leasing services?

BLOCK 2 - DEMAND FOR LEASING SERVICES

12. What has been the performance of clients who are solid waste and sanitation service providers?
13. What is the trend in the use of leasing services by solid waste and sanitation service providers as compared to other clients of your company?
14. What is your comment on the trend of demand for leasing services by solid waste and sanitation service providers?

BLOCK 3 - INCREASING DEMAND FOR LEASING SERVICES

15. What is your rating of leasing as a financing option in meeting the equipment needs of formal and informal solid waste and sanitation service providers?
16. What do you think your company can do in order to encourage more solid waste and sanitation service providers to use leasing services?

Annex II. Interview guide - equipment suppliers

BACKGROUND INFORMATION

1. Name of respondent
2. Name of company
3. Position in the company and responsibilities of the respondent
4. Brief history of the company
5. Are there companies that you collaborate with in order to effectively deliver leasing services to clients?
6. Are there well developed equipment manufacturers/suppliers to meet the demand for leasing services?
7. Are there well developed equipment markets to support the increased growth and use of leasing services?

BLOCK 1 – PERCEPTIONS ON LEASING TO FORMAL AND INFORMAL SOLID WASTE AND SANITATION SERVICE PROVIDERS

8. What is the policy of your company with regard to extending leasing facilities to companies that provide public services?
9. What is the policy of your company with regard to extending leasing services to informal service providers?

BLOCK 2 - DEMAND FOR LEASING SERVICES

10. What is the trend in the use of leasing services by solid waste and sanitation service providers as compared to other clients of your company?
11. What is your comment on the trend of demand for leasing services by solid waste and sanitation service providers?

BLOCK 3 - INCREASING DEMAND FOR LEASING SERVICES

12. What areas need to be addressed if leasing is to become an innovative equipment financing option that meets the needs of formal and informal service providers?
13. What is your rating of leasing as a financing option in meeting the equipment needs of formal and informal solid waste and sanitation service providers?
14. What do you think your company can do in order to encourage more solid waste and sanitation service providers to use leasing services?

Annex III. Interview schedule for solid waste and sanitation service providers and KCC officials

Dear respondent,

Iam Ivan Katongole a master student at the Institute of Housing and Urban Development Studies in Rotterdam-Netherlands. Iam conducting a study on equipment leasing as a financing mechanism for sustainable solid waste and sanitation services in Kampala. The findings of this research will highlight the potential of leasing as an innovative mechanism for leveraging public and private market resources, add new knowledge to existing literature and give recommendations for leasing services and analyse critical constraints to the socio-economic and legal dimensions of leasing. The resulting report will be made into a publication for dissemination to different stakeholders. This study will also help me to fulfil the requirements for the ward of a masters degree in Urban Management and Development. I therefore kindly request you to spare a few minutes to respond to the following questions.

Number of questionnaire…….. Date……...

BACKGROUND INFORMATION

1. Name of respondent…….
2. Name of organisation……...
3. Position in organisation……
4. Services offered by the organisation……
5. Responsibilities of the respondent……...

   ……..

BLOCK 1 - PROBLEMS WITH EQUIPMENT

6. What are the different types of equipment that you need in order to do your work effectively?

Garbage truck		Cesspool truck		MAPET		Others	

Others (Please specify)

……

7. Which of the equipment mentioned above do you actually have in your portfolio?

Garbage truck		Cesspool truck		MAPET		Others	

Others (Please specify)

……

What is the reason for lack of some of the equipment that you need?

Lack of capital	
Lack of access to asset finance e.g loans	
Lack of maintenance and expansion budget	
Lack of equipment manufacturers/suppliers	
Others	

Others (Please specify)

……

What is the quality of equipment you are using?

Very good		Good		Fair		Poor		Very poor	

8. How do you rate the work done with your equipment?

Very good		Good		Fair		Poor		Very poor	

BLOCK 2 – PURCHASING/ FINANCING EQUIPMENT

9. What is the source of money that you used to purchase your equipment?

Own capital		Bank loan		Leasing		Others	

Others (Please specify)

……

Have you ever tried to use leasing to purchase equipment?

Yes		No	

If No, why have you never tried to use leasing as a financing option?

Lack of capital	
Do not have requirements for bank loans	
Do not have requirements for leasing companies	
Lack of knowledge on other financing options	
Others	

Others (Please specify)

……

BLOCK 3 - PERCEPTIONS ABOUT LEASING EQUIPMENT

10. If you have ever used leasing to purchase equipment;

What are the positive remarks you have to make on leasing as a financing option?

Way of acquiring equipment easily	
Helped in improving records management	
Guaranteed access to insurance and maintenance of equipment	
Others	

Others (Please specify)

……

What are the negative remarks you have to make on leasing as a financing option?

It is too expensive in the long run	
Lack of ownership of the equipment	
Linking leasing with maintenance and insurance costs	
Others	

Others (Please specify)

……

11. Do you plans to use leasing to purchase equipment in future?

Yes		No	

Give reasons for your response.....

……..

12. If you have never used leasing to purchase equipment;

Why have you never used leasing to purchase equipment?

It is too expensive in the long run	
Lack of ownership of the equipment	
Difficulty in getting a lease	
Lack of awareness on leasing	
Others	

Others (Please specify)

……

What are the advantages of leasing that you are aware of?

Way of acquiring equipment easily	
Helped in improving records management	
Guaranteed access to insurance and maintenance of equipment	
Others	

Others (Please specify)

……

Do you have any negative remarks about leasing?

Yes		No	

If Yes, what are the negative remarks you have on leasing?

Leasing no accessible to the small service providers	
Leasing too expensive in the long run	
There is lack of equipment to be leased	
Others	

Others (Please specify)

……

RECOMMENDATIONS

13. What improvements do you want leasing companies make in order to make leasing attractive for solid waste and sanitation service providers?

Collaborate with equipment manufacturers/suppliers	
Develop leasing products for small companies	
Create awareness on leasing	
Develop capacity to work with small clients	
Others	

Others (Please specify)

……
……
……

Thank you