

**THE INFLUENCE OF ICT OUTSOURCING ON  
PERFORMANCE OF PROFIT MAKING PARASTATALS  
IN NAIROBI**

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## DECLARATION

I, Daisy Otom, do hereby declare that this project paper is my original work and has not been submitted for a degree in any other university.

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## **DEDICATION**

This project paper is dedicated to my dear mother, Mrs. G. A. Otom, who has encouraged me all the way and whose encouragement has made sure that I give it all it takes to finish that which I have started. I also dedicate this work to my husband; Herbert, without whose caring support this would not have been possible.

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## **ABSTRACT**

The objective of this study was to determine the influence of ICT outsourcing on performance of profit making parastatals in Nairobi. The population was 55 parastatals and the study was a census survey. The study used primary and secondary data. Primary data was collected through structured questionnaires. The response rate was 55%. The study used descriptive and cross-sectional research design. The results of the study found that the use of ICT is central in the everyday operations of parastatals. Majority of the parastatals outsource so as to improve efficiency and focus on core competence. The study established that there is a strong and positive relationship between ICT outsourcing and performance. The study recommends that there should be emphasis on internal staff capacity building so that internal staff can offer value in the mid and long term, budgetary allocation of ICT outsourced functions should be directed to research and development and there should be emphasis on integrity and professionalism during recruitment and tendering process.

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## **ABBREVIATIONS AND ACRONYMS**

<b>ADM</b>	Application Development Management
<b>BSC</b>	Balanced Score Card
<b>ICT</b>	Information Communications Technology
<b>IS</b>	Information Systems
<b>ITS</b>	Information Technology
<b>PDE</b>	Public Procurement and Disposing Entity
<b>R &amp; D</b>	Research and Development
<b>TCE</b>	Transaction Cost Economics

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

Globally, organizations are experiencing unsteady circumstances because of changes in financial conditions, globalization and quickly progressing innovative developments. To adapt with these unprecedented changes, institutions are looking for medium and long-term interventions in their operations, and one of the most popular interventions has been outsourcing of non-core services. Outsourcing refers to hiring external service providers to provide non-core business functions of an organization. As a result of huge investments, high specialist expertise needed and fast innovative advancements, ICT is one of the functions that is highly outsourced.

This study was anchored on two theories; the Fit- Viability theory proposed by Tjan (2001) and the Resource-Based View theory by Wernerfelt (1984), Rumelt (1984) and Barney (1986). The Fit-Viability theory seeks to explain that fit and viability are the two main dimensions that determine the performance of information systems in an organization. Resource-based view theory has its basis on the fact that resources are critical to an organizations performance and that these resources are heterogeneous and immobile. This study aimed at understanding on the influence of ICT outsourcing on performance of profit making parastatals in Nairobi given the rapid evolution in the adoption of ICT related infrastructure in the day to day operations of these institutions.

Kenya Vision 2030 which is the country's transformative plan formed in the year 2008 to 2030 intends to change Kenya to a globally competitive middle- income country. Vision 2030 anchors its development blueprint on three pillars which are

economic, social and political pillars. Under the economic pillar, advancement of use of ICT within public and private sectors is identified as a key development stimulator. Profit making parastatals tasked with the provision of important basic services while generating profits have had to adopt the use of ICT to improve their efficiency and service delivery. It is because of this situation that most profit making parastatals in their attempts to remain relevant and generate income, have adopted a substantial use of information technology in their operations, a department where most of the parastatals do not consider as their core area of operation.

### **1.1.1 ICT Outsourcing**

In business management studies, there are many varied definitions and understanding of what outsourcing is. Brown (1997) defines outsourcing as a legally binding agreement between a client and an external service provider to provide services or processes which the client would have provided internally. According to Venkatraman (1992), outsourcing is the noteworthy commitment by external service providers and this can be in the form of physical or human resources related with the whole or particular segments of the Information Technology systems in the hiring institution. Kotabe (1992) defines outsourcing as goods provided to a multinational organization by outside suppliers from other countries and the degree of parts and completed materials provided to a firm by external service providers.

In this study, outsourcing is taken to refer to the shifting or delegation of an institutions' non-core daily operations or components of its business functions to an external supplier; done with expectation of better quality and at a cheaper cost. While organizations strive to concentrate on their core business, those activities that are not core to the business are at times outsourced to specialized providers to ensure quality and efficiency. Firms are moving away from traditional forms of expansion such as

building more facilities and hiring more employees when they can simply hire an external service provider to provide better quality services at a cheaper cost. Almost all firms outsource certain functions and processes from specialized vendors allowing them to concentrate on their core business. One of the most outsourced business function is Information Technology/ Information Systems.

According to Economic survey 2016 report, Kenyan ICT market is one of the fastest growing in Africa and the government has ensured that most parastatals are supported by high-quality ICT infrastructure by encouraging Public Private Partnerships for ICT- enabled systems. Outsourcing has been used as part of the new public management agenda with the aim of increasing efficiency and reducing costs. Government institutions have turned to outsourcing non- core functions as a strategic option meant to enhance productivity. Areas that may be outsourced within the IT industry include: software support, infrastructure development, network management, application development, business continuity, maintenance and end- user support.

### **1.1.2 Organizational Performance**

Lusthas and Adrien (1998) define organizational performance as a firm's ability to accomplish its goals using minimum resources. According to Abbasnejad et al. (2017), organizational performance is about the results achieved after doing the work and argues that a good public-sector performance measurement approach assesses economy, efficiency and effectiveness. Gomes and Romao (2012) observed that parastatals are under pressure to explain their decisions to invest in expensive IS/IT.

Most researchers, Kaplan and Norton (1993) and Lusthan and Adrien (1998) among others agree that measuring performance is not easy and performance elements may be understood differently from person to person. Most traditional performance measures were only concerned with the financial aspect and have been criticized as

not offering a balanced view between financial and non-financial aspects of the organization.

Kaplan and Norton (1993) developed the Balanced Score Card which is a framework that measures performance using both financial and non-financial indicators. The Balanced Score Card (BSC) will be used in this study to develop performance measures in parastatals ICT departments. The BSC looks at four business perspectives to develop key performance indicators. The four perspectives are: Financial, Customer and Stakeholder, Internal Business Indicators Processes and Learning and Growth.

### **1.1.3 Profit Making Parastatals in Kenya**

After Kenya's independence in 1963, parastatals were formed by the government with the intent of providing significant services to its citizens. Currently, there are one hundred and eighty-eight parastatals in Kenya working in the different sectors of the economy. Each ministry in the Kenyan government has a number of parastatals to help it operate efficiently. In each ministry, different parastatals work alongside each other and are interdependent for effective delivery of services. The formation of parastatals gave government institutions an opportunity to develop and compete fairly with private institutions. This has resulted to excellence in government performance as is evident in the continued growth and success of parastatals such as the various public universities.

Profit making parastatals were formed with an intent of generating other non-tax income for the government with the aim of supporting the country's agenda. On the other hand, despite the high level of commercial and economic intents, parastatals were established with public policy aim in the conduct of their operations. They are required to serve as a stabilizer of highly profit oriented capitalists whose goal is

profit maximization. They therefore stand as a bridge in providing goods and services to the general public at a much lower affordable prices compared to the private firm. There are 55 profit making parastatals in Nairobi.

The running of parastatals in itself is a complexity; each parastatal has a board of members headed by a chairperson. Depending on the ministry under which the parastatal functions, the chairman has various roles and responsibilities. The managing director or vice chancellor for universities who is a member of the board oversees the day-to-day running of the parastatal or institution.

Most of the Kenyan parastatals have embraced the use of ICT to achieve international best practices. Current examples include the Kenya Revenue authority which has adopted an e-platform where companies and individuals can submit their taxes and view tax ledgers. The introduction of the e-citizen, an online platform where citizens can apply for government services. It is within the context of these factors that this study finds it important to examine the effects of outsourcing ICT services within profit making parastatals and the ramifications that this has had on the performance of the selected parastatals. The ICT portfolios referred in this study include: infrastructure management, systems integration, application development, software development and management, research and development and end-user support. This study therefore intends to make inquiries into the factors that influence which ICT related services that these organizations outsource, why they deem this necessary and how this outsourcing has improved the operations and effectiveness of service delivery within the organizations.

## **1.2 Research Problem**

The quick adoption of ICT outsourcing as a performance improvement stimulant among institutions and organizations is an important factor in organizational performance and growth. Even Liang et al. (2004) concluded that a firm's performance improves significantly if information is passed to all business departments through automation and that immediate benefits that can be gained by outsourcing IT services include reduced labor costs, increased efficiency and competitiveness, quicker implementation of new technology and compliance and security.

Rosenbloom and Piotrowski (2005) in their study, outsourcing the constitution and administrative law norms, maintains that government agencies outsource services without assessing the impact on costs. Young and Hood (2003) conducted a research on risk management implications of outsourcing claims management services in local government and found that most government outsourcing exercises are intensely impacted by political factors and not the rigor of cost-benefit analysis to inform the decision-making process. The study concluded that there are risks associated to managing outsourcing contracts in local governments. However, both studies maintain that outsourcing non-core government activities leads to cost effective solutions. The studies are not clear on the effect outsourcing may have on service delivery to the institutional service consumers.

Aning (2012) carried out a study on the effect of outsourcing on organizational performance in financial institutions in Ghana and found out that security ranked highest on the list of most outsourced functions by organizations in Ghana. The study concluded that most organizations outsource to reduce costs and enable employees to focus on core business activities. Arthur (2007) in his study, outsourcing, contract,



trust, opportunistic behavior and service delivery in PDE's in Uganda concluded that opportunistic tendencies by top officials in public institutions during the contracting process ultimately lead to poor service delivery. He concluded that there's a direct relationship between outsourcing, contract, trust, opportunistic behavior and service delivery in public institutions. However, these studies have not discussed whether outsourcing has any direct impact on performance.

Mwanje (2010) in his study concluded that benefits that accrue to firms that outsource non-core services include; cost cutting, minimal risks of failure and enhanced efficiency in operations. The study also noted that there are no policies in Kenya to guide outsourcing contracts. Barako and Gatere (2008) in their study outsourcing practices in Kenyan banking industry concluded that IT services is the most outsourced function in banks and that outsourcing strategy increased profitability. This study however ignored other parameters and only focused on the financial component of the organization.

Although numerous studies support the positive implications of outsourcing in organizations, especially in Kenya, it is still unclear whether there's any direct relationship between ICT outsourcing and performance in government institutions. Most of the studies have discussed outsourcing from a general perspective and none has focused on ICT outsourcing in Kenyan parastatals. This study was undertaken in a period where the use of ICT has been embraced in most Kenyan public institutions with over 60% of the country's population having access to mobile and internet enabled devices. It was also undertaken in a period of massive competition in the provision of services from the private sector in areas which were hitherto public monopolies. It is within this background that this study sought to examine the influence of ICT outsourcing on the performance of profit making parastatals in

Nairobi. This research, therefore, responds to the question; what are the factors that influence outsourcing of ICT services in Kenyan profit making parastatals and what are the challenges associated with outsourcing of ICT services in profit making parastatals?

### **1.3 Research Objectives**

The objective of this study was to determine the influence of ICT outsourcing on the performance of profit making parastatals in Nairobi.

### **1.4 Value of the Study**

This study assessed some of the theories fronted on this subject matter and highlighted their significance in explaining the concept of ICT outsourcing and performance in parastatals. Through this study, there will be a deeper theoretical understanding on some of the parameters that parastatals need to consider to determine if they need to outsource ICT services.

The study also seeks to promote the efficiency of public institutions through proposing recommendations that can be applied to institutions that are facing closure or losses through poor application of ICT by giving the recommendations that could be applied to make these institutions ICT relevant. These recommendations will seek to implement through the operations frameworks of these institutions in departments of procurement and those that are concerned with development and operations.

This study finally seeks to develop policy proposals that could be adopted in public institutions to enable easier and effective procurement and adoption of outsourced services, particularly those that are ICT related. The study assessed the existing policy frameworks, identified loopholes and developed proposals for their improvement.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter highlights the various categories of ICT outsourcing, potential risks of outsourcing and the relationship between ICT outsourcing and performance. The chapter also focusses on review of empirical studies, general literature review, and theoretical framework and finally the conclusions and research gaps from literature review are presented.

#### **2.2 Theoretical Foundation of the Study**

The theoretical foundation of the study was the Fit-Viability theory by Tjan (2001) and Resource Based View theory by Wernerfelt (1984), Romelt (1984) and Barney (1986).

##### **2.2.1 Fit-Viability Theory**

During the decision-making process to adopt new technology, most managers assume that the new technology will fit the task requirements. There are several factors that the organization must consider before deciding to adopt a new technology. Tjan (2001) proposed the fit-viability model which includes factors that he considers relevant during the process of acquiring new technology.

Tjan (2001) proposed the fit-viability theory in an endeavor to explain the relationship between the financial success of a company's technology and the alignment of the technology to end user goals. In this model, Fit and Viability are considered as the two main dimensions that influence performance of ICT adoption by institutions. Fit-Viability model is widely used in making decisions to acquire technology and there has to be a fit between the technology features and the task requirements (Goodhue &

Thompson, 1995). Hollingsworth (2015) argues that an organization can procure the right technology but the technology could be unable to complete the tasks at hand.

Fit measures the consistency of proposed technology with the organizations mission and vision, structure, core competence, culture and other initiatives. The fit aspect measures the degree to which the element of technology corresponds to the requirements of a task (Turban et al 2010). According to Liang et al (2004) fit is the degree to which the capabilities of a technology correspond to the requirement of task.

Viability on the other hand measures the return on investment of the proposed technology and its ability to integrate with existing infrastructure. Organizations adopt new technologies with the hope of enhancing performance. Liang et al (2004) defines viability as the degree to which the infrastructure of a firm is ready for application such as financial expenses and benefits, clients' availability to utilize, and the development of firms' infrastructure to support information technology.

Within the fit- viability model, Turban et al. (2010) proposes the following process to evaluate whether a particular organization should adopt a particular technology; decide the fit between a technology and assignment, investigate financial suitability of the technology, recognize essential ICT framework, look at human and organizational related with the application, pick a deployment plan and then finally measure performance.

The Fit-Viability theory provides important guidelines on which technology to invest in and potentially avoid the waste of organizations' resources on inappropriate technology. The main constraint of this theory is that it considers many variables that must be contemplated for the model to be viable and its implementation can be complex (Turban et al 2010). This theory is relevant because it can be used as a guide

by parastatals in deciding which areas within the ICT industry to outsource and whether the technology to be outsourced is fit and viable.

### **2.2.2 Resource Based View Theory**

Penrose (1959) argued that the basis of a firm's performance is its resources and capabilities. Wernerfelt (1984) was one of the scholars to take an interest on the RBV of a firm and he emphasized that firms are a collection of resources. Rumelt (1984) argued that the strategic theory of a firm is based on the idea of a firm as a collection of resources. Resource Based View of a firm explains how resources, capabilities, strengths and expertise of a firm can be organized and deployed to achieve sustainable competitive advantage. Penrose (1959), Rumelt (1984), Wernerfelt (1984), and others based RBV arguments on two assumptions; that valuable resources and capabilities are costly to imitate and cannot be substituted and that these resources are not mobile. Many researchers have emphasized that resources are of great significance for the growth of an organization. In the Resource Based View, Barney (1991) classifies resources as; an organizations' information technology, human capital resources, physical capital resources, financial resources and a firms' reputation.

The basis of the resource-based view is that there's heterogeneous allocation of resources and capabilities from one firm to the next and that these resources are immobile (Barney and Hesterly, 1996). The proposition is that a firm gains competitive advantage by mixing and deploying resources and capabilities in an organized way. The argument put across for using RBV theory in outsourcing is that a firm that has a shortage of rare, valuable, costly to imitate and organized resources and capabilities shall hire an outside provider to overcome that inadequacy and enjoy a sustained competitive advantage. The four questions asked in RBV are; is the resource or capability valuable? Is it rare across organizations? Is it hard for

competitors to imitate? Does the resource or capability have equivalent substitutes? According to RBV, sustainable competitive advantage can only be attained if an organization answers “yes” to all the four questions. Valuable resources can therefore be used by a firm to reduce its costs, increase revenue, and improve efficiency and effectiveness.

RBV is one of the most widely accepted and influential theories of strategic management. Most researchers argue that firms should adopt this model if they want to improve performance. However, some scholars have criticized RBV, Priem and Butler (2001) argues against the RBV’s assumption that the product market is stable. This assumption ignores the real value of the resources. Priem and Butler (2001) also argue that RBV lacks managerial implications and is silent on how managers develop or obtain resources. The RBV critiques are valuable and suggest amendments that should be made with further developments of the theory.

The RBV attempts to explain the relationship between resources and success in an organization. This theory is important during the initial stages of outsourcing because it guides managers on making decisions regarding which resources the firm should outsource. The resource based view theory is important in the supplier selection stage for hiring an appropriate supplier. The theory has been additionally used to clarify some of the key issues of dealing with client- vendor relationship and reconsideration stages.

### **2.3 Types of ICT Outsourcing**

ICT services outsourcing can be classified into the following categories (Global Technology Audit Guide, 2012): Application development and management outsourcing(ADM), infrastructure management outsourcing, help desk outsourcing,

independent testing and validation outsourcing, data center management outsourcing, systems integration outsourcing, research and development outsourcing and cloud computing outsourcing.

ADM outsourcing is when an organization partners with a third party with technical skills to build and run high performance applications and systems in line with their clients' requirements, to enhance their performance. The ADM outsourcing contract covers all outsourcing relationships from beginning of formal stages, developmental phase and ongoing maintenance. Infrastructure management outsourcing is the decision to transfer different ICT components such as: business applications, network and security structure, operating systems, disaster recovery strategies and maintaining databases to an external provider. Downtime in any of these components can lead to a huge loss for an organization. Organizations' that are not able to efficiently manage ICT infrastructure resort to outsourcing some or all the components to an external provider. Help desk outsourcing involves hiring experts to provide any maintenance services. Help desk services can be offered at the hiring party's premises or at service providers' premises. Independent testing and validation outsourcing involves decisions to outsource the testing and validation of software developed in-house or by a third party. Programming errors can be identified via specialized testing and solutions tracked.

Data center outsourcing is the practice of hiring a third party to provide day to day storage and computing services. Some of the services provided by a data center include; on-going monitoring of a servers' performance, backup and restoration, server capacity management etc. Systems integration outsourcing involves hiring a third-party provider to combine sub-systems into one system that can deliver functionality.

Many organizations outsource the R&D of different elements of ICT in order to adapt to the ever-changing business environment. One major disadvantage of outsourcing R&D is increased complexity and bureaucracy and it's therefore important that both the service provider and hiring organization have clarity during the formal stages of the project. Cloud computing outsourcing involves hiring a vendor to virtualized computing or a network of remote servers to fill a business need or demand. After adoption of cloud computing, clients can access hardware storage and software applications directly from the web.

## **2.4 ICT Outsourcing and Performance**

Outsourcing strategies is a prominent determinant of performance in companies. Barako and Gatere (2008) conducted a study on the effects of outsourcing IT on commercial banks and the findings from this study suggest that outsourcing leads to lower operational costs, banks that outsource have improved technology that leads to innovation, and they enjoy economies of scale. Sang (2010) argues that financial savings rank highest among the achievements of outsourcing. According to Perry (2008), contracting out production of goods and services to a firm with competitive advantage in terms of reliability, quality and cost exacerbates productivity.

Most parastatals have considered outsourcing as a choice in their endeavors to cut operational costs, enhance effectiveness while meeting accountability demands from the public and different stakeholders. The deteriorating economic conditions and the need to offer quality products and services while meeting international standards has forced public institutions to reconsider their approach to providing non-core business functions by seeking the most cost-effective solutions. Government institutions have turned to outsourcing non- core business functions such as IT/IS as a strategic option



meant to enhance productivity. Most of the Kenyan parastatals have upgraded ICT to achieve international best practices.

Most organizations outsource certain business functions with the main aim of reducing costs associated with the service being outsourced. Kakumanu and Portanova (2006) noted that what drives most organizations to hire outside service providers is cost reduction. Girma and Gorg (2004), in the study of outsourcing by UK firms noted that firms that outsource had a significant reduction in their wage costs. The study asserts that most outsourcing decisions are usually related to attempts by the organization to reduce operational costs. Most organizations find it cheaper to outsource some services rather than provide these services in-house. Sang (2010) conducted a survey on outsourcing practices in universities and concluded that outsourcing in universities resulted in financial savings.

Many studies in the topic of outsourcing found a positive relationship between outsourcing and performance. Ten Raa and Wolff (2001) found that outsourcing certain business activities enhances the performance of a firm. This study looked at the reasons why parastatals in Kenya opt for outsourcing of ICT services and how this enables these institutions achieve their goals. The study argues that without outsourcing these parastatals will not be able to effectively provide services and meet their core objectives.

## **2.5 Empirical Review**

A number of researchers have carried out studies on the effect of outsourcing on performance. Some of them have concluded that the relationship between outsourcing and performance is positive while others have concluded that the relationship is negative. Some of these studies are expounded below.

Outsourcing can also prove to be a risky engagement for a company and therefore firms must be careful when choosing a business process to outsource or not. Young and Hood (2003) in their study, risk management implications of outsourcing claims management services in local government, concluded that the risks associated to management issues are: not being in control of the business function outsourced, longer lead times, understanding the contractors' continuity plan and establishing a reaction plan in case the supplier fails to meet obligations as stipulated in the contract. In the study, confidentiality, strategic, reputational, compliance, operational, country, counterparty, contractual, access, concentration and systematic risks were tested as possible risks that local governments face when they decide to outsource. The study concluded that the measurement of these risks is difficult if not possible at all a that there are additional hidden such as daily monitoring, training and development re tendering etc. and all these in the long run increase the cost of outsourcing.

A study by KPMG (2013) on UK ICT outsourcing service provider performance and satisfaction concluded that ICT outsourcing in the UK has grown beyond reducing operational costs. There are other drivers associated with ICT outsourcing such as; access to skilled workers, quality products and services, and concentration on core business. Gonzalez and Dorwin (2012) in their study outsourcing: past, present and future highlight why India accounts to 90% offshore IT outsourcing. The study lists cheap labor, infrastructure support and favorable government policies as some of the factors that make India an attractive destination. The study encourages governments to train and equip people to take up technical jobs instead of needless outsourcing of jobs.

Nakanjako (2016) conducted a study on outsourcing and performance of public institutions in Uganda. The study found that the most outsourced function in public

institutions in Uganda is IT with programming and systems integration being the most outsourced IT services. The study findings established a weak positive relationship between IT outsourcing and performance of public institutions in Uganda. The results of the study indicated that as much as there is a direct relationship between outsourcing IT services and performance of public institutions, there are other factors that than IT contribution that influence the performance public institutions. The study also noted that most outsourced firms exaggerated costs increasing operational costs and therefore making outsourcing to be expensive compared to offering the services in-house.

Smuts et al., (2014) in their study information systems outsourcing issues in the communications technology sector in South Africa concluded that most organizations experienced challenges with IT/IS outsourcing with the general rating for success of IT/IS outsourcing varying from somewhat successful to very successful. The challenges pointed to the outsourcing arrangements and most of the organizations had specific issues in the contract. The study listed project team conflicts, cultural differences, cost escalation, breakdown in communication, service delivery and turnaround times as the challenges experienced by firms that outsource IT. The study maintains that firms should still consider IS/IT outsourcing but with a clearly defined agreement with clarity on expectations of both parties.

Dajissa (2012) in his study, the impact of outsourcing training services on supply chain performance in government parastatals, noted that a major reason firms decide to outsource rather than provide the services in-house is to decrease their cost of doing business. Some businesses win short term contracts for specific jobs and it is expensive and time consuming to hire temporary staff and train them for such projects. These firms therefore opt to outsource to an external provider rather than

provide these services in-house. Dajissa (2012) concludes that in such instances it is cheaper to outsource. One of the findings of the study was that parastatals outsourced training services for cost benefit purposes such as economies of scale and access to unique expertise of the service provider.

Dajissa (2012) found that experience, professionalism, reputation, competence, cost, qualification, right time and past supplier performance are some of the factors that organizations consider before deciding to outsource while the performance of the agreement is influenced by supplier relationship, supplier management, quality of service, time the service delivered and supplier selection. From the study findings, the risks associated with outsourcing include; over reliance on service providers, loss of control over the outsourced service, low quality of work and limited flexibility. The study also found that poor organizational structures led to poor outsourcing management and this inhibits supply chain performance while outsourcing training services.

Barako and Gatere (2008) examined the effects of outsourcing IT on Kenyan commercial banks. This study asserts that the main driver of outsourcing is cost reduction. Banks cited rapid technological changes as the reason for outsourcing IT. Findings suggest that outsourcing leads to lower operational costs, enhanced technological access, focus on core activities, economies of scale, free limited resources for core business activities, and quality services. In the findings, the study also suggested an urgent measure to form a regulatory framework to guide outsourcing contracts. Sang (2010) conducted a survey on the effect of outsourcing practices in Kenyan universities. The research concluded that outsourcing in universities resulted in financial savings. The study found that outsourcing led to cost and time-savings; better security; enhanced cleanliness and less involvement in non-

core matters such as personnel issues. Financial savings accruing from outsourcing initiatives ranked highest among the achievements of outsourcing.

## **2.6 Summary of Literature Review and Research Gaps**

From the empirical studies conducted by different researchers on outsourcing and performance, different conclusions have been made. While some researchers such as Dajissa (2012) and Barako and Gatere (2008) conclude that outsourcing strategy enhances the performance of organizations, Nakanjako (2016) concluded that there are other factors other than outsourcing that influence the performance of an organization. Smuts et al., (2014) concluded that there are varying performance ratings associated with outsourcing depending on how well an organization manages outsourcing challenges. Performance rating could range from somewhat successful to very successful. Young and Hood (2003) discussed the risks of outsourcing. They maintain that outsourcing leads to enhanced performance but also cautions that if outsourcing risks are not managed, firms could end up making huge losses in the long run.

Previous works on outsourcing have heavily relied on theories with statements supported by anecdotal evidence. This has created a gap between formulation and implementation of frameworks that outline the outsourcing process and guidelines that can be implemented by these institutions.

The study aims at bridging the theoretical gap between the developed theories and identified gaps and the current policy frameworks. The study aims at identifying some of the bottlenecks in policy implementation which curtail the proper implementation of outsourcing as well as those that inhibit outsourcing in terms of time and quality management.

Further, there are conflicting conclusions to these studies. Many studies have argued for and against outsourcing as strategic option of enhancing performance. This study aims to put this into perspective as well as analyze the influence of ICT outsourcing on performance of profit making parastatals.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter discusses the overall methodology that was adopted in conducting this study and it's divided into the following sections: Research Design, Population of Study, Data collection and Data analysis.

#### **3.2 Research Design**

Research design is a comprehensive plan that involves highlighting all the methods that will be utilized in the collection and analysis of data. The research design is also in line with the research objectives and study questions. In particular, this study aims to explain the influence of ICT outsourcing on performance of profit making parastatals.

Descriptive research design was used in the study as it provided an accurate account of the parameters under study which included management styles, values, corporate cultures and visions. Cross-sectional research methods was also applied in this study whereby the parastatals selected for the study were clustered into pre- selected groups which included sectors of service provision. This research design was applied to develop the relationships between the different clusters selected and their performance in relation to ICT outsourcing.

#### **3.3 Population of study**

Target population in statistics is the specific population about which information is desired. Population of the entire groups or individual, events or objects having common characteristics about which the researcher wishes to make generalizations, inferential statistics indicate the likelihood that what is true of the sample, is also

true or the population from which is drawn. When the target population is similar the researcher has more confidence making generalization.

In Kenya, there are currently fifty five profit making parastatals across the different government ministries in Nairobi. These parastatals cover different sectors. The target population for this study constituted all the 55 profit making parastatals in Nairobi (Appendix 1).

### **3.4 Data Collection**

In the study, primary and secondary data collection methods were adopted. Secondary data, which hereby mostly refers to published material was obtained through library and desk research. The data was collected from past academic research studies, published journals and online sources. This data was counter checked and cross-tabulated and the gaps identified filled through the primary data sources.

Primary data which refers to raw data from the field was the key data source for this study. Questionnaires were administered to top departmental heads working in ICT. The questionnaire is divided into three parts. The first and second part consists of questions dealing with type(s) of ICT services outsourced by the organization, reasons for implementing outsourcing strategy and benefits and challenges of outsourcing, while the third part consists of questions dealing with balance score card as a measure ICT outsourcing related performance.

### **3.5 Data Analysis**

The data collected was processed, analyzed, interpreted and presented in such a manner that it is clear, precise and unambiguous. This data was quantified and coded using descriptive statistics. The Statistical package for social sciences (SPSS) was



used to analyze the collected data, sort and sift through and analyze it. Measures of central tendency and tests of significance was used in data analysis.

The researcher employed tests of significance tools mainly Analysis of variance (ANOVA), Coefficient of determination (R<sup>2</sup>), Correlation coefficient (R) and the F statistic to better understand the different relationships between the variables in the study. Qualitative data was analyzed by the use of inferences to draw summaries for purposes of the final report.

The data is depicted in the form of an equation:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

*Where: Y = Performance*

*X<sub>1</sub> = Application Development and Management Outsourcing*

*X<sub>2</sub> = Infrastructure Management Outsourcing*

*X<sub>3</sub> = Data Centre Management Outsourcing*

*ε = Error term*

*β = Correlation Coefficient*

## CHAPTER FOUR

### DATA ANALYSIS, RESULTS AND DISCUSSION

#### 4.1 Introduction

The main objective of this study was to determine the influence of ICT outsourcing on the performance of profit making parastatals in Nairobi. The data collection was carried out between the months of August and November 2017 targeting 55 profit making parastatals in Nairobi.

The study targeted the heads of departments in charge of ICT who filled structured questionnaires for purposes of data collection. The questionnaire is annexed on this document. The questionnaires were coded and entered in Microsoft Excel and Statistical Package for Social Sciences (SPSS) for analysis. This chapter represents the findings and analysis of data obtained and an analysis of the same in light of the objectives of the study.

#### 4.2 Response Rate

The study population was 55 parastatals of which 30 questionnaires were completed and returned. This was a response rate of 54.5%. This response rate was deemed representative enough. According to Mugenda and Mugenda (2003) a response rate of 50% is adequate for analysis and reporting. The results are presented in table 4.1.

**Table 4.1: Frequency of Respondent Institutions**

<b>Response</b>	<b>Frequency</b>	<b>Percentage</b>
Responded	30	54.5
Non Responded	25	45.5
<b>Total</b>	<b>55</b>	<b>100</b>

*Source: Primary data (2017)*

### 4.3 Distribution of Respondents by Service Sector

The study sought to establish the type of services offered by the parastatals. The results are presented in table 4.2

**Table 4.2: Distribution of respondents by service sector**

<b>Service Sector</b>	<b>Frequency</b>	<b>Percentage</b>
Insurance and Banking	5	16.7%
Agriculture	6	20%
Transportation	7	23%
Research and Academia	5	16.7%
Health and Housing	5	16.7%
Sports and Culture	2	6.7%
<b>Total</b>	<b>30</b>	<b>100%</b>

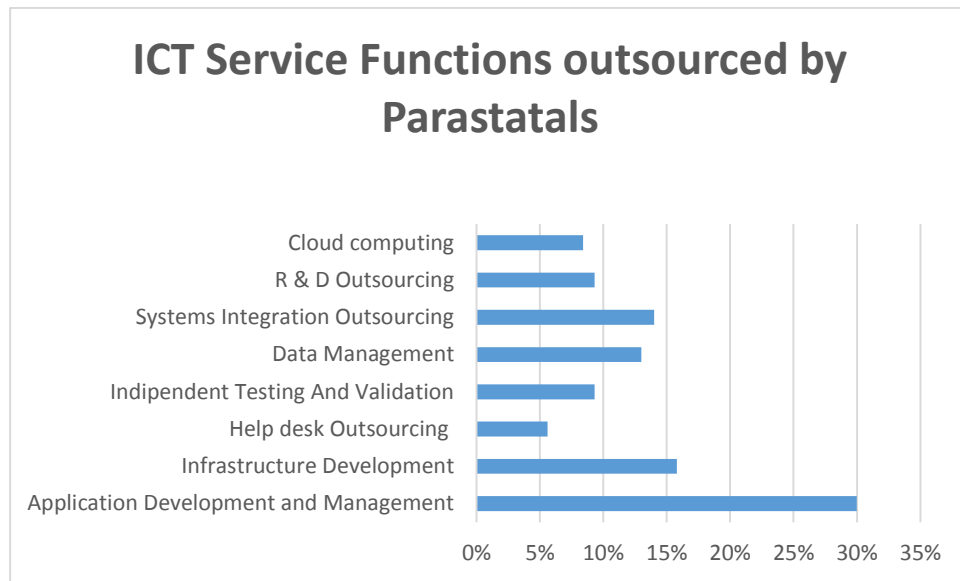
*Source: Primary data (2017)*

Data in table 4.2 indicate that majority of respondents were from the transport sector at 23% , those from the agriculture sector came second at 20%, an equal representation of 16.7% from insurance and banking, research and academia, and health and insurance sectors, while 6.7% came from sports and culture sector.

### 4.4 ICT Service functions outsourced by profit making parastatals

The study sought to establish the types of ICT services outsourced by profit making parastatals. The results are presented in Figure 4.1.

**Figure 4.1: ICT Service Functions Outsourced by Parastatals**



*Source: Primary Data (2017)*

The findings from figure 4.1 indicate that the most common ICT service outsourced by respondents is application development and management at 30% while only 6% of the respondents outsource help desk services.

From the data, majority of respondents at 30% outsource application development and management. This could imply that these parastatals were applying radical changes in their operations particularly shifting their operations from manual to digital format in service production or product development.

In the study, help desk outsourcing was found to be the lowest form adopted with only 6% of respondents implementing its use. This implies that parastatals might have outsourced help desk services in cases where they had short term projects outside their core business and outsource consultants to provide guidance on short term basis and exit.

It was also determined that most of the parastatals (85%) adopt the use of more than one outsourcing form. This is an indication that outsourcing forms are greatly used

hand in hand as these organizations have multifaceted approaches in their operations with huge areas of operation.

#### **4.5 Benefits of outsourcing ICT services in profit making parastatals**

The study sought to establish the benefits of outsourcing ICT services in profit making parastatals. Respondents were given questionnaires listing seven (7) factors as probable benefits of outsourcing ICT services within the institutions. They were asked to indicate by ticking the extent to each of the factors benefited the organization using a four point scale where 1= Strongly Disagree, 2= Neutral, 3= Agree, 4= Strongly Agree. Mean scores were thereafter computed and the higher the mean score, the greater the benefit identified and vice versa. The results are presented in Table 4.3.

**Table 4.3: Benefits of Outsourcing ICT Services**

<b>Benefit of Outsourcing ICT Services</b>	<b>N</b>	<b>Mean</b>	<b>Standard Deviation</b>
Cost Reduction	22	3.018	1.0931
Focus on core competence	26	3.586	0.5284
Access to specialized vendor	23	3.254	0.6853
Improved services	23	3.110	1.0568
Free resources	13	2.428	0.7854
Provide flexibility	11	2.101	0.5958
Competitive Advantage	18	2.603	0.6102
<b>Average Score</b>	<b>19.4</b>	<b>2.8714</b>	<b>0.7729</b>

*Source: Primary Data (2017)*

From table 4.3, the average mean of benefits of outsourcing ICT services was 2.8714. This result indicates that profit making parastatals in Nairobi greatly benefit from ICT outsourcing. In this study, the benefits of outsourcing ICT services were many and varied but the most important was that outsourcing enabled the organizations to focus on their core competence, access to specialized vendor and improved services. This is evident from Table 4.1 where the mean score recorded for the three benefits was

3.586 for focus on core competence followed closely by access to specialized services (mean of 3.254) and improved services (mean of 3.110). Other benefits that recorded mean scores but still accrue to an organization when they outsource ICT are; cost reduction (mean of 3.018), competitive advantage (mean of 2.603), free resources (mean of 2.428) and provide flexibility (mean of 2.101).

#### **4.6 Reasons for outsourcing ICT in profit making parastatals**

The study sought to establish reasons for outsourcing ICT in profit making parastatals. In the field survey, the respondents were asked to indicate the reasons for outsourcing ICT. The respondents ticked the reasons where, 4 was ticked for strongly agreeing to the factor being a reason for outsourcing and 1 being the strongly disagreeing with the factor. Mean scores were thereafter computed and the higher the mean score, the greater the benefit identified and vice versa. The results are presented in Table 4.4

**Table 4.4: Reasons for ICT Outsourcing**

<b>Reasons for ICT outsourcing</b>	<b>N</b>	<b>Mean</b>	<b>Standard Deviation</b>
Lack of In-house Expertise	13	2.309	1.0931
High Administrative Costs	9	1.375	0.5354
Improved Company focus on core competencies	25	3.409	0.6102
High Operational Costs	12	2.230	1.0568
Lack of Time	10	1.538	0.7854
To improve Efficiency	24	3.2189	0.5958
Pressure from Business Environment	18	2.423	0.9954
To access skills and resources unavailable in-house.	20	3.004	2.326
<b>Average</b>	<b>16.4</b>	<b>2.438</b>	<b>0.9981</b>

*Source: Primary Data (2017)*

From Table 4.4, the average mean for reasons for outsourcing ICT was 2.438. This result indicates that the reasons for ICT outsourcing in profit making parastatals in Nairobi listed in the table greatly influence outsourcing decisions in these parastatals. The reasons for outsourcing ICT were ; improved company focus on core competencies with a mean score of 3.409, to improve efficiency with a mean score of 3.2189 and to access skills and resources unavailable in-house with a mean score of 3.004. The factors with least influence were; pressure from business environment (mean of 2.423), lack of in-house expertise (mean of 2.309), high operational costs (mean of 2.230), lack of time (mean of 1.538) and high administrative costs (mean of 1.375).

#### **4.7 Challenges associated with outsourcing ICT services**

The study sought to establish the challenges associated with outsourcing ICT services. The respondents were asked to indicate the challenges for outsourcing ICT. The respondents ticked the challenges where, 4 was ticked for strongly agreeing to the factor being a challenge for outsourcing and 1 being the strongly disagreeing with the factor. Mean scores were thereafter computed and the higher the mean score, the greater the challenge identified and vice versa. Table 4.5 presents pertinent results.

**Table 4.5: Challenges Associated with Outsourcing of ICT services**

<b>Challenges Associated with Outsourcing of ICT Services</b>	<b>N</b>	<b>Mean</b>	<b>Standard Deviation</b>
Poor Structures to manage outsourcing function	24	3.241	0.875
Over- reliance on external parties	23	3.154	1.5354
Confidentiality Issues	24	3.241	0.7392
Political Interference	16	2.064	0.568
Lack of control on outputs	22	3.064	1.6884
Below par services	21	2.978	0.6558
Limited Flexibility	16	2.087	0.9954
Lack of proper cost benefit Analysis	19	2.879	1.4262
Hidden costs of outsourcing	18	2.684	0.6531
<b>Average</b>	<b>20</b>	<b>2.821</b>	<b>1.0152</b>

*Source: Primary Data (2017)*

From Table 4.5, the average mean for challenges associated with outsourcing ICT was 2.821. This result indicates that the challenges associated with ICT outsourcing in profit making parastatals in Nairobi listed in the table greatly influence implementation of ICT outsourcing in these parastatals. The challenges for outsourcing ICT were reported to be; poor structures to manage outsourcing function with a mean score of 3.241, confidentiality issues with a mean score of 3.241, over-reliance on external parties with a mean score of 3.154 and lack of control of outputs with a mean score of 3.064. The challenges with least influence were; below par services (mean of 2.978), lack of proper cost benefit analysis (mean of 2.879), hidden costs of outsourcing (mean of 2.684) and political interference (mean of 2.064).

Other challenges that were identified by the respondents include; little development of in-house staff capacity to adapt to the use of new systems, cases of litigation and court cases resulting from breach of contract, integrity issues and breach of privacy.



## 4.8 Effect of outsourcing on performance

The study sought to establish the relationship between ICT outsourcing and performance of profit making parastatals in Nairobi. Various statements were provided for rating by respondents where, 4 was ticked for strongly agreeing to the statement and 1 being the strongly disagreeing. Mean scores were thereafter computed the findings on measures of performance on the institutions are as tabulated below:

**Table 3.6: Measures of performance**

<b>General Factor</b>	<b>Measure</b>	<b>N</b>	<b>Mean</b>	<b>Standard Deviation</b>
<b>Finance</b>	The difference between budget and expenditure does not exceed 10%.	28	3.321	0.8342
	There has been a 7% net profit increase since ICT has been outsourced for the past 3 years.	28	3.564	0.6743
<b>Internal Business Processes</b>	Over 75% customer satisfaction rating as relates to ICT services	20	3.765	0.6432
	Less than 250 customers' complaints as relates to ICT services in the past one year.	28	3.765	0.6743
	Delay in processing customer requests has reduced to one day since ICT has been outsourced.	22	3.781	0.4231
	More than 1000 repeat customers in the past one year	24	3.665	0.7342
	Less unplanned system downtimes experienced since outsourcing ICT	27	3.541	0.9564
	The percentage of e-government transactions has increased by 50% since outsourcing ICT	22	3.789	0.9843
<b>Learning and Growth</b>	More than 25 staff have attended ICT training programs in the past one year	29	3.424	0.9832
	It is very easy for staff to adopt, learn and use ICT systems adopted by the organization	25	3.415	0.3496
<b>Customer Satisfaction</b>	Highly rated customer satisfaction indices in the past one three years	26	3.576	0.5812
<b>Average</b>		<b>25</b>	<b>3.6005</b>	<b>0.7125</b>

*Source: Primary Data (2017)*

From Table 4.6, ICT outsourcing has had a big impact on the performance of the sampled parastatals and this can be affirmed by the finding that there has been an increase of 7% in net profits since ICT was outsourced by the parastatals with a mean of 3.564. This has been reflected by the customer satisfaction ratings which across the parastatals was found to be over 75% as relates to ICT services provided by the parastatals with a mean of 3.765. These high customer ratings were further proven and collaborated by statistics on customer complaints reported which showed a mean figure of 3.765 which represented the fact that there have been less than 250 customer complaints reported annually as relate to ICT services since ICT was outsourced by the parastatals.

The satisfaction of customers was further illustrated by the high mean of 3.781 representing satisfaction with the reduction of delays in processes and service delays as relate to ICT. This was further corroborated by the mean of 3.665 representing repeat customers who have sort the services of the parastatals as repeat customers over the past year. Since the outsourcing of ICT, it was also found that there has been a significant reduction of system down time represented by a mean of 3.541 which could imply that there has been reliable provision of services hence improved customer satisfaction.

Staff members trained on the use of ICT in the firms was represented by a mean of 3.424 which meant that more than 25 permanent staff members had undergone ICT training in the past one year while a mean of 3.415 represented staff members within these institutions that were conversant and comfortable with the use and application of ICT. With the adoption of ICT therefore and outsourcing of specialized ICT services, all the institutions surveyed attested that there have been improved and faster service delivery, a factor that has been beneficial to both the organization and their clients.

Also, the companies have been recording high percentages of repeat customers (over 92%), while this can be attributed to high quality of services or improved services, it can also be attributed to the fact that these organizations deal with the provision of essential services.

#### 4.9 Regression Analysis

A regression analysis of the relationship between ICT outsourcing and operational performance of the surveyed organizations yielded the results as is shown in Table 4.5 below. The following regression model was established:

$$Y = 1.486 + 0.977 X_1 + 0.306 X_2 + 0.015 X_3 + \epsilon$$

Where;  $X_1$  Application Development and Management Outsourcing,  $X_2$  Infrastructure Management Outsourcing,  $X_3$  Data Centre Management Outsourcing.

**Table 4.7: Regression Analysis of Variables**

Model	Unstandardized coefficients		Standardized Coefficients	T	Sig p-Value	F	R	R2	Psig from ANOVA	
	B	Std. Error	Beta							
	$B_0$	1.486	.566		2.625	.019	4.475	.774	.599	0.011
	$X_1$	.977	.273	1.058	3.583	.003				
	$X_2$	.306	.105	.292	2.924	.004				
	$X_3$	.015	.1112	.014	.137	.891				

*Source: Primary Data (2017)*

Holding other factors constant, a unit increase in application and development management outsourcing would lead to 0.977 increase in organizational performance, a unit increase in infrastructure management outsourcing would lead to 0.306 increase in organizational performance and a unit increase in data center management outsourcing would lead to 0.015 increase in performance. There is a positive

significance relation between application development and management outsourcing and organization performance  $p=.003$ . There's also a positive significance relation between infrastructure management outsourcing and organization performance  $p=.004$ . This means that infrastructure management outsourcing and application development management outsourcing is a suitable predictor of Y given that the significant level used is 5%.

#### **4.10 Discussion of results**

The objective of this study was to determine the influence of ICT outsourcing on the performance of profit making parastatals in Nairobi. The findings of this study clearly demonstrate a strong and positive relationship between ICT outsourcing and performance of profit making parastatals. This is consistent with Dajissa (2012), Raa and Wolff (2001) and Barako and Gatere (2008) findings that revealed that outsourcing strategy enhances the performance of organizations.

Specifically, this study found that the most important benefits of ICT outsourcing to the organizations was that outsourcing enabled the organizations to focus on their core competence, access to specialized vendor and improved services. This is supported by the works of Barako and Gatere (2008) and KPMG (2013). Further results from the analysis revealed that the key reasons leading to outsourcing were in order to access skills and resources unavailable in-house, to improve company focus on core competencies and to improve efficiencies. This finding mirror Sang (2010) study that public universities consider outsourcing in there endeavors to enhance effectiveness and focus on core business.

This study also found that poor structures to manage outsourcing functions and breaches of contract associated with confidentiality are the main challenges of outsourcing. Other challenges identified by this study were; over-reliance on external

parties, political interference, below par services, limited flexibility, lack of proper cost benefit analysis, hidden costs of outsourcing, little development of in- house staff capacity to adapt the use of new systems and cases of litigation and court cases resulting from breach of contract. This is supported by the works of Young and Hood (2003) which found that there are risks associated with outsourcing such as not being in control of the business function.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents a summary of findings on the influence of ICT outsourcing on performance of profit making parastatals in Nairobi. The chapter also gives recommendations and highlights the limitations of the study and suggestions on areas of further research.

#### **5.2 Summary of the Findings**

From the study it was found that the use of ICT is central in the everyday operations of parastatals and that due to this fact many of these institutions have heavily invested in its use through contracting of third parties to provide the service hence outsourcing. From the study it was found that these institutions allocate an average of 10% of their annual revenue to IT expenditure. The most common mode of ICT outsourcing is application development outsourcing while the least applied model is the front desk outsourcing.

In the study it was found that the main contribution of ICT adoption on performance is that there has been increased revenue over the past three years and this was attributed to the increased revenues from more effective products and services. Organizational staff were the key drivers to this as they were better able to effectively undertake their tasks, a fact corroborated by the fact that over 67% of staff in these organizations felt comfortable in the use and adoption of ICT.

### **5.3 Conclusions of the Study**

The study set out to determine the influence of ICT outsourcing on performance of profit making parastatals in Nairobi. From the findings, there is a strong positive relationship between ICT outsourcing and performance. The study also concludes that whereas ICT outsourcing has a positive effect on performance, its implementation and level of success is greatly dependent on other factors such as proper staff training and effective leadership. It was also found that the staff within these organizations play a key role to the level of success of the ICT model being implemented and consequently the effect of this on performance. It is therefore imperative that whereas ICT outsourcing improves performance, it is important to develop staff member's adherence and comfort in the implementation and success of the concept.

From the study it was found that whereas ICT was generally outsourced by the organizations under study, most of the ICT forms were being implemented in other areas that are not directly related to the key areas of operation of the organizations. This means that for example if the key sector of operation of an organization is transportation, ICT is outsourced and greatly used in Finance, Administration and marketing. This has had the effect that as much as the internal operations of the organization become simpler and easier to manage, the core objective of the organization is still not greatly developed through the ICT outsourcing.

### **5.4 Limitations of the Study**

A high level of beauracracy in Kenyan public institutions was a constraint. It was not easy to meet the ICT and Finance directors of selected parastatals in person and to validate their status. Some of the directors passed the questionnaires to junior staff and outsourcing being a management decision; it is only senior staff who are well versed with the intricate policies of outsourcing. This study also experienced financial

and time constraints considering the large quantity of information expected for analysis.

Given that the study was also carried out at a period of heightened political and electioneering activities in the country, the response rates were lower than anticipated as most offices stayed closed. Despite this however, the study was able to meet its threshold and this was achieved by having numerous and repeated visits to these institutions in order to obtain responses. Also, this was countered through the use of library research as a source of data whereby the study spent time on archives and libraries to obtain data which could have hitherto been obtained directly from the anticipated study respondents.

## **5.5 Recommendations**

From the study findings recommendations are proposed to address three key challenges identified. These are; 1) Outsourcing and the need to build internal staff capacity, 2) Need to address challenges emerging from outsourced individuals/companies, 3) ICT investment in key competent areas

It was found that outsourcing of ICT services has greatly contributed to improving the competitive edge of profit making parastatals and this has greatly led to an increase in the revenues and profits realized by these organizations. In particular, it was found that application development outsourcing was the mostly common adopted and helpdesk outsourcing the least. It is therefore recommended that for increased revenues the application development model is adapted in order to help develop the capacity of the organizations to achieve short term goals as well as achieve targets. In the same light it is recommended that there has to be a lot of emphasis on internal staff capacity building such that the internal staff are able to independently offer the



same value in the mid and long terms. This in effect will imply that the organizations will be able to realize higher profits due to reduced expenses in outsourcing. A trained workforce will also mean that there will be more in house capacity and skills rollover hence more staff productivity.

It is the recommendation of this study that the biggest percentage of budgetary allocation of ICT outsourced functions is directed to research and development in this core area. Through this, there is assured development of outputs and products that are more refined and customer responsive while at the same time embrace the use of ICT which is a key medium of operation in the 21<sup>st</sup> century society.

The study also recommends that in the recruitment and tendering process there needs to be a big emphasis on competent organizations/ individuals with emphasis on integrity and professionalism. This will mitigate one of the key challenges identified with outsourcing which is breach of contract and lack of privacy. Through hiring of competent individuals the organizations will be able to avoid cases of litigation which most of the time are lengthy and very expensive hence leading to increased expenses and reduced customer confidence hence reduced revenues and profits. In the course of carrying out their contracts, it is also recommended that there should be structures, legal and otherwise that continually monitors and evaluates the implementation of contracts by the outsourced organizations and individuals so as to mitigate and alleviate immerging issues and challenges that might crop up.

## **5.6 Suggestions for Further Research**

The following recommendations from the study should advise both management theory and the practice of ICT outsourcing. First, the study upholds both the Resourced Based View theory and the Fit- viability Theory. The research also

evaluated the impact of staff training and ease of adoption of ICT systems adopted as a means by which organizations can ensure sustainability in the medium and long terms. As a suggestion of this study, the study proposes that further research needs to be done to assess the medium and long term effects of outsourced services on organizational staff to measure their input as well the sustainability of these outsourced services. Also the study recommends that further studies should be carried out to assess the outsourcing regulations developed for public institutions so that these outsourced services take into concern the human capital and capacity building for maintenance of these services once the contract period of the outsourced service is expired.

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## APPENDICES

### APPENDIX I: QUESTIONNAIRE

#### Introduction

This questionnaire is designed to collect information about the influence of ICT outsourcing on performance of profit making parastatals in Nairobi. The information obtained here will **ONLY** be used for the research purpose and shall be treated in confidence.

Thank you for your time.

#### PART A: DEMOGRAPHIC DATA

*{Please tick where applicable}*

Name (*Optional*).....

Name of Parastatal .....

Position .....

Department.....

#### Part B: OUTSOURCING INFORMATION

*(Tick the Institution appropriately)*

1. What are some of the ICT services functions outsourced by your organization to external providers?

ICT Service functions	Tick where appropriate
Application development and management outsourcing	
Infrastructure management outsourcing	
Help Desk Outsourcing	
Independent testing and validation outsourcing	
Data management outsourcing	
Systems integration outsourcing	
R &D outsourcing	
Cloud computing outsourcing	



2. In your opinion, what are some of the benefits that have accrued to the organization as a result of outsourcing ICT services?

	<b>Strongly agree</b>	<b>Agree</b>	<b>neutral</b>	<b>Strongly disagree</b>
Cost reduction				
Focus on core competence				
Access to special vendor				
Improved services				
Free resources				
Provide flexibility				
Competitive advantage				
Others				

3. How would you rate the following factors as reasons for ICT outsourcing?

<b>Statement</b>				
	<b>Strongly agree</b>	<b>agree</b>	<b>Neutral</b>	<b>Strongly disagree</b>
Lack of in-house expertise				
High Administration Cost				
Improved company focus on core competencies				
High operational costs				
Lack of time				
To improve efficiency				
Pressure from business environment				
Access skills and resources not available in-house				

4. What other factors in your opinion may have contributed to the adoption of outsourcing of ICT services in your institution?

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5. How would you rate the following factors as challenges of ICT outsourcing?

Statement				
	Strongly agree	Agree	Neutral	Strongly disagree
Hidden costs of outsourcing				
Lack of a proper cost- benefit analysis				
Limited flexibility				
Lengthy contracts				
Sub-par services/ failure to deliver				
Lack of control.				
Political interference				
Security threat/ Confidentiality issues				
Over- reliance on external parties				
Poor structures to manage the outsourcing function well.				

6. Are there any other challenges that your organisation has experienced as a result of outsourcing ICT services. Please explain.

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## PART C: Performance

	Measure	Strongly Agree	Agree	Neutral	Strongly Disagree
<b>Finance</b>	The difference between budget and expenditure does not exceed 10%.				
	There has been a 7% net profit increase since ICT has been outsourced for the past 3 years.				
<b>Internal Business Processes</b>	Over 75% customer satisfaction rating as relates to ICT services				
	Less than 250 customers' complaints as relates to ICT services in the past one year.				
	Delay in processing customer requests has reduced to one day since ICT has been outsourced.				
	More than 1000 repeat customers in the past one year				
	Less unplanned system downtimes experienced since outsourcing ICT				
	The percentage of e-government transactions has increased by 50% since outsourcing ICT				
<b>Learning and Growth</b>	More than 25 staff have attended ICT training programs in the past one year				
	It is very easy for staff to adopt, learn and use ICT systems adopted by the organization				
<b>Customer Satisfaction</b>	Highly rated customer satisfaction indices in the past one three years				

## **APPENDIX II: LIST OF PROFIT MAKING PARASTATALS IN NAIROBI**

1. Kenya Re- Insurance Corp
2. Consolidated bank of Kenya
3. Kenya Post Office Savings Bank
4. Capital Markets Authority
5. Kenya Accountants and Secretaries Examination Board (KASNEB)
6. Kenya National Assurance Limited
7. Central Bank of Kenya
8. Kenya Airports Authority
9. Transport Licensing Board
10. National Transport and Safety Authority
11. Communication Commission of Kenya
12. Telkom Kenya LTD
13. Kenya Film Commission
14. Kenya Railways Corporation
15. Kenya Civil Aviation Authority
16. Kenya Roads Board
17. Postal Corporation of Kenya
18. Kenya Broadcasting Corporation
19. Tea Board of Kenya
20. Kenya Airways Limited
21. Cooperative College of Kenya
22. Pyrethrum Board of Kenya
23. Coffee Board of Kenya
24. National Cereals and Produce Board
25. Kenya seed Company
26. Kenya Dairy Board
27. New Kenya cooperative creameries LTD
28. University of Nairobi
29. Kenyatta University
30. Jomo Kenyatta Foundation
31. Kenya Literature Bureau

32. Kenya Institute of Education
33. Kenya Power and lighting Company
34. Kenya Pipeline Company
35. Kenya Petroleum Refinery
36. Kenya Electricity Generating Company
37. National Oil Corporation of Kenya
38. Kenya Utalii College
39. Kenya Wildlife Services
40. Kenyatta International Conference Centre Corporation
41. Export Processing Zones Authority
42. National Environmental Management Authority
43. Kenya Wine Agencies Limited
44. East African Portland Cement
45. Kenya Bureau of Standards
46. Kenya Industrial estates
47. Industrial development Bank Capital Limited
48. Kenyatta National Hospital
49. National Hospital Insurance Fund
50. Kenya Medical Supplies Agency
51. Kenya Medical Training College
52. National Housing Corporation
53. National Sports Stadia Management Authority
54. Kenya National Library Services
55. Kenya Culture Centre

*Source: Kenya Gazette (2016)*