THE INFLUENCE OF MIS ON THE PERFORMANCE OF THE PUBLIC PROCUREMENT AND DISPOSAL OF PUBLIC ASSETS AUTHORITY (PPDA)

A dissertation presented to

FACULTY OF BUSINESS ADMINISTRATION AND MANAGEMENT

in partial fulfillment of the requirements for the award of the degree

Master of Business Administration

UGANDA MARTYRS UNIVERSITY

**AKIROR Mary
2010-M102-20004**

Supervisor: Mugerwa Richard

September 2012

DEDICATION

I dedicate this report to my beloved Parents (Mr. and Mrs. Okol Leo) who have supported me all the time in all aspects of my life.

ACKNOWLEDGEMENT

Most of all I thank the Almighty God for the gift of life, wisdom, knowledge and courage towards the successful completion of this report.

I thank the management and staff of the Public Procurement and Disposal of Public Assets (PPDA) and also appreciate the individual respondents for their time and the answers to the questions that helped me gain insights during the great discussions and the stimulating visions. Their efforts helped me to sail through the research smoothly.

I would like to thank my beloved parents for their tireless efforts and sacrifice in bringing me up, counseling, facilitating my education and always being there for me.

Special thanks go to my supervisor, Mr. Mugerwa Richard for his commitment, continued support and guidance without which I would not be able to successfully complete this whole exercise. To all my lecturers of Uganda Martyrs University and course mates, especially: Godfrey Erukwaine, Drake Kataaha, David Asiimwe and Nannozi Josephine (Starz Group) for their fun and encouragement that kept me strong during the course. Thank you.

Much appreciation to Sheila Sempa, Masembe Ishak, and Moses Mwesigye for their love and patience exhibited during the program, my brothers and sisters for all the support rendered towards my life and this research and all those that I have not mentioned for being part of my wellbeing during this program. Thank you all.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

AO:	Accounting Officer
CC:	Contracts Committees
DFA:	Director of Finance and Administration
DLC:	Directorate of Legal and Compliance
DMS:	Database Management System
DPAI:	Directorate of Procurement Audit and Investigations
DTCB:	Directorate of Training and Capacity Building
EC:	Evaluation Committee
ED:	Executive Director
ERP:	Enterprise Resource Planning
HR:	Human Resource
ICT:	Information and Communications Technology
IFMS:	Integrated Financial Management Systems
IS:	Information System
IT:	Information Technology
MIS:	Management Information System
MISs:	Management Information Systems
MOFPED:	Ministry of Finance, Planning and Economic Development
PDE:	Procuring and Disposing Entities
PDU:	Procurement and Disposal Unit
PESTEL:	Political, Economic, Social, Technological, Environmental and Legal
PPDA:	Public Procurement and Disposal of Public Assets Authority
PPMS:	Procurement Performance Monitoring System
PS/ST:	Permanent Secretary / Secretary to the Treasury
ROP:	Register of Providers
TP:	Tender Portal
WWW:	World Wide Web

ABSTRACT

The study sought to investigate the influence of Management Information Systems (MISs) on the performance of the Public Procurement and Disposal of Public Assets Authority (PPDA). Data was collected from 100 respondents, using self administered questionnaires and analyzed using the Statistical Package for Social Sciences (SPSS V.17). The findings substantiate that MISs was an integral part in promoting efficiency in organizational work processes. This implies that when management is committed to development and implementation of the MISs, this would promote effectiveness and efficiency in the PPDA's performance. This is justification that MIS was paramount in improving organizational efficiency.

The findings on objective two revealed that MIS had a positive significant effect on service delivery. The positive influence of MIS on service delivery is justification that to attain reliable, responsive, tangible, empathy and assurance during service delivery, there was need to have line managers and employees appreciate the role of MIS at the PPDA. The findings confirmed that MIS was a determining factor of information quality which is an implication that management's willingness to develop a fully fledged MIS at the PPDA would enhance information quality at the PPDA and also result into production of accurate, reliable and relevant information.

The study recommends that the management of PPDA should draw a lot of emphasis on MIS as this would greatly enhance the performance of the PPDA. This should be supported by effective and efficient governance structures which promote MIS among stakeholders in the procurement sector. On the other hand, PPDA should advocate for the production of accurate, relevant and reliable information through the use of the MIS that can be used by the different stakeholders. Considering that the study indicated a significant positive correlation between MIS and organizational performance, greater attention must be given to the perceptions held by the PPDA staff, PDEs and providers in relation to the MIS. Stakeholders in the procurement sector should undertake training of the employees in the use of MIS as this will help in developing their perceptions of usefulness and ease of use. This in turn will greatly influence service delivery in the sector. Staff need the assurance that by using the MIS option they will achieve greater job performance, save time, money and complete a given task better, than it would have otherwise been.

From the findings, it is further recommended that in order to realize effective capacity utilization of the MIS, there should be a move from use of ICTs for elementary work such as word processing and integrate the current systems with customized electronic information management programmes which promote organizational performance. Management should consider putting in place a fully fledged customized MIS system which will coordinate the creation, management, maintenance and disposal of records.

CHAPTER ONE

INTRODUCTION

1.1   Introduction

In order to realize effective and efficient service delivery by Procuring and Disposing Entities (PDEs), there is need to have an integrated procurement function enabled by information technology. Several efforts have been made by government, the private sector and international organizations to support public procurement through MIS. However, the performance of PDEs in Uganda is still below average. The study sought to examine the influence of MIS on the performance of PPDA. According to the study, MIS is the independent variable and performance of PPDA is conceptualized as the dependent variable for the study. In this chapter, the background of the study, the statement of the problem, the purpose of the study, the research objectives, the research questions, the hypotheses, the scope of the study, the conceptual framework, the significance, justification and operational definition of terms and concepts are presented.

1.2   Background to the Study

During World War I & II – The function of purchasing increased due to the importance of obtaining raw materials, supplies, and services needed to keep the factories and mines operating. In the 1950s & 1960s - Purchasing continued to gain stature as the techniques for performing the function became more refined and as the number of trained professionals increased. The emphasis became more managerial. With introduction of major public bodies and intergovernmental organizations, such as United Nations, procurement became a well-recognized science. Almost all purchasing decisions included factors such as delivery

and handling, marginal benefit, and price fluctuations. Procurement generally involves making buying decisions under conditions of scarcity. If good data is available, it is good practice to make use of economic analysis methods such as cost-benefit analysis or cost-utility analysis (ww.wikipidia.com).

The Harvard Business Review (1983) published a ground-breaking article on purchasing strategy that is widely cited today as the beginning of the transformation of the function from "purchasing," something that is viewed as highly tactical to procurement or supply management, something that is viewed as very strategic to the business. Procurement started becoming more integrated into the overall corporate strategy and a broad-based transformation of the business function was ignited, fueled strongly by the development of supply management software solutions which helped automate the source-to-settle process (Defense Acquisition 2009).

MIS is the combination of men, machines and procedures for the process of collecting significant information from the internal and external source of a firm or organization, and then processes this information for the purpose of facilitating the process of making decisions (Kumar *et al* 1998). Therefore, MIS focuses on supporting the decision making function in the organization and it is a computerized business processing system which helps to generate information for the people in the organization to meet their information needs for the process of decision-making in order to achieve the objectives and goals of the entire organization (Kumar *et al* 1998). An organization's performance involves identifying outcomes that it wants to achieve, creating plans to achieve those outcomes, carrying out

those plans, and determining whether the outcomes were achieved. Success is achieving the planned outcomes.

MIS involve three primary resources: technology, information, and people. It's important to recognize that while all three resources are key components when studying MIS, the most important resource is people or human resource. MIS are regarded as a subset of the overall internal control procedures in an organization, which cover the application of people, documents, technologies, and procedures used. MIS are distinct from regular information systems in that they are used to analyze other information systems applied in operational activities in the organization. Academically, the term is commonly used to refer to the group of information management methods tied to the automation or support of human decision making.

PPDA is a regulatory body that was established under the Public Procurement and Disposal of Public Assets Act No. 1 of 2003 which was passed by Parliament in November 2002 and assented to by His Excellency the President in December 2002. The law was gazetted in January 2003 and brought into effect by the Minister of Finance, Planning and Economic Development on 21 February 2003. It is the principal regulatory body for public procurement and disposal of assets in Uganda. Due to a number of challenges faced by the Act and Regulations of 2003, an amendment of the Act was assented to and signed by His Excellency the President of the Republic of Uganda on 22nd June 2011. The amendment to the Regulations is still in Parliament for discussion before the process can be concluded to enact them as a statutory instrument.

In Uganda, PDEs are slowly considering the computerization of their processes so as to reap the benefits associated with MIS such as reduced supply risk, increased purchasing professionalism, improved information, communication and knowledge management, freeing up time for their staff allowing them time to accomplish more strategic aspects of the organizations and better access to information. However, the status of Information Communication Technology (ICT) in the PDEs and providers undermines the objectives of PPDA's MISs as most of them lack ICT infrastructure, ICT literacy and mismatch between the workforce and the workload hence affecting effectiveness, efficiency and service delivery of PPDA as a result having a negative effect on reporting and decision making in the sector.

1.3   Statement of the Problem

Competence may be an organizational challenge that most employers strive to accomplish through staff and employing technologies that the modern world offers. When technologies are employed it comes with challenges of compliance, constant updates and establishing the employed technology among all stakeholders and clients across all the operational areas of that organization. Since PPDA introduced MIS in 2006, it is still grappling with non-compliance, failure or non-receipt of letters to the respective PDEs which are in response to applications of deviations, accreditations, administrative reviews, legal advice, audit reports and suspension communications due to the fact that these letters do not reach their intended destinations, especially newly created remote districts. There is also a related concern of PDEs' country wide, complaining of PPDA being out of their reach due to the fact that it does not have decentralized offices, causing grave difficulties for them in making various queries as per the PPDA law to enable them make quick, quality, effective and efficient

delivery of their functions as required in the execution of their duties of public procurement and disposal of public assets. Therefore, this study is proposed to find out the influence of MIS on the performance of PPDA as an organization and the clients it serves since the introduction of the systems into PPDA workings.

1.4 Objectives of the Study

1.4.1 Major Objective

The study sought to investigate the influence of MIS on the performance of PPDA.

1.4.2 Specific Objectives

i) To establish how PPDA's MIS has enhanced service delivery among clients and stakeholders.

ii) To establish how MIS has facilitated the creation of standards for the PPDA systems.

iii) To establish how information quality has been influenced by MIS in PPDA.

1.4.3 Research Questions

i) How has the MIS of PPDA helped in enhancing service delivery?

ii) Has MIS resulted in setting up quality standards for PPDA?

iii) How has the MIS helped in information quality in PPDA?

1.5 Research Hypotheses

H_1: There is a relationship between MIS and service delivery in PPDA.

1.6   Scope of the Study

1.6.1   Geographical Scope

The study was carried out at the PPDA offices located on Plot 37 at Nakasero Towers, 5th Floor and Plot 39, Naksero Road. It is situated in Kampala District, the capital city of Uganda.   The PPDA comprises of four (4) departments, and three (3) units. The total number of staff at the headquarters as of April 2011 was 80 staff, which includes technical officers as well as support staff. These comprised the population of the study.

1.6.2   Subject Scope

In terms of content, the study was limited to the use of the MIS in PPDA resulting into effective, efficient and quality delivery of services thus enhancing its performance in the service delivery industry. The study was limited to the use of the MIS in PPDA resulting into effective, efficient and quality delivery of services thus enhancing its performance in the service delivery industry. The study focused on examining how PPDA's MIS has enhanced service delivery, facilitated the creation of standards for the PPDA systems and how MIS has influenced information quality at PPDA.

1.6.3   Time scope

Reforms in the public for procurement sector in Uganda started way back in 1997, but the Procurement and Disposal of Public Assets Act took effect in 2003. The Researcher concentrated on the year 2006, when the MIS was officially launched in PPDA to date.

1.7   Significance of the Study

The results of the study will help the management of PPDA realize the influence of MIS on the performance of PPDA so as to develop the necessary strategies to attain value for money through relaying emphasis on an effective and efficient MIS.

For the academicians, the study will bring out the association between MIS and the performance of PPDA. The results will contribute to the existing pool of knowledge and debate on MIS and organizational performance in both the public and private sectors, which in turn will be used as a future reference for other Researchers by drawing examples from the Ugandan setting.

For the policy makers such as the Ministry of Information Communication Technology, Uganda Communications Commission, Ministry of Finance, Planning and Economic Development among others, the findings and recommendations will be useful in the development and strengthening of the existing policies and regulations in the procurement sector.

The study identified problems in public procurement in regard to inadequacies with MISs and suggested recommendations on how the different stakeholders can develop strategies that can enable them overcome the challenges in the sector.

1.8   Justification of the Study

The PPDA's objectives set out in Section 6 of the Act, are; the first objective is to ensure the application of fair, competitive, transparent, non-discriminatory and value for money public procurement and disposal standards and practices. The second objective is to

harmonize the procurement and disposal policies, systems and practices of the Central Government, Local Governments and statutory bodies. Setting standards for the public procurement and disposal systems in Uganda, monitoring compliance of procuring and disposing entities and building procurement and disposal capacity in Uganda are the third, fourth and fifth objectives respectively. To effectively deliver on the objectives stated above, it is vital that studies such as this be frequently carried out to guide, correct, and evaluate activities of such establishments in line with their goals and / or objectives.

Fundamentally this research will; facilitate to establish the impact of MIS on the performance in PPDA and help to identify the gaps hindering efficient, effective and quality performance in the organization. The study will assist to enhance the tools (s) that are used in network communication for efficient and effective information sharing in PPDA and contribute to scholarly knowledge on the impact of MIS on performance in an organization, all of which validate the importance of this study.

1.9   Definition of Key Terms

Information: This refers to data that has been verified to be accurate and timely, is specific and organized for a purpose, is presented within a context that gives it meaning and relevance, and that can lead to an increase in understanding and decrease in uncertainty.

Management: This characterizes the process of leading and directing all or part of an organization, often a business, through the deployment and manipulation of resources (human, financial, material, intellectual or intangible).

Mission: The purpose for which the PPDA exists based on the Act of Parliament and mandate.

Organization – This is the group of people working together to achieve a common goal, objectives and mission.

Outputs: The product or service that the PPDA produces.

System: A set of detailed methods, procedures, and routines established or formulated to carry out a specific activity, perform a duty, or solve a problem.

The PPDA: The Public Procurement and Disposal of Public Assets Authority

Vision: A vibrant and compelling image of what PPDA wants to create

1.10   Conceptual Framework

Figure 1: Conceptual Framework

```
                    ┌─────────────────────────┐
                    │ Moderating variables    │
                    │   ▪ Legal               │
                    │   ▪ Economic            │
                    │   ▪ Social              │
                    │   ▪ Technological       │
                    │   ▪ Political           │
                    │   ▪ Environmental       │
                    └─────────────────────────┘
                                │
                                ▼
┌──────────────────┐                      ┌─────────────────────────────┐
│ MIS              │                      │ Organizational Performance  │
│  • People        │─────────┐      ┌────▶│   • Effective Service       │
│  • Technology    │         │      │     │     delivery                │
│  • Information   │         └──────┘     │   • Quality service         │
│                  │            ▲         │   • Efficient service       │
└──────────────────┘            │         └─────────────────────────────┘
                                │
                    ┌─────────────────────────────┐
                    │ Intervening variables       │
                    │   • Education               │
                    │   • Experience              │
                    │   • Personal factors        │
                    │   • Influence peddling      │
                    │   • Top management          │
                    │     interference            │
                    └─────────────────────────────┘
```
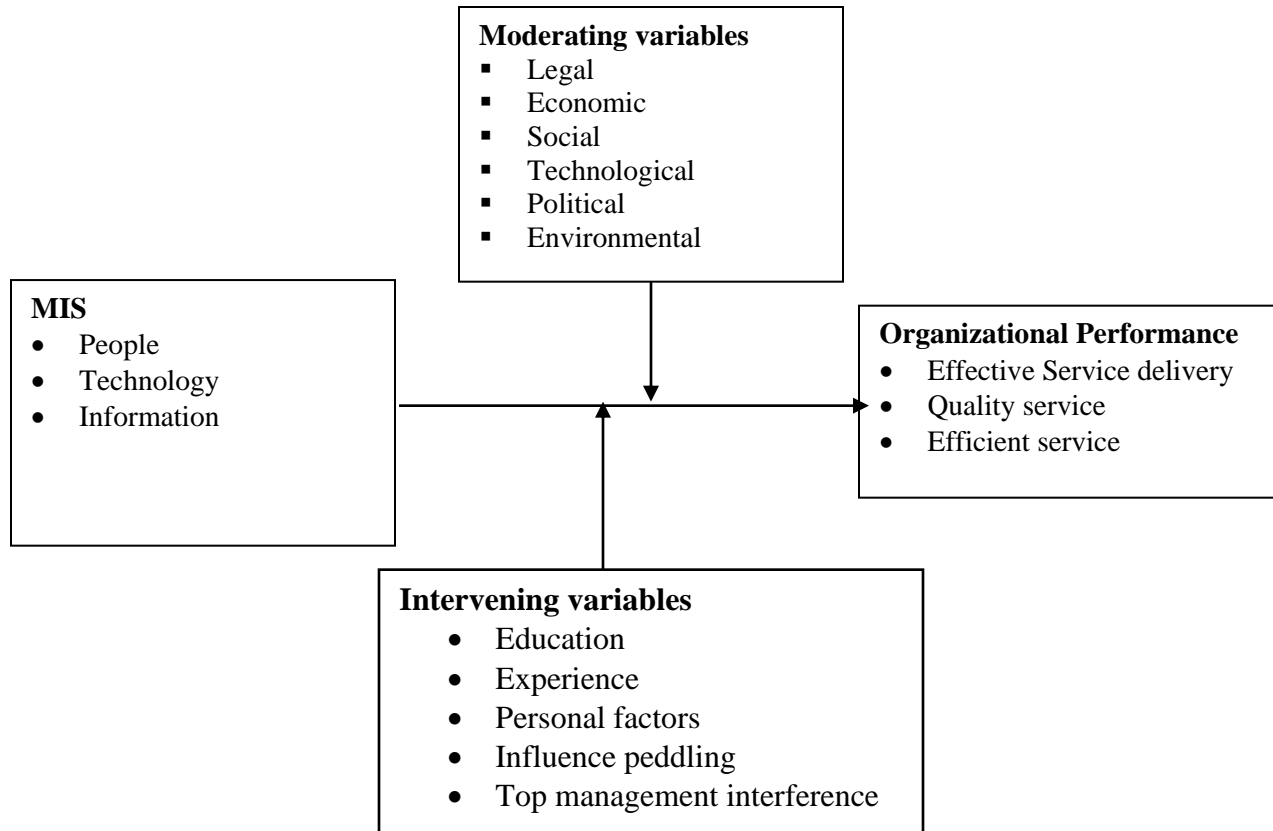
The conceptual framework is developed after review of related literature on the study variables. The conceptual framework shows the relationship between the study variables under investigation. The independent variable is MIS with organizational performance as the dependent variable. The model was moderated by the legal, economic, social, technological, political and environmental factors whereas, the intervening variables comprised of education, experience, personal factors, influence peddling and top management interference. From existing literature, the old techniques like intuition, rule of thumb, personal impulse and prestige, are now considered useless in the process of decision taking. Modern management is constantly on the lookout for such quantitative and such

10

information, like MIS which can help in analyzing the proposed alternative actions and choosing one as its decision. According to Stoner, *et. al,* (1995), MIS is the computer based information system used for effective planning, decision-making and control, and it is based on technology, people and information.

Ursula (1989) in the real world of technology defined the concept of technology as the practice, the way we do things. Looking at Information Technology (IT), is concerned with technology to treat information. The acquisition, processing, storage and dissemination of vocal, pictorial, textual and numerical information by a microelectronics-based combination of computing and telecommunications are its main fields, (Longley & Shain 2012). Some of the modern and emerging fields of IT are next generation web technologies, bio-informatics, cloud computing, global information systems, large scale knowledge bases. Advancements are mainly driven in the field of computer science. Accurate Procurement and the whole cycle require a solid Information Technology system that will definitely result in strong performance for PPDA.

The concept of information according to Luciano, *et. al.,* (2009) is seen in times of high competitiveness between companies, the value of information becomes an important component for executives to make timely decisions to react to adversities of the environment. The use of a system based on information management can provide advantages in decision making. Concomitantly, the use of IT by companies has spawned the appearance of various styles in relation to IT management. For a better understanding of the IT concept and its management styles, this work makes use of the single case research method, focusing on a company operating in the telecommunications market. The objective

is to characterize the concept of IT, as well as some of its peculiarities. Finally, it confirms that IT management can show how much the information can be treated as an important resource for the company to stay competitive in the market. Information is the basis for every decision taken in an organization. The efficiency of management depends upon the availability of regular and relevant information. Thus it is essential that an effective and efficient reporting system be developed as part of an accounting system. The main object of management information is to obtain the required information about the operating results of an organization regularly in order to use them for future planning and control.

People: Training has traditionally been an important area in information systems (IS). Modern organizations require IS to be more productive and innovative in their operations. Training IS personnel in creative problem solving (CPS) techniques may be an attractive alternative for IS organizations that wish to improve the productivity of their personnel. An understanding of learning styles can be an essential factor in designing successful creativity training. The likely learning styles exhibited by IS personnel and the appropriate CPS techniques based on those learning styles offer the organization the much needed stability. (Digital Object Identifier-Hawaii- 1991)

Performance: Balunywa's (1997) position on the concept of performance is that performance can be looked at in terms of competitive performance, financial performance and quality of services, flexibility, resource utilization and innovations. Performance is taken to be the function of an organization's ability to meet its goals and objectives both in the short and long run. O'Brien (1999) adds that performance entails effectiveness, which refers to the firm's ability to serve and produce what the market requires at a particular time

and efficiency which means meeting the objectives at the lowest possible cost with the highest possible benefits. Staples et al., (2002) argue that performance measures must focus attention on what makes, identifies and communicates the drivers of success, support organization learning and provide a basis for assessment and rewards.

Legal Concerns: The PPDA Act and Regulations (2003) are in operation and all Government departments and other Government-owned bodies are obliged to follow them. The law emphasizes best practices including procurement and disposal principles, rules, administrative review systems, Codes of Conduct, as well as suspension of providers for offences and disciplinary measures against public officers who commit malpractices. The law is also complemented by Regulations, Guidelines, Forms and Standard Bidding Documentation. These serve to assist the PDEs and providers of services, supplies and works in carrying out procurement and disposal processes.

1.11   Conclusion

This chapter of the study looked at the background to the study, statement of the problem, major objective, specific objectives, research questions, hypotheses, scope of the study, significance of the study, justification of the study, conceptual framework and definition of key terms. Generally, it gave the overview of what the Researcher intended to achieve concerning the problem of study.

CHAPTER TWO

LITERATURE REVIEW

2.1   Introduction

This chapter presents the review of literature related to the subject under study. In order to give a clear picture of the status of the influence of MIS on the performance of PPDA, this chapter reviewed available literature on this subject. It clearly identified the gaps in the existing literature on the influence of MIS on the performance of PPDA and highlight similar problems that have not been resolved and thereby justify the study. In so doing, the Researcher tackled them objective by objective because discussing it that way aids clear and precise discussion and presentation of current literature and for ease of reference.

2.2   The Public Procurement Structure

The Government of Uganda has since 1997 been implementing the reforms in the Public Procurement Sector, the reform effort culminated into the enactment of the Public Procurement and Disposal of Public Assets Act 2003, and Regulations 2006. The Act established the Public Procurement and Disposal of Public Assets Authority (PPDA) as the Procurement oversight body and decentralized procurement to the procuring and disposing Entities (PDEs). (PPDA-Report January 2010). A diagrammatic representation of the relationship between the various bodies responsible for public procurement and disposal in Uganda is shown below.

Figure 2.1: Institutional set-up for procurement as provided in the PPDA Act.
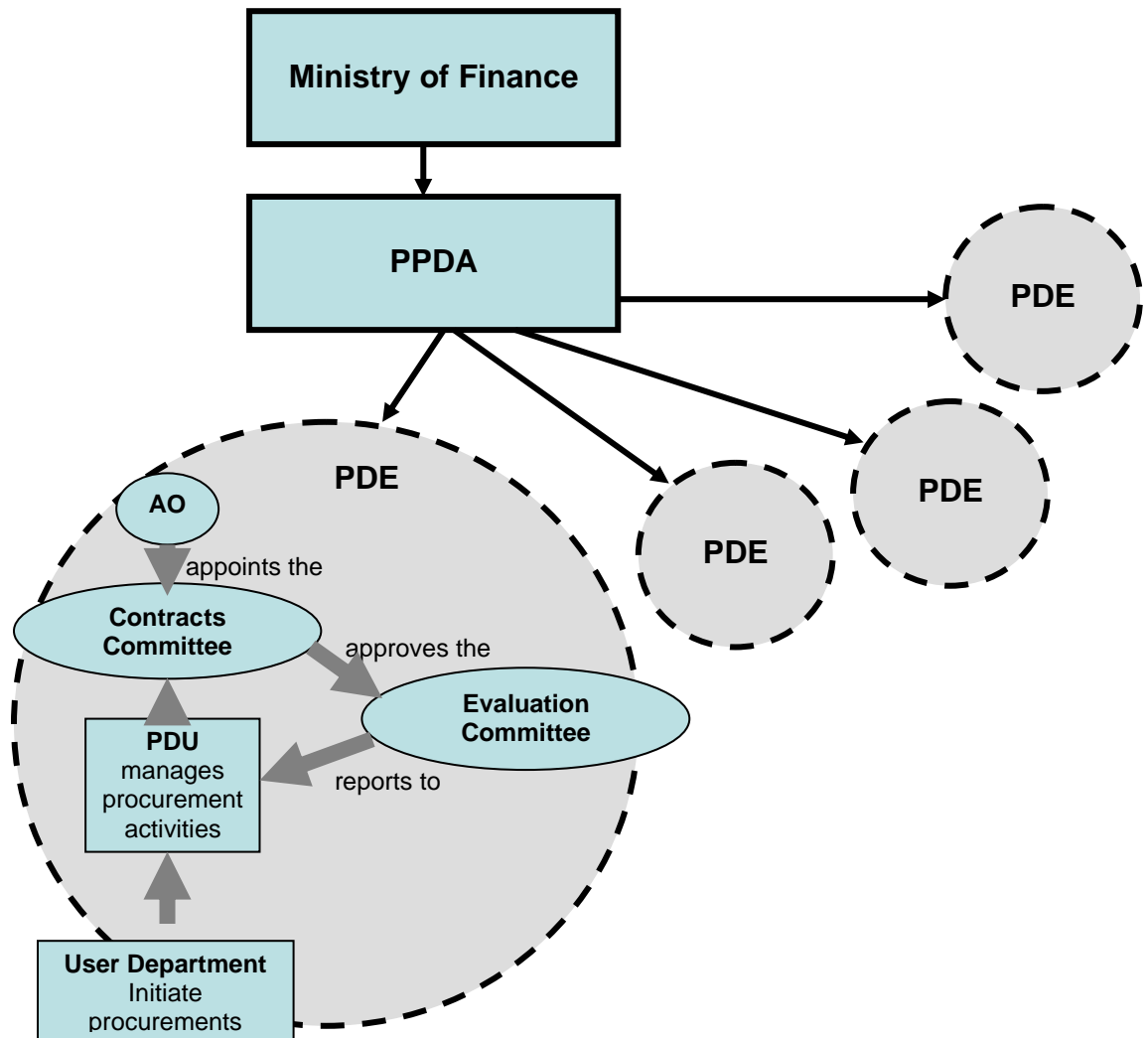
Source: The Country Procurement Assessment Report, 2004

The structure of public procurement in Uganda under the PPDA Act no.1 of 2003 as amended is that the PPDA Act regulates the Procuring and Disposing Entities (PDEs) which are Government Ministries, Districts and Municipal Local Government Authorities and other public bodies engaged in procurement and disposal activities. Each PDE includes: an

Accounting Officer, a Contracts Committee, a Procurement and Disposal Unit, User Departments and Evaluation Committees. The Accounting Officer, who is appointed by His Excellency, the President of the Republic of Uganda, is responsible for establishing a Contracts Committee subject to approval of the Permanent Secretary/Secretary to the Treasury (PS/ST) of Ministry of Finance, Planning and Economic Development (MOFPED). The Contacts Committee's main functions are to authorise the choice of a procurement and disposal methods, to approve bidding documents, the Evaluation Committee (EC) and the firms to be invited to participate in the bidding process depending on the choice of method of procurement or disposal. The CC also awards contracts.

The Accounting Officer also ensures that the PDE establishes an appropriately staffed PDU, who are the professional staff charged with managing all the procurement and disposal activities of the Entity except adjudication and award of contracts. User departments are a branch or division of the PDE that initiate procurements or disposal requirements and are responsible for the management of the contract to completion. The evaluation of bids is the responsibility of an Evaluation Committee whose membership is recommended by the PDU and approved by the CC. The Act emphasises the delineation of functions and separation of powers at the various stages of the procurement and disposal process.

2.3   The Functions and Objectives of the PPDA

Public procurement is decentralized to the Procuring and Disposing Entities, therefore, the PPDA's functions include; developing regulations, guidelines, standard bidding documents and carrying out compliance checks and audits, publishing contract awards, and pre-qualifying and approving the use of Third Party Procurement Agents (TPPA) by Procuring

and Disposal Entities (PDEs), suspending providers who are in breach of the Ethical Code of Conduct. The PPDA also provides a second line of appeal in case of complaints. There is no formal appeals body beyond the PPDA and a formal mechanism is yet to be established to handle appeals and complaints which shall be known as the tribunal.

The law is in operation and all Government departments and other Government-owned bodies are obliged to follow it. The law emphasizes best practices including procurement and disposal principles, rules, administrative review systems, Codes of Conduct, as well as suspension of providers for offences and disciplinary measures against public officers who commit malpractices. The law is also complemented by Regulations, Guidelines, Circulars, Forms and Standard Bidding Documentation. These serve to assist the PDEs and providers of services, supplies and works in carrying out procurement and disposal processes.

The first objective describes the principal purpose of the PPDA's regulatory role, the second objective reflects the need to bring the benefits of the public sector reform programme to all levels of government and to bring about a properly integrated system as well as the standards contained in the Act and Regulations. The PPDA sets additional standards in the guidelines it issues as in the third objective. The law may not be fully observed by all PDEs on account of misunderstanding of its requirements or an attachment to traditional practices and the PPDA is therefore charged by the objective of monitoring compliance with the Act, Regulations and guidelines by all relevant parties; this objective is discharged through the PPDA's audit, inspection and investigation function. Finally, PPDA is also charged with the objective of recognizing that procurement and disposal capacity in Uganda needs to be

strengthened in respect of professional procurement skills and understanding of the law and the purposes of the reform programme.

2.4 Management Information System (MIS)

2.4.1 The Concept of Management Information System

According to Mainhart (1999) a MIS is a system to convert data from internal and external sources into information and to communicate that information, in an appropriate form, to managers at all levels in all functions to enable them to take timely and effective decisions for planning, directing and controlling the activities for which they are responsible. MISs are a combination of hardware and software used to process information automatically. Commonly, MISs are used within organizations to allow many individuals to access and modify information. In most situations, the MIS mainly operates behind the scenes, and the user community is rarely involved or even aware of the processes that are handled by the system.

As in other areas of the organization, there should be an information strategy, well thought out, formulated, administered and monitored (Ndubisi & Jantan, 2003). Formal communication systems in an organization can have an effect on its structure, the style of management and overall direction. MIS is more than just a plan for the use of computers, since it involves a greater understanding and interlinking of organizational processes, management functions, planning and decision making processes, control principles, and the nature of communication and information flow (Waterfield & Ramsing, 1998). To gain an understanding of the MIS currently existing in the organization, it is important to conduct

an information audit. An audit should establish two things: first where the information gaps are, and secondly how the information already possessed is handled.

A MIS must be understood by management – it must be simple and easy to communicate with, and inspire confidence in its output. It must also be perceived as useful – it must be complete in key areas, logical, easy to update, and controllable (Bloomfield & Coombs, 1992). Information is only relevant if it is timely, appropriate, accurate, understandable and operational. In order to do this, it is important to reduce information overload. This can be done by investing in vertical information systems so that information is collected and redirected to appropriate places in the hierarchy. According to Dcurran & Meuter (2005), iinformation overload can, also, be reduced by creating lateral resources, decentralizing decision-making by allowing direct contact between people who can share problems, or by forming short term teams or task forces to resolve issues via interdepartmental problem-solving (Bloomfield & Coombs, 1992). Many difficulties are encountered by organizations with MIS, no matter how sophisticated the computer equipment used.

In a more dynamic and competitive environment, organizations are changing towards more flexible systems, with the object of improving their performance. Thus some organizations are changing their ISs, others their managerial styles, and other both of them. MIS according to Davis and Olson (1984) is an integrated user-machine system for providing information to support operations, management and decision making functions in an organization. The system utilizes computerized and manual procedures; models for analysis, planning, control and decision making; and a database. MIS principle concerns is to facilitate decision making by supplying the information needed in an up-to- date and

accurate information to the people who need it on time in a usable form. Information is a set of classified and interpreted data used in decision making. It has also been defined as 'some tangible or intangible entity which serves to reduce uncertainty about future state or events'.

2.4.2 Reasons for failure of MISs

Many of the reasons for the failure of MISs to provide management with the information needed include lack of support from top management, deficiency of computer knowledge and computer applications amongst managers, mistaken application of computers and computer systems, too great emphasis on low-level data processing applications, lack of understanding by information specialists of the requirements of management, insufficient attention to assessment, choice and implementation stages of MIS design, absence of an information systems strategy and misuse of the information system in the area of control (Venkatesh, 2000).

2.4.3 Benefits of MIS

MIS facilitates managerial functioning, management information is an important input at every level in the organization for decision making, planning, organizing, implementing, monitoring and controlling. MIS is valuable because of its content, form and timing of presentation. In the context of different levels of decision making, information can be described as: source, data, inferences and predictions drawn from data, value and choices (evaluation of inferences with regard to the objectives and then choosing a course of action), and action which involves course of action. The MIS concept comprises three interrelated and interdependent key elements: management, system and information (Murdick and Ross, 1975). Today, organizations in the world are facing different changes

which affect their competitive advantage. Organizations are moving to information-based management. As a result, more and more companies/organizations are focusing on implementing information system or computerized system which process data or facts and produces information to be used in the decision-making process (Shim 2000).

Furthermore, most of the organizations have realized the importance of MIS, a system or process that offers the information that is vital in order to manage a company or organization in an effective manner. It enables to improve communication among employees, distribute complex material throughout the institution, supply an objective system for recording and aggregating information, lessen expenses that are connected to labor-intensive manual activities and support the organization's strategic goals and direction (Administrator of National Banks; Comptroller of the Currency May 2005).

2.5   Organizational Performance

According to Balunywa (1997) performance is taken to be the function of an organization's ability to meet its goals and objectives both in the short and long run. Murdick and Ross *(*1975) adds that performance entails effectiveness, which refers to the firm's ability to serve and produce what the market requires at a particular time and efficiency which means meeting the objectives at the lowest possible cost with the highest possible benefits. Balunywa (1997) says that performance can be looked at in terms of competitive performance, financial performance and quality of services, flexibility, resource utilization and innovations. While Mahmood et al. (2000) argue that performance measures must focus attention on what makes, identifies and communicates the drivers of success, support

organization learning and provide a basis for assessment and rewards. The Researcher agrees with the respective authors in terms of all these definitions of performance.

In the view of Lawrence (1993), performance can be measured at both organizational and individual levels and this is referred to as performance appraisal. He further argued that organizations have desired potentials in terms of capacity attraction, market share and financial strength, and that performance is the difference between potential achievement and what has been achieved. While Lucey (1997), revealed that profitability is the most commonly used measure of financial performance, due to the nature of small business enterprises, it is difficult to measure the levels of profitability as they rarely keep proper books of accounts.

Therefore, for the purpose of this study, performance will be looked at in terms of effective, efficient and quality delivery of the service. There is a tendency to consider productivity in terms of a quantitative point of view as a ratio of output to input. As Iacono and Kling (2006) points out, the basic concept is always the relationship between the quantity and quality of goods or services produced of resources used to produce them.

2.6   Facilitation of Standards through MIS

MIS adoption by public organizations increases productivity in the procurement process; enhances and increases efficiency of internal organizational operations; and connecting public organizations more easily and cheaply to external contacts (Taylor and Murphy, 2004). Similarly MIS adoption in the procurement function improves the operational efficiency, reduce operations cost and increases value for money (Schware, 2003). Schware

mentioned that the use of www or computer system could enhance organizations to improve on their communication and therefore effectiveness in service delivery. Likewise, organizations and institutions today are being forced by the Internet to move toward tele-working. Therefore, there is need for web-based computer system that could provide easy access of information online and also provide accessibility to information from anywhere, anytime. This necessitates Management and the staff of PPDA to have access to the database. This is done by registering them into the system and then giving the privilege to them once logged-in. This is provided at the login time and other unauthorized users denied access.

Saucer *et al*. (1997) mentions that systems could not be designed as standalone components since they have to communicate, interact, access the same data and share information with their organizational environment. Therefore, www should have come in to integrate part of an existing information system by providing well-defined interfaces to standard application systems such as database systems and computer networks. The processing of the data is undertaken through online transaction processing with open source that facilitated Management get the required reports immediately. This helps in tracking and monitoring at the same time control the system for the extraction of the right information through an application. The response of the required report for well access correlated information across the MIS database depends on the data management system complexity of joint operations and the differences between the data sources.

According to Stoner *et al.* (1995) MIS is the computer based information system used for effective planning, decision-making and control. This is through a database. As leaders of

departments, good information ought to be maintained and controlled in a database by use of security measures through quotas, usernames, passwords and given privileges. A database is a shared collection of logically related data and a description of this data, designed to meet the information needs of an organization. In order for quicker and easier retrieval and references of stakeholders information and correspondences, there is need to automate the system to come up with a database for faster, cheaper, more efficient and effective performance than the manual processing system.

This built permanent information is kept for future use. Also the database has become an integrated part of almost every human's life, without it, many things we do would become tedious and perhaps impossible. A database gives way to do complex things, which human beings cannot do, as they are prone to errors. Consequently, Connolly and Begg (2001) stated that a Database Management System (DMS) and MIS was a software system that enabled users to define, create, maintain and control access to the database. In many instances, it gives access to users at the click of a button to get the required information without traversing into many documents. Accordingly, constraints are alleviated like storage space, budget and time factor making information easier operated in order to be automatically converted into printed form, which is exactly encompassed in the new era. This gives chance to enter into the global competition. Output can be brought forward at any desired time. Information will be retrieved at any time when needed which is a requirement development in the changing world. The manual system takes long to finish a single transaction resulting into time wastage to get the required reports and to effectively communicate any needed urgent matters to the stakeholders. It is inadequate and does not respond to the needs of management for efficient and effective data access.

In order to obtain the required standards in public procurement, effectiveness is one of the major core elements in the procurement process. Procurement is leant on delivery of a service effectively to the end users while at the same time realizing value for money. When something is deemed effective, it means it has an intended or expected outcome, or produces a deep, vivid impression but this is dependent on a well integrated MIS. Similarly, efforts have been made at developing information systems for assessing public procurement information to assist in the understanding of the procurement procedures efficiently for both the public stakeholders and the regulators (PPDA). However, most of these measures have been put into place but the implementation on how to use them through a MIS is not provided to the PDEs. The cost of providing the service should be efficient and evident in the delivery aspect of services.

2.7   MIS and Quality Information

Quality information in the service sector is of increasing concern to both academics and practitioners. Although MIS has been an unmet need among organizations for many years, the urgency of finding a solution has been increasing as many organizations focus on significantly scaling up operations. To begin scaling up without adequate information system is an invitation to disaster. Thus, the development of rigorous management information systems is one of the most important tasks currently facing organizations (Zeller, 2003). Information lies at the very heart of organizations, whether by hand or by computer, institutions maintain large amounts of critical data, from basic client information to detailed analysis of portfolio statistics. These data must be stored, manipulated, and most importantly, presented coherently to system users so that they can make sound management decisions (Mainhart, 1999). It is a well-known fact that information has different

characteristics, depending on the purpose for which it is used. Usually the same information will need to be presented in different forms for differing requirements of users.

This is the specific area where organizations find it hard to deal with. Management information systems (MIS) can be manual, semi automated, or even fully automated. If the system followed for data/record maintenance is completely manual, operational staff members will need large amount of time only to make entries into the manual records, analyze the data there from and obtain the reports as required. The main problem with the manual system is that is laborious, inefficient, and prone to errors as also data manipulation and information loss through improper storage. Basic level of information use is for strategic planning, management control and operational control (Connolly and Begg, 2001).

The organizations with semi-automated mode of system will also face similar problems. Though the system does the required work, it is not suitable in the long run to accommodate the growing requirements of the organization with respect to flexibility, product complexity and decision making methodologies. This data must be stored, manipulated and presented comprehensibly to users so that they can make sound management decisions. Therefore developing and deploying an MIS is very important for organizations. Siu (2001) stresses that through well-defined MIS, organizations are able to access/analyze information more efficiently for better decision-making, operations management and product development.

The right system in place, easy to understand, elegant, consistent and complete is required. The functionality had to be known and implementation with a well-defined interface, data hiding, loose coupling, using passwords and usernames as security measure for data access

from the system is essential. Communication would be efficient and effective with the developed system. Since many different methods are used, this called for one method to be in place. Every information system has to be familiar with the different kinds of methods with generally designed principles. An automated system would help management appreciate the benefits of efficient management of the Information System (IS) with the right developed system and introduced good performance as an alternative effective control. Database technology helps managers and enables management of every aspect of their operations in a coordinated and integrated way through access to structured data (Lucey, 1997). Management and staff will be able to share information in the organization.

The World Wide Web (www) became one of the most important media for sharing information resources. Programs, tracking of information, information monitoring, and various other types of resources could be accessed through the www (Bing *et al*., 2001). Research results, audit and investigative reports, suspended providers, procurement information to be shared by all the stakeholders and the public could also be put on the web from anywhere at any time by the right people. Therefore, since www provides a good infrastructure, reports could be accessed centrally by management of PPDA using an integrated MIS through the Internet.

2.8   MIS and Service Delivery

Services represent substantial part of business output and investments. In providing these services Information Technology (IT) is employed to facilitate the services, which represents a substantial portion of organizational spending. The objective of such investments is to create value for money. Internally, improved IT systems can enhance and

strengthen organizational infrastructure and capacity by increasing employees' efficiency; service coordination; information sharing between departments, financial record keeping and tracking of an organization's production and impact. Externally, information technology solutions can fundamentally transform organizational service delivery (Allison, 2010). Therefore, the impact of MIS on service delivery is an important issue for Researchers, resource managers and other stakeholders. MIS and service delivery include productivity enhancement, profitability improvement, improved work relations, competitive advantage and efficient use of resources at both intermediate level and organizational level (Melville et al., 2004).

While institutions invest substantially in MIS both in developing and developed countries, much attention has not been given to the understanding of how MIS creates value in organizations in developing countries. Many of the findings from developed countries have a limited value to stakeholders in developing countries (Zeller, Lapenu and Greeley, 2003). The topic of the payoffs of MIS investments in the developing countries is an important issue for managers and academics Researchers. An understanding of the contribution of MIS to organizational value and service delivery in developing countries will provide managers more confidence and direction in their MIS investments (Prasad 2008).

2.9   Conclusion

The reviewed literature revealed that organizations are becoming more dependent upon MIS because they are increasingly involved in more complex business environments, which need more technical skills to be properly coordinated. This calls for effective MIS in order to enhance performance of organizations. It makes employees more committed to the

organization and enjoy their work thus delivery of quality work both efficiently and effectively. Therefore, it is against this background that the Researcher found out that the influence of MIS on the performance of an organization, the Public Procurement and Disposal of Public Assets PPDA.

CHAPTER THREE

METHODOLOGY

3.1   Introduction

This chapter focused on the techniques that were used to obtain the required data for the study. It includes the research design, study area, population of the study, sample size, sampling techniques, sampling procedure, and data collection methods, instruments for data collection, validity and reliability of the instruments, data analysis and measurement of variables.

3.2   Research Design

Mugenda and Mugenda (2003), observe that a research design can be thought of as the structure of research. According to them, it is the "glue" that holds together all of the elements in a research project. A design is used to structure the research, to show how all of the major parts of the research project work together to try to address the central research questions. Orodho (2003) defines research design as the scheme, outline or plan that is used to generate answers to research problems. A research design hence can be regarded as an arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance with the research purpose. It is the conceptual structure within which research is conducted. In consideration, the Researcher adopted a case study as the research design. A case study seeks to describe a unit in detail, in context and holistically. It is a way of organizing data and looking at the object to be studied as a whole. In a case study, a great

deal can be learned from a few examples of the phenomena under study (Mugenda and Mugenda 1999).

3.3   Study Population

The population of the study was 120 respondents comprising of 22 PPDA staff, 3 PPDA IT department staff, 43 PDE technical staff and 52 pre-qualified service providers (PPDA HR Report, 2011; PDDA Compliance Report, 2011).

3.4   Sample Size

Sampling size is the portion representing the population and selection involves the process of choosing the elements from the population, (Amin, 2005). The sample size was 106 selected scientifically using a table for determining sample size developed by Krejcie and Morgan (1970) (Appendix III). The summary of the samples are broken below:

Table 3.1: Summary of samples

Category	Population	Sample Size	Sampling Technique
PPDA Staff	22	19	Simple random sampling
PPDA department of IT	3	3	Purposive sampling
PDE Technical Officials	43	40	Simple random sampling
Pre-Qualified Service providers	52	44	Simple random sampling
Total	**120**	**106**	

3.5   Sampling Techniques

Purposive sampling was adopted during the selection of PPDA IT Department staff, PPDA technical officials and PPDA staff were selected using simple random sampling. During the

selection of pre-qualified service providers, simple random sampling was used. All the respondents were selected basing on their individual relative understanding on the issues of procurement and MIS.

3.6   Data Source

Primary data were the main source of the data for the study and this was acquired from the respondents that comprised the study. This followed systematic and established academic procedures, as suggested by Mark (1995).

Secondary data: The secondary data were used to enhance the investigation and it was obtained from a review of existing literature on the PDEs, PPDA and providers. Additional information was gathered through documentary review where a number of documents for example; operational, quarterly and annual reports, minutes for PDEs, loose minutes/internal memos and correspondence from the suggestion boxes were reviewed. Documents on MIS at the global level were also reviewed to identify changes overtime in employee performance.

3.7   Data Collection Methods

The data collection methods are techniques of collecting data and since in this research both quantitative and qualitative methods were used, the quantitative data was collected using questionnaire, while qualitative data was collected by way of an interview guide.

3.7.1   Questionnaire

Data was collected using questionnaires. The Researcher developed questionnaires that answered specific objectives of the study for respondents to complete in writing. The questionnaire was structured (close ended). A closed ended questionnaire was adopted by the Researcher because it elicits specific responses which are easy to analyze, compare among different groups and are economical in terms of time and energy. The structured questionnaire elicited specific response which is easy to analyze as per Amin (2005). It gives an accurate profile of the situation and the data provided describes who, what, how, when and where of the variables in the study and also establishes the relationship between the independent and dependent variables.

3.7.2   Interviews

Face to face interviews were conducted. Interviews are a good tool as they enabled the Researcher gather in-depth information around the topic to meet specific needs. The Researcher was also able to clarify unclear issues in the questionnaire to the respondent (Mugenda and Mugenda, 1999). This method was used to collect data from top management.

3.8   Data Collection Instruments

The tools that the Researcher used for collecting data included the following; self administered questionnaires, interview guide and documentary review checklist.

3.8.1   Structured Questionnaire

Questionnaire is a carefully designed instrument for collection of data in accordance with the research questions and hypothesis. The justification for using this instrument is that it is less expensive and does not require the Researcher to be present for the respondent to complete. It was used to collect data in the category of senior and middle management staff, this is because they have a high level of literacy, and are able to read, understand and interpret the questions besides possessing the information required for the research. Attitude Scale (interval Likert Scale) was used to enable the respondents to select a statement that best described his or her reaction to the statement in the question. The interval Likert Scale questionnaire was designed on values assigned and ranked 5 to 1 in order of; 1-Strongly Agree, 2-Agree, 3- Neither Agree nor Disagree, 4-Disagree and 5-Strongly Disagree.

The interval scale measurement of variables was adapted because it is recommended for measurement of variables of a study that are seeking to draw conclusions based on percentages of respondents' responses as opposed to the nominal scale which is recommended for mutually exclusive and interval variables (Sekaran, 2003). This scale is used to determine what an individual believes, perceives or feels about self, others, activities, institution or situation (Amin, 2005).

3.8.2   Interview Guide

An interview guide was used to collect data from key informants who were top management staff and staff of PDEs. This data assisted in clarifying data collected by the structured questionnaires since it involved a face to face interaction and it also provided a whole range of views.

3.9   Quality of Data Collection Instruments

In order to make sure that quality and relevant data was collected, the research instruments were tested for validity and reliability as follows;

3.9.1   Validity and Reliability

The validity of the study is concerned with the extent to which data collection instruments accurately measure what they intend to. Validity and reliability are important concepts in the acceptability of the use of an instrument for research purposes. Validity refers to the appropriateness of the instrument in collecting the data that is supposed to be collected while reliability refers to its consistency in measuring whatever it is intended to measure (Amin 2005). The validity was measured by both content and face validity. Content validity measures the extent to which the content of the instrument corresponds to the content of the theoretical frame work of the study (Amin, 2005). Here, the expert views were obtained by talking to experts both academicians and practitioners in the field of Information and Communication Technology (ICT). These were required to comment on the relevance of the questions/items in the instrument. Content validity was assessed by using the questionnaire which measured the same concepts. If the measurements are consistent with the theoretical expectation, then the data have construct validity.

The reliability of the questionnaires was improved through pre-testing of pilot samples from staff. This enabled the re-phrasing of some questions. Furthermore, reliability of the scales was done with the application of the Cronbach Coefficient Alpha for the computations so as to check for the internal consistency of the scales (Cronbach, 1950). According to Cronbach (1950), coefficient alpha of 0.7 and above is considered adequate. From the results all the

Cronbach alpha coefficients ranged from 0.858 to 0.959, therefore meeting the acceptable standards.

Table 3.2:   Reliability

Variable	Anchor	Cronbach Alpha Value
MIS	5 Point	.858
Efficiency	5 Point	.897
Service delivery	5 Point	.959
Information quality	5 Point	.789
Performance	5 Point	.802

Source: Primary data

3.10   Data Collection Procedures

After obtaining an introductory letter which allows the Researcher to go into the field and gather data from Uganda Martyrs University, the Researcher made necessary introductions and outlined the objectives of the study to the top management of PPDA and selected PDEs, when permission was granted, then the Researcher presented a copy of the approved letter to carry out investigations to the top management and also discussed with them what was involved in this particular kind of study.

3.10.1 Structured Questionnaire

After permission was granted to the Researcher to carry out the investigation in PPDA and PDEs and providers, the Researcher then identified respondents. Then questionnaires were delivered by the Researcher who asked the respondents if they were ready to fill them in there and then. For those who were ready to fill in the questionnaires there and then, the Researcher sat and waited for the questionnaires to be completed and returned to her. For those who were not ready to fill in the questionnaires there and then, the Researcher found out from them when they could fill them in or when they could be collected (Amin, 2005).

She then also availed them with her telephone contact in case they do not mind calling. She also sent questionnaires to respondents by email who filled them and mailed them back to her.

3.10.2 Interview

After permission was granted to the Researcher to go on with the investigations in PPDA, PDEs and providers, the Researcher went ahead to prepare for the interviews with selected respondents. All interviews were oral and some of the steps which were followed included the following; contacting the interviewee(s), setting up the time and a convenience place for the interviews, go through the interview guides to ensure that the do's and don'ts are thoroughly considered and/or eliminated, thereafter the interviews were carried out while avoiding mistakes which could arise out of the interviewee's emotions, body expressions, loss of self control and so on, (Amin, 2005).

3.10.3 Documentary Review

Following the Researcher being granted permission to carry out the research in PPDA and PDEs, she availed her documentary checklist to the concerned authorities to enable her access the listed or necessary documents for perusal, studying of written documents and recording of facts where necessary, (Amin, 2005).

3.11   Measurement of Variables

The Likert Scale turns the questions into different statements which the respondents can select according to their judgment as indicated by Amin (2005). The variables were measured by defining concepts. For instance the questionnaire was designed to ask for

responses about MIS and organization performance. These were translated into observable and measurable elements so as to develop index of the concepts. The Researcher categorized the data collected in an orderly form using the 5 Likert scale used on the questionnaire as indicated below where; 1= Strongly agree, 2= Agree, 3= Undecided, 4= disagree, 5= Strongly Disagree. Socio-economic attributes like age, sex, employment period/duration of service, academic levels were measured at a nominal and ordinal scales depending on the variables.

3.12   Data Management and Analysis

After collecting the questionnaires and the interview schedules, the Researcher did central editing to check the questionnaire for obvious errors such as wrong entry, and missing or inappropriate replies. The Researcher also contacted the respondents for clarifications where necessary.

3.12.1   Quantitative Data Analysis

The Researcher collected data cleaned, coded and classified them into categories. The data was edited and entered into the data editor of Statistical Package for Social Scientists (SPSS) software for analysis according to the objectives of the study. Data was organized and analyzed using a 5 Likert scale. The Researcher presented data using descriptive and inferential statistics where frequency tabulations were used to present the data on demographic characteristics whereas, for the research objectives, percentages, Pearson correlation matrix and regression analysis were used. The Researcher used correlation analysis to test the relationships between the independent and dependent variables whereas, regression analysis was used to study the combined effect of the independent variables on

the dependent variable. The Researcher used percentages and correlations to present the findings of the study objectives. Item means were used to present the results. Pearson correlation coefficient, also known as r, R, or Pearson's r, a measure of the strength and direction of the linear relationship between two variables that is defined in terms of the (sample) covariance of the variables divided by their (sample) standard deviations.

3.12.2 Qualitative Data Analysis

Qualitative data were analyzed into a manageable form and a narrative constructed around it (Amin, 2005). Examples were used in the narrative in order to review trends and compare the respondents' opinions/perspectives of the issues being discussed. The data were classified into simple content categories, themes and sub-themes, closely examined and compared for similarities and differences. Qualitative data obtained by way of an interview guide were used to reinforce information gathered using the questionnaire to draw meaningful conclusions.

3.13 Limitations and delimitations

There was bias from the respondents when approached to provide information for the study. However, the Researcher tried to encourage the respondents to be as objective as possible. The Researcher encountered limited response especially from the respondents because these operate in a competitive business environment and by virtue of the sensitivity of the information. However the Researcher persuaded the respondents by showing them the letter of introduction from the university. Besides that she persuaded them that the research was meant for academic purposes only.

3.14 Ethical Consideration

When carrying out research the following ethical considerations were made;

Permission of the people who were being studied was sought to conduct the research involving them. The study avoided causing physical or emotional harm to the respondents who were part of the study. Objectivity during the research was emphasized so as to eliminate personal biases and opinions. Anonymity of the respondents was taken care of during the study so as to avoid victimization and this was informed to the respondents.

3.15 Conclusion

The chapter dealt with the concept of research design, sampling design, data collection, validity and reliability of the research instrument, data processing, analysis and limitations of the study which formed the research methodology. The next chapter provides an analysis, presentation, interpretation and a discussion of the findings of the study.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter presents the empirical findings, analysis and interpretation of the study according to the purpose and objectives of the study. The chapter is comprised of five sections. Section one presents the introduction, section two represents the response rate, section three dealt with the demographic characteristics which include gender, highest level of education, working experience and staff position using frequency tabulations. Section four, dealt with empirical findings on the study objectives using percentages and correlations. Section five dealt with multiple regression which presented the results on the combined effect of the independent variables on the dependent variable using regression analysis.

4.2 Characteristics of Respondents

To present characteristics, frequency tabulations and frequency distributions were used to indicate variations of respondents based on gender, highest level of education, working experience and staff position. The sample characteristics were presented basing on the responses from PPDA staff, PDE officers and providers.

4.2.1 Respondent Category by Experience Distribution

Frequency tabulation was used by the Researcher to present the experience distribution categories of the respondents. Table 4.1 below presented the results:

Table 4.1:   Experience Distribution

		Frequency	Percent	Cumulative Percent
Valid	Less than one year	18	18	18
	Less than two years	27	27	45
	Less than five years	23	23	68
	More than five years	32	32	100
Total		100	100	

Source: primary data

From the results in table 4.1 above, 32% of the respondents had worked for more than 5 years, 27% had served for less than 2 years, 23% had worked for less than 5 years and 18% had worked for less than 1 year. From the results it is clear that the majority of the staff had served for over 5 years which is indication that the majority of the respondents had acquired enough experience to perform their jobs in an effective and efficient manner. The results are summarized in figure 4.1 below.

Fig. 4.1: Experience Distribution
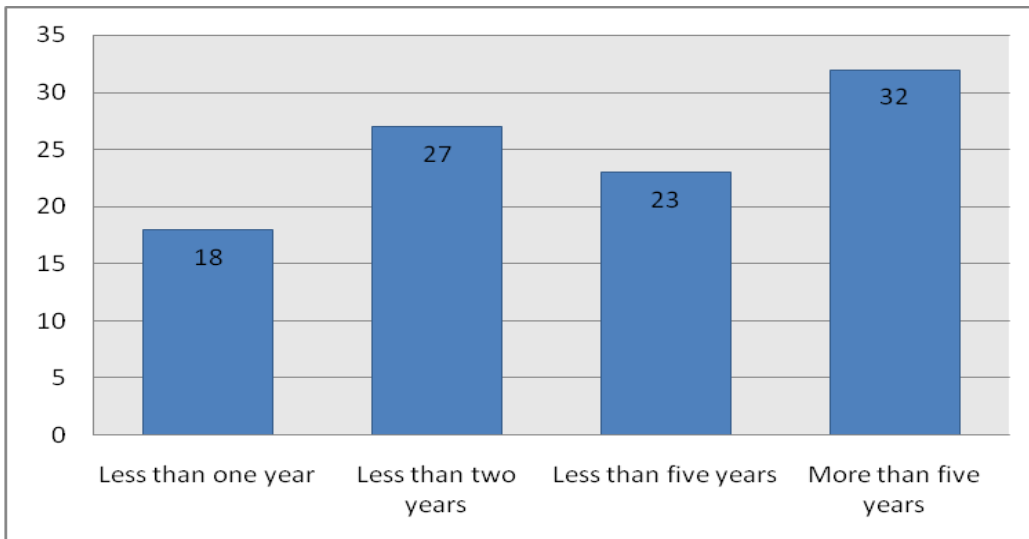
4.2.2   Respondent Category by Position Held

Frequency tabulation was used by the Researcher to present the position held categories of

the respondents. Table 4.2 below presented the results:

Table 4.2:   Position Held

		Frequency	Valid Percent	Cumulative Percent
Valid	Top management	39	39	39
	Middle management	28	28	67
	Lower management	33	33	100
Total		100	100	

According to the results in table 4.2 above, the majority of the respondents 39% were top

managers, 33% were lower managers and 28% were middle managers. This is implies that

the respondents were collected from across all the different positions in the organization to

provide a pool of views of the respondents. The results are summarized in figure 4.2 below.

Fig. 4.2: Position Held
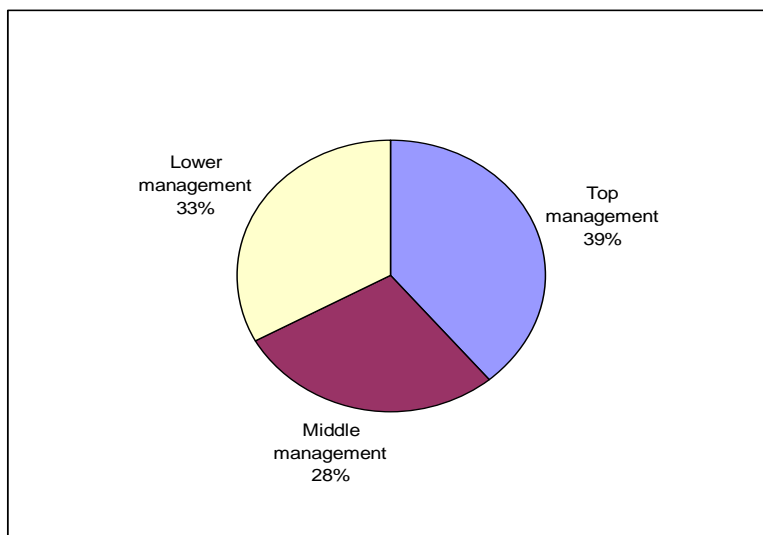
4.2.3 Highest Level of Education Distribution

Frequency tabulation was used by the Researcher to present the distribution of the highest level of education of the respondents according to their highest levels of education. Table 4.3 below presented the results:

Table 4.3: Highest Educational level

		Frequency	Valid Percent	Cumulative Percent
Valid	Master's Degree	24	24	24
	Post Graduate Diploma	16	16	40
	Bachelor's Degree	46	46	86
	Diploma	12	12	98
	A-level or Equivalent	1	1	99
	O-level or Equivalent	1	1	100
Total		100	100	

Source: primary data

Table 4.3 above shows that 46% of the respondents were first degree holders, 24% were masters holders, 16% were postgraduate diploma holders, 12% were diploma holders, 1% possessed A-Level and O-Level of education each. From the results it is evident that over 80% of the respondents were either diploma, masters or bachelors degree graduates which implied that the organizations recruited qualified personnel to perform duties. The results are summarized in figure 4.3 below.

Fig. 4.3: Highest Educational Level
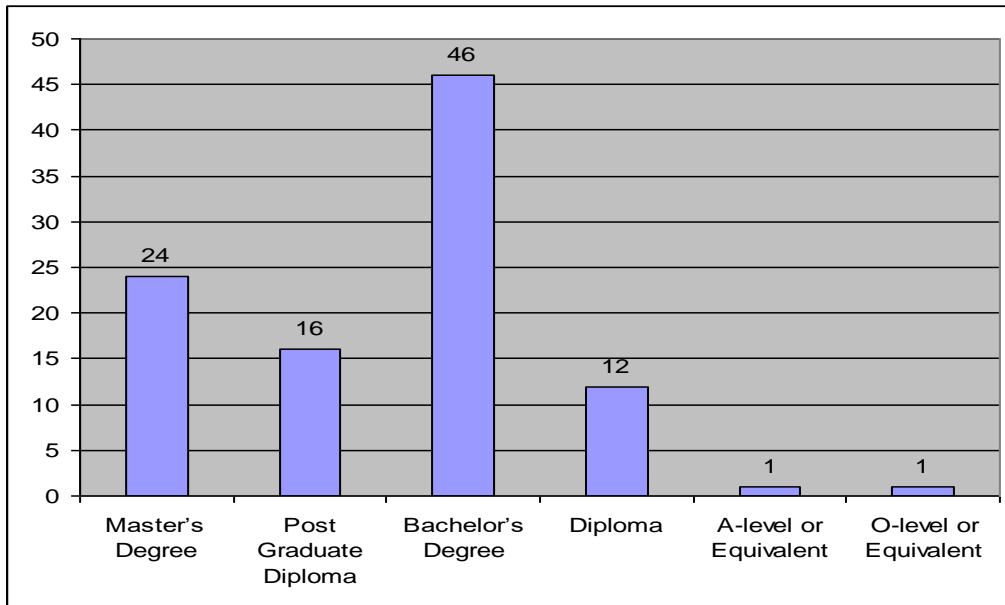
4.2.4 Respondent Category by Professional Qualification Distribution

Frequency tabulation was used by the Researcher to present the professional qualification distribution of the respondents according to their highest levels of education. Table 4.4 below presented the results:

Table 4.4: Professional Qualification Distribution

		Frequency	Valid Percent	Cumulative Percent
Valid	CIPS	22	28.9	28.9
	CPA	50	65.8	94.7
	ACCA	4	5.3	100.0
Total		76	100.0	

Source: primary data.

From the results in table 4.4 above, 65.8% of the respondents possessed CPA professional qualifications, 28.9% were CIPS holders and 5.3% were ACCA holders. The results imply that the respondents who possessed professional qualifications provided the required information for the study compared to their counterparts who possessed lower qualifications such as A and O level certificates. The results are summarized in figure 4.4 below.

Fig 4.4: Professional Qualification Distribution
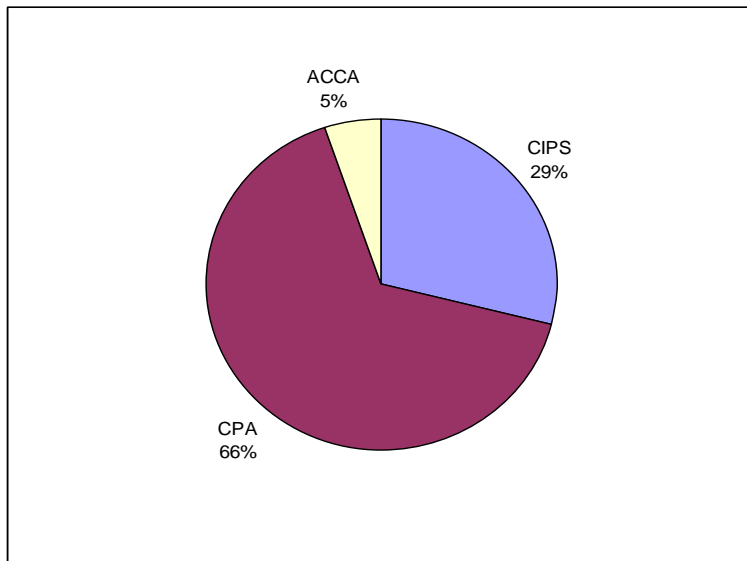
4.3 Empirical Findings

4.3.1 Effect of MIS on Service Delivery

The first objective for the study was to assess the effect of MIS on service delivery. The items were rated on the 5 point Likert scale ranging between strongly agree, agree, undecided, disagree and strongly disagree. The item means showed the mean response from the respondents for each item in relation to MIS. The findings are shown in table 4.6 and in summary form in figure 4.5 below:

Table 4.5: Service delivery

	Min	Max	Mean	Std. Dev
The MIS used by PPDA enhances its performance	1	5	2.26	.993
PPDA MIS are reviewed periodically to ensure efficiency and effectiveness of the organization's performance	1	5	2.59	.880
Management consults the different departments/stakeholders when designing the Information Systems adopted by the Organization	1	5	3.08	.739
Management often discusses reports and suggests recommendations for improvement of the Information system	1	4	2.69	.893
In PPDA the MIS are realistic, dependable and operative and can be relied upon to enhance efficiency	1	5	2.59	.993
Management heavily relies on the Information Systems when making performance decisions that affect the organization	1	5	3.00	.889
Information Management Systems involve matching organizational needs with individual employee's needs to achieve operational efficiency	1	5	2.72	.916
Information Systems result into compliance with set processes, objectives and organizational goals	1	5	2.74	1.229
Technology (Internet, emails, Enterprise resource planning etc) has greatly improved the management of information in PPDA	1	5	2.26	1.117
In this organization, employees are properly trained to use the MIS in order to perform their roles efficiently	1	5	2.97	1.063

Fig 4.5: Service Delivery
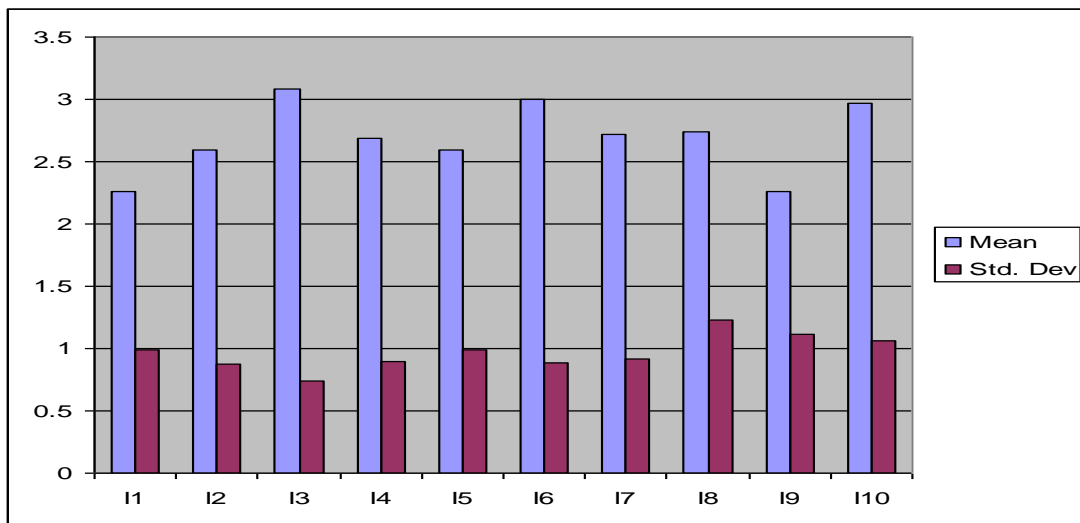
The results on the effect of MIS on service delivery revealed that the MIS used by the PPDA did not enhance its performance (Mean=2.26), the MIS were not reviewed periodically to ensure efficiency and effectiveness (Mean=2.59), Management did not often

discuss reports and therefore did not suggest recommendations for improvement of the Information system (Mean=2.69), in the PPDA, the MIS were not realistic, dependable and operative and could not be relied upon to enhance efficiency (Mean=2.59). MIS did not involve matching organizational needs with individual employee's needs to achieve operational efficiency (Mean=2.72). Similarly, information systems did not result into compliance with set processes, objectives and organizational goals (Mean=2.74), technology (The PPDA website, emails, Enterprise resource planning, Procurement Performance Management System, Integrated Financial Management System, Register of Providers, Solomon, Omni PCX etc) had not improved the management of information (Mean=2.26), and employees were not properly trained to use the MIS in order to perform their roles efficiently (Mean=2.97).

From the results, the standard deviations for most of the scales used to measure service delivery were below 1 which is indication that the information that was provided by the respondents confirmed how service delivery was being conducted whereas, for the scales where the standard deviations were above 1, this showed that it was not necessarily the case at the PPDA. This position was supported by the interview results provided by the PPDA staff who revealed that "*the existing MIS did not promote reliability, responsiveness, assurance, tangibility and empathy during service delivery*". This concurs with earlier studies by (Gilbert, Kelley and Barton 2003), who found that a system which is perceived to be helping the user to perform his or her job better, would appear to be key to potential usage. These findings are consistent with (Venkatesh 2000), who posited that usage of a technology like MIS is particularly influenced by usefulness of the technology. This finding further concurs with Ndubisi and Jantan (2003), who revealed that perceived

usefulness of the system has a significant direct impact on its usage to deliver services to customers.

4.3.2 Effect of MIS on Efficiency

In order to assess the effect of MIS on efficiency, item mean results were generated to show the average response of the respondents on each item. The items were anchored on a 5 point Likert scale ranging between strongly agree, agree, undecided, disagree and strongly disagree. The findings are shown in table 4.7 and in summary as presented in figure 4.6 below:

Table 4.6: Effect of MIS on Efficiency

	Min	Max	Mean	Std. Dev
The database of PPDA has added value to the quality of the information that is kept by the organization	1	5	2.46	1.047
In my organization quality work accomplishments are recognized and rewarded	1	5	3.15	.961
PPDA does not encourage and support poor handling and management of information	1	5	3.66	1.203
Work groups set their own objectives and with the use of MIS produce quality work	1	5	2.67	.898
Development of skills and knowledge is viewed as an investment in this organization for quality performance	1	5	3.69	1.301
Supervisors encourage us to set high goals and rely on the PPDA information systems for quality information	1	5	2.69	1.127
The reward system in this organization encourages employees to work together for quality performance	1	5	3.4103	1.163
The training provided by PPDA has helped employees to generate and maintain quality information	1	5	2.4872	1.022
All PPDA employees are aware of its mission and vision which are used as a basis for measuring quality output	1	5	2.51	1.023
PPDA staff are equipped with information system skills that enhance their performance	1	5	3.00	1.051
The quality of data that is generated by the MIS of PPDA meets the minimum acceptable international standards	1	5	2.56	.912

Figure 4.6: Effect of MIS on Efficiency
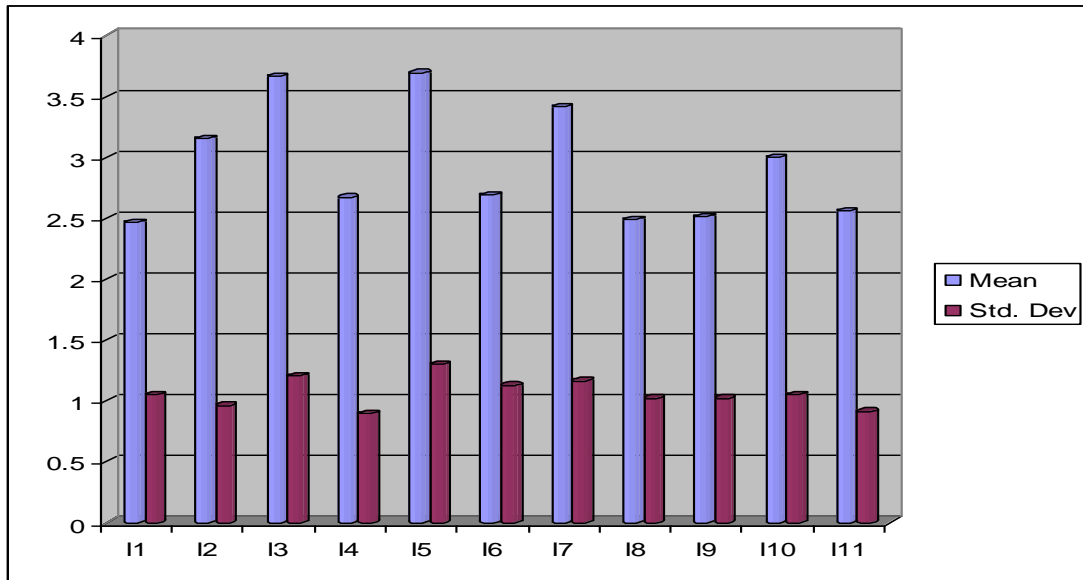
The results in table 4.7 above on the effect of MIS on efficiency revealed that the database of PPDA had not added value to the quality of the information that is kept by the organization (Mean=2.46). Work groups did not set their objectives and the use of MIS did not produce quality work (Mean=2.67), supervisors did not encourage staff to set high goals and to rely on the PPDA information systems for quality information (Mean=2.69). Training provided by the PPDA had not helped employees to generate and maintain quality information (Mean=2.4872). Some of the PPDA employees were unaware of PPDA's mission and vision which were used as a basis for measuring quality output (Mean=2.51). The quality of data that is generated by the MIS of PPDA did not meet the minimum acceptable international standards (Mean=2.56). On the other hand, the PPDA did not encourage and support poor handling and management of information (Mean=3.66). Development of skills and knowledge was viewed as an investment in this organization for quality performance (Mean=3.69). From the results, the standard deviations for most of the

scales used to measure effect of MIS on efficiency were above 1 which is indication that the information that was provided by the respondents confirmed how MIS affected efficiency whereas, for the scales where the standard deviations were below 1, this showed that it was not necessarily the case at the PPDA.

The findings are supported by the work of Bloomfield and Coombs (1992) who posit that a MIS must be understood by management, must be simple and easy to communicate with, and inspire confidence in its output. It must also be perceived as useful, complete in key areas, logical, easy to update, and controllable. Tricker (1982) adds that information is only relevant if it is timely, appropriate, accurate, understandable and operational. Which is why, it is important to invest in vertical information systems so that information is collected and redirected to appropriate places in the hierarchy.

Many difficulties are encountered by organization with MIS, no matter how sophisticated the computer equipment used. Many of the reasons for the failure of MISs to provide management with the information needed include lack of support from top management, deficiency of computer knowledge and computer applications amongst managers, mistaken application of computers and computer systems, too great emphasis on low-level data processing applications, lack of understanding by information specialists of the requirements of management, insufficient attention to assessment, choice and implementation stages of MIS design, absence of an information systems strategy and misuse of the information system in the area of control.

4.3.3 Effect of MIS on Information Quality

In order to assess the effect of MIS on information quality, item mean results were generated to show the average response of the respondents on each item. The items were anchored on a 5 point Likert scale ranging between strongly agree, agree, undecided, disagree and strongly disagree. The findings are shown in table 4.8 and in a summarized manner in figure 4.7 below:

Table 4.7: Effect of MIS on Information Quality

	Min	Max	Mean	Std. Dev
The PPDA Information system is the most effective way of ensuring service delivery	1	4	2.67	.955
The MIS of PPDA delivers timely information to staff as and when required	1	4	2.74	.910
The MISof PPDA is responsive to the needs and expectations of other stake holders (Providers, PDEs etc)	1	5	2.82	1.023
PPDA MIS has helped the organization comply with the legal requirements	1	5	2.69	1.055
PPDA management responds quickly when there is a problem with the Management Information System.	1	5	2.77	1.111
The MIS employed by PPDA ensures that documents and other sensitive information provided by its clients is held securely	1	5	2.56	1.046
The MIS employed at PPDA is properly managed and regularly updated in relation to the global changes in Information Technology in order to enhance up to date service delivery.	1	5	2.92	.929

Figure 4.7: Effect of MIS on Information Quality
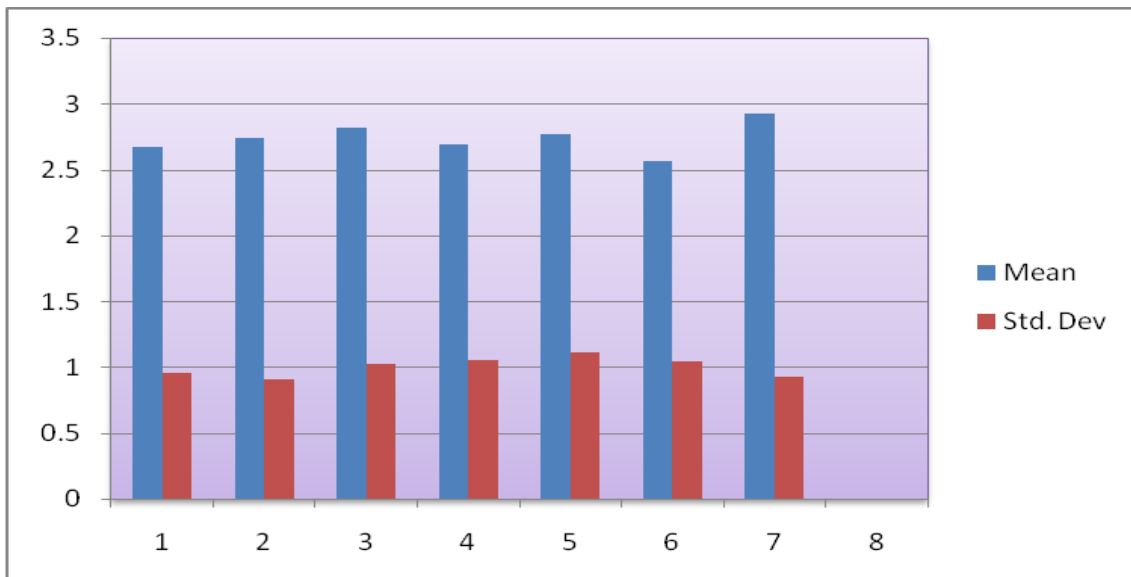
From the results on the effect of the MIS on information quality revealed that the PPDA Information system was not the most effective way of ensuring service delivery(Mean=2.67). The MIS of the PPDA did not deliver timely information to staff as and when required (Mean=2.74). The MIS of the PPDA was not responsive to the needs and expectations of other stake holders (Providers, PDEs etc) (Mean=2.82). The PPDA MIS had not helped PDEs comply with the legal requirements (Mean=2.69). The PPDA management did not responds quickly when there was a problem with the MIS (Mean=2.77). The MIS employed by PPDA did not ensure that documents and other sensitive information provided by its clients are held securely (Mean=2.56). The MIS employed at the PPDA was not properly managed and regularly updated in relation to the global changes in Information Technology in order to enhance up to date service delivery (Mean=2.92). According to the results, the standard deviations for most of the scales used to measure effect of MIS on information quality were slightly above 1 and the other were very close to 1 which is indication that the information that was provided by the respondents confirmed how MIS affected the quality of information at the PPDA.

In support of the findings, Barry (2003) is of the view that both the survival and the readability of records can easily be endangered in the electronic environment and this depends on the ICT infrastructure in place. Thus designing and building ICT systems that ensure the survival, accessibility, availability and integrity of electronic records is a challenge that every record keeper and organization needs to meet. ICT implications such as fragility of media, file deterioration, media obsolescence, and hardware and software obsolescence pose a challenge to managing electronic records. ICT presents opportunities

for recordkeeping in developing countries. Such opportunities include; to name but a few; enhanced retrieval systems and online search facilities.

Opportunities for compact storage through electronic and digital storage devices are becoming more enticing to those responsible for records as they offer an alternative to bulky paper records that need a considerable amount of space for storage. Goodman (2003), referring to the state of electronic records management in developing countries, argues that in an environment where there is no ICT architecture, countries are computerizing inefficient manual recordkeeping systems. Fitzgerald (1998), stated that electronic records depend on ICT infrastructure for their generation, access and use over time and that they should be protected from unauthorized and undocumented alteration or deletion. This is because records created and maintained in electronic form are continually at risk of inadvertent or intentional alteration.

4.4   Relationship between Variables

In order to study the relationships between the MIS and organizational performance, the Pearson's correlation table was generated. Pearson correlations were generated to establish the relationships between the study variables and the results are presented in table 4.9 below.

Table 4.8: MIS and Organizational Performance

		MIS	Organizational Performance
MIS	Pearson Correlation	1	.569(**)
	Sig. (2-tailed)		.000
Organizational Performance	Pearson Correlation	.569(**)	1
	Sig. (2-tailed)	.000	
**. Correlation is significant at the 0.01 level (2-tailed).*			

Source: primary data

Correlation results indicated a significant and positive relationship between MIS and organizational performance (r = 0.569^{**}, p<.01). The results in the above table indicate that there is a very strong and statistically significant positive correlation between MIS and organizational performance at 0.569** with a significance of 0.000 at the level of 0.01. The coefficient of determination (r^2) showed that responsibility accounts for 32.4% of the effects in the dependent variable organizational performance. This implies that MIS positively contributes to the performance of PPDA, PDEs and providers.

4.5   Conclusion

Chapter four dealt with the data analysis, presentation, interpretation and a discussion of the findings. From the findings, it was revealed that the majority of the respondents had experience of more than 5 years, the top management were more responsive, the degree holders were the majority and CPA holders were more responsive. According to the findings, MIS influenced the performance of PPDA. However, there were shortcomings in the proper integration of the procurement activities in the MIS.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1   Introduction

This chapter presents the conclusions and recommendations arising out of the research findings in chapter Four and suggests areas for further study. The study has generated several findings which are in line with existing literature and previous research findings.

5.2   Summary of Findings

The findings substantiate that MISs was an integral part in promoting efficiency in organizational work processes. This implied that when management is committed to development and implementation of the MISs, this would promote effectiveness and efficiency in the PPDA's performance. This is justification that MIS was paramount in improving organizational efficiency.

The findings on objective two revealed that MIS had a positive significant effect on service delivery. The positive influence of MIS on service delivery is justification that to attain reliable, responsive, tangible, empathy and assurance during service delivery, there was need to have line managers and employees appreciate the role of MIS at the PPDA. The findings confirmed that MIS was a determining factor of information quality which is an implication that management's willingness to develop a fully fledged MIS at the PPDA would enhance information quality at the PPDA and also result into production of accurate, reliable and relevant information.

5.3   Conclusion

The conclusions were drawn basing on the research objectives of the study as presented below:

The findings substantiate that MIS was an integral part in promoting efficiency in organizational work processes. This implies that when management is committed to development and implementation of the MIS, this would promote effectiveness and efficiency in the PPDA's performance. This is justification that MIS was paramount in improving organizational efficiency.

The findings on objective two revealed that MIS had a positive significant effect on service delivery. The positive influence of MIS on service delivery is a justification that to attain reliable, responsive, tangible, empathy and assurance during service delivery, there was need to have line managers and employees appreciate the role of MIS at the PPDA.

The findings confirmed that MIS was a determining factor of information quality which is implication that management's willingness to develop a fully fledged MIS at the PPDA, would enhance information quality at the PPDA and also result into production of accurate, reliable and relevant information.

5.3   Recommendations

After considering the results of this study, recommendations are suggested that should provide more information on stakeholders' acceptance. These recommendations are not limited to the PPDA but may also apply to all stakeholders committed to increasing MIS use in both public and private organizations.

Considering that the study indicated a significant positive correlation between MIS and organizational performance, greater attention must be given to the perceptions held by the PPDA, PDEs and provider staff in relation to the MIS. Stakeholders in the procurement sector should undertake training of the employees in the use of MIS as this will help in developing their perceptions of usefulness and ease of use. This in turn will greatly influence service delivery in the sector.

From the findings, staff need the assurance that by using the MIS   option they will achieve greater job performance, save time, money and complete a given task better, than it would have otherwise been. Stakeholders must further focus more on incorporating a number of users in the system considering that users have alternative choices and there is opportunity cost. Additionally for the systems to be perceived as useful, they should be able to perform tasks that directly affect people's lives.

The findings on the effect of MIS and quality of information revealed that the availability of ICT infrastructure and their effective usage improved the quality of information. Therefore, in order to realize effective capacity utilization of the MIS, there should be a move from use of ICTs for elementary work such as word processing and integrate the current systems with customized electronic information management programmes which promote organizational performance.

From the findings, it was clear that MIS influenced service delivery, therefore, the management of PPDA should carry out MIS system development in order to ensure that it is responsive, reliable and can create assurance to the stakeholders during service delivery.

As a means of enhancing organizational performance, there should be benchmarking of other institutions such as the British Council, American Embassy Library, Uganda Parliament Research Department among others that are currently carrying out proper MIS management. This should be supported with stakeholder involvement as a means to bring all users on board.

Management should consider putting in place a fully fledged customized MIS system which will coordinate the creation, management, maintenance and disposal of records. This system should have security controls such as passwords, back-ups and encryption of data and should be managed by a few authorised staff.

Management should consider putting in place a complete staff development plan which will coordinate the scheduling of staff for training both on and off the job. This plan should have active participation from stakeholders and should be adhered to by management as a means of creating a sense of equality among staff.

5.4   Areas for further study

This study concentrated on MIS and organizational performance on PPDA headquarters, selected PDEs and providers in Kampala district. Future research should attempt to collect data from other sectors to ascertain the findings. To study the true nature and quality of MIS and organizational performance, a longitudinal study is more appropriate.

REFERENCES

Administrator of National Banks MIS, Comptroller's Handbook May 1995.

Allison F. (2010). Evaluating the Impact of Information Technology, Accessed online 30th of August, 2010.

Amin, M. E. (2005). Social Science Research: Conception, Methodology and Analysis, Makerere University Printery, Kampala, Uganda.

Balunywa, Waswa. (1997). A Handbook of Business Management, The business-publishing group, 2nd Edition. Kampala.

Bing EG, Burnam MA, Longshore D, Fleishman JA, Sherbourne CD, London AS, Turner BJ, Eggan F, Beckman R, Vitiello B, Morton SC, Orlando M, Bozzette SA, Ortiz-Barron L, Shapiro M (2001). Psychiatric disorders and drug use among human immunodeficiency virus-infected adults in the United States. Arch Gen Psychiatry 58: 721–728.

Bloomfield, B. P. and Coombs, R. (1992). Information technology, control and power: the centalisation and decentralization debate revisited, *Journal of Management Studies, 29(4)*: 459 – 84.

Connolly, T., Begg C., (2001). *Database MIS* London: Continum Construction of the Automobile in the Rural United States." Technology and Culture (37), pp. 763-795.

Cronbach, L. J. (1950). Further evidence on response sets and test design. *Educational and Psychological Measurement*, *10*, 3-31.

Davis, G., and *Olson*, M.H. (*1984)*. MIS: Conceptual Foundation, Structure and Development. New York, NY: McGraw-Hill.

Davis, G.B. (1985). MIS: McGraw-Hill Conceptual foundations, structure and development (2nd ed.), New York: McGraw- Hill.

Dcurran, M. J., and Meuter L., M, (2005). Self service technology adoption: comparing three technologies. *Journal of services marketing* Vol 19/2, PP 103-113.

Digital Object Identifier (1991), Twenty- Fourth Annual Hawaii System sciences Conference: January 1991.

Fitzgerald G (1998) Evaluating information systems projects: a multidimensional approach.

Ghoshal, and Kim, (2005) "*Building effective intelligence systems for competitive advantage"* Sloan Management Review Fall, 49-58.

Gilbert, D., Kelley, L. L. and Barton, M., (2003), Technophobia, gender influences and consumer decision-making for technology related products, *European journal of innovation management* Vol 6 No.4 pp 253-263.

Glossary of Defense Acquisition Acronyms and Terms, 12th Edition (plus updates since publication) accessed on 22 April 2009, Defense Acquisition University

Goodman, Susan K. (2003) "*Information needs for management decision making."* Records management Quarterly October, 21-22.

Grammatikou, M., Stamatelopoulos, F., and Maglaris, B. (2003). Distributed information system architecture for healthcare. Retrieved on January 25, 2005 from http://www.ncbi.nlm.gov/entrez/query.fcgi.

Gulati, Ranjay, and James Oldroyd (2005). *"The Quest for Customer Focus*." Harvard Business Review 83, no. 4 (April 2005).

Iacono, S., Kling, R. (2006) "*Computerization and Controversy*. Value Conflicts *in Information Systems Development."* Information Systems Frontiers (3:1), 2001, pp. 75-90.

Krejcie and Morgan, (1970). Table for Determining Sample Size

Kumar, A., (1998). "New Techniques for data reduction in database systems for knowledge discovery applications," *Journal of Intelligent Information Systems,* 10:1, 31-48.

Lawrence Loh, (1993), The economics and organization of information technology governance: Sourcing strategies for corporate information infrastructure.

Lucey, T., (1997). MIS: London: Continuum.

Luciano A. Toledo (2009). The Electronic Journal of Information Systems in Developing Countries, Vol. 38.

Mahmood et al. (2000); Advance Topics in End User Computing Vol. 3 p. 207.

Mainhart, A. (1999). Management Information system for Micro finance: An Evaluation Framework. Online: (http://www.mip.org)

Management in the 1980's, Harold J. Leavitt and Thomas L. Whisler, Harvard Business Review, 1958-11.

Mark S. L. (1995). How to Measure Survey Reliability and Validity: Sage Publications Inc. Califonia USA

Melville, N. Kraemer, K. and Gurbaxani, V. (2004). Information Technology and Organizational Performance: An Integrative Model of IT Business Value", MIS Quarterly, Vol. 28, No.2, Pp. 283-321.

Mugenda, M. and Mugenda A., (2003) Research Methods qualitative and quantitative Approaches. ACTS Nairobi.

Murdick, *R.G., and* Ross, *J.E. (*1975). Information Systems for Modern Management. Englewood Cliffs, NJ: Prentice-Hall.

Ndubisi, O. N. and Jantan, M. (2003). Evaluating IS usage in Malaysian Small and Medium sized firms using the technology acceptance model. *Logistics Information Management* Vol 16. No. 6 pp 440-450.

O'Brien (1999), Managing Information Technology in the Internet worked Enterprise.

Orodho J.A., (2003) Regional Inequalities in Education, Population and Poverty Patterns in Kenya: Emerging Issues and Policy Directions, Population of Kenya Journal, 1

PDDA Compliance Report, 2011

PPDA Act of 2011

PPDA HR Report, 2011

PPDA-Report January 2010

Prasad A. (2008). Information Technology and Business Value in Developing Economies: A study of Intangible Benefits of Information Technology Investments in Fiji, Electronic Journal of Information Systems in Developing Countries Vol.34, No. 2, Pp 1-11.

Public Procurement and Disposal of Public Assets Act No. 1 of 2003.

Public Procurement and Disposal of Public Assets Regulations 2006.

Saucer, J. and Bruns, G. (1997). Knowledge-based Design of scheduling system in industry and medicine. *IEEE-expert*, 12(1):24-31.

Schware, R., 2003. Information and communications technology (ICT) agencies: Functions, structures and best operational practices. J. Inform. Syst., 5: 3-7.

Sekeran, U. (2000). Research methods for business, John Wiley & Sons, USA.

Shim, J 2000, Information Systems and Technology for the non-information Systems Executive: An Integrated Resource Management Guide for the 21st Century, CRC.

Siu, P. (2001). Increasing access to Micro Finance using Information and Communication Technologies.

Staples et al., (2002), Information and Management Volume 40, Issue 2, December 2002, Pages 115–131.

Stoner, J., (1995). *Management 6th Edition London; Prentice Hall*.

Taylor, M. and A. Murphy, 2004. SMEs and e-business. J. Small Business Enterprise Dev., 11: 280-289.

Tricker, R. I. (1982). Effective Information Management. Oxford: Beaumont Executive Press.

Ursular Franklin (1989): The Real world of Technology.

Venkatesh V. (2000). Determinants of perceived ease of use integrating control, intrinsic motivation and emotion into the technology acceptance model, *information systems research*, Vol 11 No. 4 pp 342-65.

Waterfield, C. and Ramsing, N. (1998). Handbook for Management Information Systems for Micro Finance Institutions. GCGPA Technical Tools Series No. 1.

ww.wikipidia.com.

Zeller, M., Lapenu, C. and Greeley, M. (2003). MFIs and Social Performance. Online: (http://www.globenet.org).

Questionnaire

Dear Sir / Madam,
I am Mary Akiror, an MBA student of Uganda Martyrs University.
The questionnaire seeks your views, opinions and experiences on the topic; The Influence of MIS on the Performance of the Public Procurement and Disposal of Assets PPDA.
I therefore kindly request you to fill this questionnaire. Please respond to questions on this form, which apply to you as genuinely as you can.

N.B: The information you give will be treated with confidentiality as it is purely for academic purposes.
I am grateful to you for your cooperation.

SECTION A: BACKGROUND INFORMATION

Note: **Please Tick where applicable in the box provided**:

1. What is your Gender?
   (a)   Male
   (b)   Female

2.   How many years have you spent with PPDA?
   (a)   Less than one year
   (b)   Less than two years
   (c)   Less than five years
   (d)   More than five years

3. At what level do you operate in the hierarchical set up of your organization?
   (a)   Top management
   (b)   Middle management
   (c)   Lower management

4.   How long have you spent at the present position?
   (a)   Less than one year
   (b)   Between one and five years
   (c)   More than five years

5. What is your highest level of qualification?
   (a)   PhD
   (b)   Master's Degree
   (c)   Post Graduate Diploma
   (d)   Bachelor's Degree
   (e)   Diploma
   (f)   A-level or Equivalent
   (g)   O-level or Equivalent

   Other or additional professional qualification
      a. CIPS   b. CPA   c. ACCA

      b. Others (please specify)……………………………………………………………….

SECTION B: MIS and Organizational Performance

Please evaluate the following items by circling the most appropriate response basing on the scale below:

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree	
1	2	3	4	5	

MIS And Efficiency					
1. The MIS used by PPDA enhances its performance	5	4	3	2	1
2. PPDA MIS are reviewed periodically to ensure efficiency and effectiveness of the organization's performance	5	4	3	2	1
3. Management consults the different departments/stakeholders when designing the Information Systems adopted by the Organization	5	4	3	2	1
4. Management often discusses reports and suggests recommendations for improvement of the Information system	5	4	3	2	1
5. In PPDA the MIS are realistic, dependable and operative and can be relied upon to enhance efficiency	5	4	3	2	1
6. Management heavily relies on the Information Systems when making performance decisions that affect the organization	5	4	3	2	1
7. Information Management Systems involve matching organizational needs with individual employee's needs to achieve operational efficiency	5	4	3	2	1
8.Information Systems result into compliance with set processes, objectives and organizational goals	5	4	3	2	1
9. Technology (Internet, emails, Enterprise resource planning etc) has greatly improved the management of information in PPDA	5	4	3	2	1
10. In this organization, employees are properly trained to use the MIS in order to perform their roles efficiently	5	4	3	2	1
MIS and Information Quality					
1. The database of PPDA has added value to the quality of the information that is kept by the organization	5	4	3	2	1
2. In my organization quality work accomplishments are recognized and rewarded	5	4	3	2	1
3. PPDA does not encourage and support poor handling and management of information	5	4	3	2	1
4. Work groups set their own objectives and with the use of MIS produce quality work	5	4	3	2	1
5. Development of skills and knowledge is viewed as an investment in this organization for quality performance	5	4	3	2	1
6. Supervisors encourage us to set high goals and rely on the PPDA information systems for quality information	5	4	3	2	1
7. The reward system in this organization encourages employees to work together for quality performance	5	4	3	2	1
8. The training provided by PPDA has helped employees to generate and maintain quality information	5	4	3	2	1
9. All PPDA employees are aware of its mission and vision which are used as a basis for measuring quality output	5	4	3	2	1
10. PPDA staff are equipped with information system skills that enhance their performance	5	4	3	2	1
11. The quality of data that is generated by the MIS of PPDA meets the minimum acceptable international standards	5	4	3	2	1

MIS and Service Delivery					
1. The PPDA Information system is the most effective way of ensuring service delivery	5	4	3	2	1
2. The MIS of PPDA delivers timely information to staff as and when required	5	4	3	2	1
3. The MIS of PPDA is responsive to the needs and expectations of other stake holders (Providers, PDEs etc)	5	4	3	2	1
4. PPDA MIS has helped the organization comply with the legal requirements	5	4	3	2	1
5. PPDA management responds quickly when there is a problem with the Management Information System.	5	4	3	2	1
6. The MIS employed by PPDA ensures that documents and other sensitive information provided by its clients is held securely	5	4	3	2	1
7. The MIS employed at PPDA is properly managed and regularly updated in relation to the global changes in Information Technology in order to enhance up to date service delivery delivery.	5	4	3	2	1

SECTION C

1. Do you think that the MIS employed by PPDA is efficient?

Yes ☐   No ☐

2. Please explain the answer above.

……
……
………………………………………………………………………………………….

3. Do you think that the MIS employed by PPDA has helped to ensure information Quality?

Yes ☐   No

4. Please explain the answer above.

………………………………………………………………………………………………………
………
………………………………………………………………………………...............☐..............

5. Do you think that service delivery in PPDA has been improved by the MIS that are employed?

Yes ☐   No ☐

Please explain the answer above.

………………………………………………………………………………………………………
………
…………………………………………………………………………...................................

6. What changes do you recommend so as to improve on the management of information in PPDA?

………………………………………………………………………………………………………
………………………………………………………………………………………………………
………………………………………………………………………………………………………

Thank you for your cooperation.

Questionnaire

Dear Sir / Madam,
I am Mary Akiror, an MBA student of Uganda Martyrs University.
The questionnaire seeks your views, opinions and experiences on the topic; The Influence of   MIS on the Performance of the Public Procurement and Disposal of Publics Assets PPDA.
I therefore kindly request you to fill this questionnaire. Please respond to questions on this form, which apply to you as genuinely as you can.

N.B: The information you give will be treated with confidentiality as it is purely for academic purposes.
I am grateful to you for your cooperation.

SECTION A: BACKGROUND INFORMATION

Note: **Please Tick where applicable in the box provided**:

1. What is your Gender?
    (a)   Male
    (b)   Female

2. What is the name of the organization you are working in?
    …………………………………………………………………………………………….
3. State the type of industry of the organization you are working for?
    …………………………………………………………………………………………..
4. How many years have your spent working in the above-mentioned organization?
    (a)   Less than one year
    (b) Less than two years
    (c) Less than five years
    (d) More than five years

5. At what level do you operate in the hierarchical set up of your organization?

    (a)   Top management
    (b)   Middle management
    (c)   Lower management

6. What is your highest level of qualification?
    (a) PhD
    (b) Master's Degree
    (c) Post Graduate Diploma
    (d) Bachelor's Degree
    (e) Diploma
    (f) A-level or Equivalent
    (g)   O-level or Equivalent
    7.   Other or additional professional qualification

    a. CIPS   b. CPA   c. ACCA
    d.   Others (please specify)………………………………………………

SECTION B: MIS and Organizational Performance

Please evaluate the following items by circling the most appropriate response basing on the scale below:

Strongly Agree	Agree	Not sure	Disagree	Strongly Disagree
1	2	3	4	5

MIS And Efficiency					
1. The MIS used by PPDA enhances its performance	5	4	3	2	1
2. PPDA MIS are reviewed periodically to ensure efficiency and effectiveness of the organization's performance	5	4	3	2	1
3. PPDA Management consults the different departments/stakeholders when designing the Information Systems adopted by the Organization	5	4	3	2	1
4. The MIS in PPDA are realistic, dependable, operative and can be relied upon to enhance efficiency	5	4	3	2	1
5. Management heavily relies on the Information Systems when making performance decisions that affect its stakeholders	5	4	3	2	1
6. Information Management Systems involve matching organizational needs with individual employee's needs to achieve operational efficiency	5	4	3	2	1
7.Information Systems result into compliance with set processes, objectives and organizational goals	5	4	3	2	1
8. Technology (Internet, emails, Enterprise resource planning etc) has greatly improved the management of information in PPDA	5	4	3	2	1
9. In this organization, employees are properly trained to use the MIS in order to perform their roles efficiently	5	4	3	2	1
MIS and Information Quality					
1. The database of PPDA has added value to the quality of the information that is accessed, kept and made reference to by my organization	5	4	3	2	1
2. In my organization quality work accomplishments are recognized and rewarded	5	4	3	2	1
3. PPDA does not encourage and support poor handling and management of information	**5**	**4**	**3**	**2**	**1**
4. Development of skills and knowledge is viewed as an investment in this organization for quality performance	5	4	3	2	1
5. Supervisors encourage us to set high goals and rely on the PPDA information systems for quality information	5	4	3	2	1
6. The reward system in this organization encourages employees to work together for quality performance in procurement	5	4	3	2	1
7. The training provided by PPDA has helped employees in the procurement unit to generate and maintain quality information	5	4	3	2	1
8. All PPDA stakeholders are aware of its mission and vision which is used as a basis for measuring quality output	5	4	3	2	1
9. PPDA staff are equipped with information system skills that enhance their performance for quality information	5	4	3	2	1
10. The quality of data that is generated by the MIS of PPDA meets the minimum acceptable international standards	5	4	3	2	1
MIS and Service Delivery					
1. The PPDA Information system is the most effective way of ensuring service delivery	5	4	3	2	1
2. The MIS of PPDA delivers timely information to its stakeholders (Providers/PDEs) as and when required	5	4	3	2	1

3. The MIS of PPDA is responsive to the needs and expectations of other stake holders (Providers, PDEs etc)	5	4	3	2	1
4. PPDA MIS has helped PDEs/Providers comply with the legal requirements	5	4	3	2	1
5. PPDA management responds quickly when there is a problem with the Management Information System.	5	4	3	2	1
6. The MIS employed by PPDA ensures that documents and other sensitive information provided by its clients is held securely	5	4	3	2	1
7. The MIS employed at PPDA is properly managed and regularly updated in relation to the global changes in Information Technology in order to enhance up to date service delivery.	5	4	3	2	1

SECTION C

1. Do you think that the MIS employed by PPDA is efficient?

Yes ☐   No ☐

2. Please explain the answer above.

……
……
……………………………………………………………………………………………

3. Do you think that the MIS employed by PPDA has helped to ensure information Quality?

Yes ☐   No ☐

4. Please explain the answer above.

………………………………………………………………………………………………………
………………………………………………………………………………………………………
…………………………………………………………………………….......................................

5. Do you think that service delivery in PPDA has been improved by the MIS that are employed?

Yes ☐   No ☐

Please explain the answer above.

……………………………………………………………………………………………………
………………………………………………………………………………………………………
……………………………………………………………………….......................................

6. What changes do you recommend so as to improve on the management of information in PPDA?

……………………………………………………………………………………………………
……………………………………………………………………………………………………
……………………………………………………………………………………………………

Thank you for your cooperation.

QUESTIONNAIRE

Questionnaire for PPDA Staff

Dear Sir / Madam,
I am Mary Akiror, an MBA student of Uganda Martyrs University. The questionnaire seeks your views, opinions and experiences on the topic; The Influence of MIS on the Performance of the Public Procurement and Disposal of Assets PPDA. I therefore kindly request you to fill this questionnaire. Please respond to questions on this form, which apply to you as genuinely as you can.

N.B: The information you give will be treated with confidentiality as it is purely for academic purposes.
I am grateful to you for your cooperation.

ORGANISATION PERFORMANCE
The table below shows the alternative responses and the number assigned in each response. Please evaluate the Statements by ticking in the box with the number that best suits your company

strongly agree (SA)	Agree (D)	not sure (NS)	disagree (A)	Strongly disagree
1	2	3	4	5

Economy	SA	A	NS	D	SD
The level of public financial resource expenditure is effectively managed by PDEs	1	2	3	4	5
There is optimum financial resource allocation at the PDEs	1	2	3	4	5
Expenditure patterns of PDEs are tagged on core activities	1	2	3	4	5
There is cost cutting on activity expenditures at the PDEs	1	2	3	4	5
During bid evaluation, contracts are awarded to the providers who are cost efficient	1	2	3	4	5
Effectiveness					
PDEs delivers services on time	1	2	3	4	5
PDEs offer useful services to the public	1	2	3	4	5
PDEs deliver valuable services to the public					
PDEs have been successful in the delivery of public services	1	2	3	4	5
There is effective revenue absorption by the PDEs	1	2	3	4	5
Efficiency					
Despite budget cuts, PDEs are able to deliver the required services to the public	1	2	3	4	5
As a result of a competent workforce, PDEs deliver services efficiently	1	2	3	4	5
As a result of a mis-match between work load and staff numbers, there are shortcoming in the delivery of public services	1	2	3	4	5
PDEs are focused on the achievement of set targets to deliver public services	1	2	3	4	5
As a result of monitoring and evaluation, PDEs promote value for money	1	2	3	4	5

Investment level					
Overtime, PDEs' level of service delivery has been increasing	1	2	3	4	5
The investment policy of PDEs encourages investing in appropriate projects	1	2	3	4	5
The current investment levels of PDEs have enhanced the quality of service delivery	1	2	3	4	5
As a result of staff development, PDEs are able to deliver services more effectively	1	2	3	4	5

Thank you

APPENDIX II

Interview Guide for Key Informants

Dear Sir / Madam,
I am Mary Akiror, an MBA student of Uganda Martyrs University.

The questionnaire seeks your views, opinions and experiences on the topic; The Influence of MIS on the Performance of an Organization; A Case Study of Public Procurement and Disposal of Assets PPDA.

I therefore kindly request you to respond to the questions on this form, which apply to you as genuinely as you can.

SECTION A: Bio-data

Organization: …………………………………………………………………………
Gender of respondent: ………………………………………………………………….
Position held by respondent: ………………………………………………………….
Time in years spent with the organization: ………………………………………………….
Highest level of education attained by respondent: …………………………………………..

SECTION B: MIS and Organizational Performance
1. What in your opinion is the rationale of MIS in an organization?
2. How has MIS enhanced performance in your organization
3. Do you consider MIS dependable in this organization? (probe how)

MIS and Information Quality
1. How has MIS resulted in setting up quality standards for PPDA?
2. In what specific areas have these standards been realized?
3. What has the organization done to ensure that staff/partners embrace MIS requirements?

MIS and Service Delivery
1. How has MIS improved delivery of services to your clients/ stakeholders?
2. In what specific ways has MIS responded to the expectations and needs of these clients?
3. Is the MIS employed by PPDA properly managed and regularly updated in relation to the global changes in Information Technology in order to enhance up to date service delivery?

Challenges and recommendations
1. What do you consider as challenges to MIS utilization in your organization and how can they be overcome?
2. Are there any known better methods of managing MIS that you consider key that you can share?
3. What other recommended ways do you suggest in managing MIS in an organization like PPDA?

Thank you for your cooperation

APPENDIX III

TABLE FOR DETERMINING SAMPLE SIZE FROM A GIVEN POPULATION

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	246
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	48	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20000	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2000	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	100000	384

Note: "N" is population size
        "S" is sample size.

Krejcie, Robert V., Morgan, Daryle W., "Determining Sample Size for Research Activities", Educational and Psychological Measurement, 1970.