

**ASSESSMENT ON THE IMPACT OF IFMIS ON THE  
PROCUREMENT PROCESS IN THE PUBLIC SECTOR  
(A SURVEY OF MINISTRY OF FINANCE, WORKS AND SUPPLY AND ANTI-  
CORRUPTION COMMISSION)**

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Submitted a dissertation to the University of Zambia in partial fulfilment of the requirement for a Master's Degree in Operations, Project and Supply Chain Management.

**UNIVERSITY OF ZAMBIA**

**LUSAKA**

**2019**

## **DECLARATION**

I, Timothy Muwema do hereby declare that this research is original, and it is an outcome of my own efforts and that its contents have never been presented elsewhere at this University or any other University or College for academic purposes. I also declare that the narratives, figures and tables contained in this report were generated by me, except for those whose origin has been acknowledged. Furthermore, I do declare that the views and opinions contained in this report do not in any way represent those of the University of Zambia, but my own.

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## **APPROVAL**

This dissertation of Timothy Muwema has been approved as partial fulfilment of the requirement for a master's degree in Operations, Project and Supply Chain Management by the University of Zambia.

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Examiner 3.....Signature.....Date.....

Chairperson

Board of Examiners.....Signature.....Date.....

Supervisor.....Signature.....Date.....

## **DEDICATION**

I dedicate this piece of work to my family members. My wife Jane Walima Muwema who offered encouragements to my studies despite demands of family matters. My wife made sure that always school issues came first. My dedication also goes to my mother Monica Kaseka who has been through it all to make sure I reach where I have reached, mama I made it. May the good Lord continue blessing you all.

## **ACKNOWLEDGEMENTS**

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I especially wish to thank my supervisor Dr. Jackson Phiri for his valuable time spent to provide direction and support from the beginning to the successful completion of this dissertation. I would also like to acknowledge and thank the employees for Ministry of Finance, Ministry of Works and Supply and the Anti-Corruption Commission for information and advice to make my work a success.

Further, I would also wish to thank all the respondents for making it possible for me to gather the information that I urgently needed for my academic purpose. Indeed, their generosity in information giving had gone a long way and I will always remain grateful for their quick and prompt responses. Above all I wholly wish to reverence the Lord Jesus Christ, for his immeasurable grace which is sufficient all the time. Truly, He is faithful and just. Thank you for sustaining my life in the University.

## **DEFINITIONS OF KEYWORDS**

- ✚ Integrated Financial Management Information Systems (IFMIS): Is a standardised monitoring and reporting system which consolidates all the information needs of a government into one information data base (Khemani and Diamond, 2012).
- ✚ Procurement process: These are steps and stages that a procurement activity follows in satisfying the need identified (Baily and Farmer, 2015).
- ✚ Public sector: Is the part of the economy composed of both public services and public enterprises that is controlled by the state.

## ACRONYMS

<b>IFMIS:</b>	Integrated Financial Management Information Systems
<b>PSRP:</b>	Public Service Reform Programme
<b>PSCAP:</b>	Public Service Capacity Building Project
<b>TSA:</b>	Treasury Single Account
<b>PFM:</b>	Public Finance Management
<b>HRMIS:</b>	Human Resource Management Information System
<b>PF:</b>	Public Finance
<b>MoF:</b>	Ministry of Finance
<b>NGO's:</b>	Non-Governmental Organizations
<b>CIPS:</b>	Chartered Institute of Purchasing and Supply
<b>NCC:</b>	National Consumer Council
<b>ZPPA:</b>	Zambia Public Procurement Authority
<b>DHS:</b>	Department of Homeland Security
<b>OCFO:</b>	Office of the Chief Financial Officer
<b>OMB:</b>	Office of Management and Budget
<b>FEMA:</b>	Federal Emergency Management Agencies
<b>TAM:</b>	Technology Acceptance Model
<b>IT:</b>	Information Technology
<b>ICT:</b>	Information Communications Technology
<b>ACC:</b>	Anti-Corruption Commission
<b>SME:</b>	Small and Medium Enterprise
<b>MS:</b>	Microsoft
<b>SPSS:</b>	Statistical Package for Social Sciences

## **ABSTRACT**

Progressive governments around the world aim at having efficient Public Finance Management in order to efficiently manage resources and maximize on opportunity costs associated with Public Procurement. The Government of Zambia has introduced IFMIS to monitor how ministries, departments and other state agencies spend funds on a real-time basis in order to improve budget implementation. The objectives of IFMIS are to attain transparency, reduce financial leakages and accountability in the way Government resources are being spend. This research thus seeks to find out how the implementation of IFMIS has impacted Public procurement in promoting Transparency, Efficiency, Speed, less financial leakages as a means of paying vendors/customers on behalf of Ministries, departments and other state agencies.

Data was collected from seventy-five (75) respondents from the Ministry of Finance, Ministry of Works and Supply and the Anti-Corruption Commission. Data was analysed using Social Package and Social Sciences (SPSS) version 20 and Microsoft excel.

The study concluded that IFMIS has not enhanced transparency in the public procurement processes because citizens, vendors do not have access to the system. In addition, the information on IFMIS can only be accessed through SAP to those authorised using passwords and usernames. The study also concluded that IFMIS has not reduced financial leakages because procurement processes are still being carried outside the system and are only loaded on the system afterwards. This has made the system reactive rather than proactive in reducing the financial leakages. The study further concluded that IFMIS has not increased efficiency and speed, this is because the system has increased the cost of performing procurement processes twice, that is on the system and on paper. Performing the activities twice has ultimately reduced speed and increased the lead time of fulfilling needs identified by different users.

The study recommended that vendors and citizens should have access to the system to enhance transparency. Furthermore, the study recommended for code restructuring of the system to make it more proactive rather than reactive in order to improve budget adherence, reduce misappropriation and misapplication of funds. In conclusion, the study further recommended procurement processes be carried on the system only and eliminate the duplication of work on paper.



## TABLE OF CONTENTS

<b>DECLARATION.....</b>	<b>i</b>
<b>APPROVAL .....</b>	<b>ii</b>
<b>DEDICATION.....</b>	<b>iii</b>
<b>ACKNOWLEDGEMENTS .....</b>	<b>iv</b>
<b>DEFINITIONS OF KEYWORDS.....</b>	<b>v</b>
<b>ACRONYMS .....</b>	<b>vi</b>
<b>ABSTRACT .....</b>	<b>vii</b>
<b>TABLE OF CONTENTS .....</b>	<b>viii</b>
<b>LIST OF TABLES .....</b>	<b>xii</b>
<b>LIST OF FIGURES .....</b>	<b>xiii</b>
<b>LIST OF APPENDICES .....</b>	<b>xiv</b>
<b>CHAPTER ONE: GENERAL INTRODUCTION .....</b>	<b>1</b>
1.1 Introduction.....	1
1.2 Background of the study .....	1
1.3 Statement of the problem.....	2
1.4 Purpose of research .....	3
1.5 Research objectives.....	3
1.6 Research questions.....	3
1.7 Research hypothesis.....	4
1.8 Scope.....	4
1.9 Justification for the research .....	4
1.10 Delimitation of the study .....	5
1.11 Organization of the Dissertation .....	5
1.12 Chapter summary .....	5
<b>CHAPTER TWO: LITERATURE REVIEW.....</b>	<b>6</b>
2.1 Introduction.....	6
2.2 Public finance management reform .....	6
2.3 What is IFMIS?.....	7
2.3.1 Overview on IFMIS .....	8
2.3.2 Transition to integrated FMIS.....	9
2.3.3 Publishing of public finance to the public .....	10
2.3.4 Budget Transparency .....	11
2.4 Treasury Single Account.....	12

2.4.1 Purpose of TSA.....	13
2.5 Procurement process .....	13
2.5.1 Definition of Procurement Process .....	13
2.5.2 Procurement Processes.....	14
2.5.2.1 Introduction.....	14
2.5.2.2 Need Identification.....	15
2.5.2.3 Determine Specification.....	15
2.5.2.4 Sourcing .....	16
2.5.2.5 Enquiry and Evaluation.....	17
2.5.2.6 Negotiating.....	17
2.5.2.7 Ordering and Progressing .....	18
2.5.2.8 Delivery of Goods.....	18
2.5.2.9 Payment and Receiving.....	19
2.5.3 Electronic Procurement (E-Procurement) Process.....	20
2.5.4 Link between procurement process, efficiency, effectiveness and performance.....	21
2.6 Case studies on IFMIS .....	23
2.6.1 Case study on IFMIS in USA .....	23
2.6.2 Case study on Treasury Single Account (TSA) in Nigeria.....	25
2.6.2.1 Conclusion & Way Forward made from the above research.....	27
2.6.3 Case study on the impact of ifmis on performance of public institutions in Rwanda ....	28
2.6.3.1 Conclusions and Recommendations .....	29
2.6.3.1.1 Conclusion .....	29
2.6.3.1.2 Recommendations.....	30
2.7 Theoretical Framework.....	31
2.7.1 Meta Theory Model .....	31
2.7.2 Circumvention Innovation Theory.....	31
2.7.3 Agency Theory.....	32
2.7.4 Systems Theory.....	33
2.7.5 Software Restructuring Model.....	34
2.7.6 Technology Acceptance Model .....	35
2.8 Chapter summary.....	36
<b>CHAPTER THREE: RESEARCH METHODOLOGY .....</b>	<b>39</b>
3.1 Introduction.....	39
3.2 Research design .....	39
3.3 Targeted population .....	39
3.4 Sampling method .....	40

3.5 Sample characteristics.....	40
3.5.1 Inclusion criteria .....	40
3.5.2 Exclusion criteria .....	40
3.6 Sample size .....	40
3.7 Data collection .....	42
3.7.1 Interviews.....	42
3.7.2 Questionnaires.....	42
3.8 Types of data.....	42
3.8.1 Primary data collection .....	42
3.8.2 Secondary data collection .....	42
3.9 Data analysis .....	42
3.10 Ethical considerations .....	43
3.11 Source of the model of this research.....	43
3.11.1 Software Restructuring Model.....	43
3.11.2 Technology Acceptance Model .....	44
3.11.3 IFMIS impact on procurement processes model .....	45
3.12 Limitations to the study .....	46
3.13 Chapter summary .....	47
<b>CHAPTER FOUR: PRESENTATION OF FINDINGS.....</b>	<b>48</b>
4.1 Introduction.....	48
4.2 Response rate .....	48
4.3 Demographic information.....	49
4.3.1 Gender.....	49
Figure 4.1: Gender of respondents.....	49
4.3.2 Age of respondents .....	49
4.3.3 Marital status of respondents .....	50
4.3.4 Highest level of education attained.....	51
4.3.5 Working Experience with the current employer.....	52
4.4 Correlation and Multiple Regression .....	52
4.4.1 Statistical Significance (P-Values) .....	53
4.5 IFMIS and Transparency .....	54
4.5.1 Citizens access to IFMIS to access financial data .....	54
4.5.2 Vendors having access to the system.....	55
4.5.3 IFMIS has enhanced transparency because other members are able to view information .....	56
4.6 IFMIS and financial leakage.....	57

4.6.1 IFMIS reducing financial leakages because of payments being effected through TSA direct to vendors.....	57
4.6.2 IFMIS reducing misapplication of funds .....	58
4.7 IFMIS and efficiency and speed .....	59
4.7.1 IFMIS has enhanced efficiency in the procurement processes .....	59
4.7.2 IFMIS has increased speed in procurement processes.....	60
4.8 Chapter summary .....	61
<b>CHAPTER FIVE: DISCUSSIONS AND CONCLUSIONS .....</b>	<b>62</b>
5.1 Introduction.....	62
5.2 Discussions .....	62
5.2.1 Demographic information.....	62
5.2.2 IFMIS AND Transparency .....	63
5.2.2.1 Citizens access to IFMIS to access financial information .....	63
5.2.2.2 Vendors having access to the system.....	63
5.2.2.3 IFMIS has enhanced transparency because other members are able to view information.....	63
5.2.3 IFMIS and financial leakages .....	64
5.2.3.1 IFMIS reducing financial leakages because payments are being effected through TSA direct to vendors.....	64
5.2.3.2 IFMIS reducing misapplication of funds .....	64
5.2.4 IFMIS and Efficiency and Speed .....	64
5.2.4.1 IFMIS has enhanced efficiency in the procurement processes .....	64
5.2.4.2 IFMIS has increased speed in procurement processes.....	65
5.3 Conclusions.....	65
5.3.1 IFMIS and Transparency .....	65
5.3.3 IFMIS and Financial Leakages .....	65
5.3.4 IFMIS and Efficiency and Speed.....	65
5.4 Dissertation model providing the solution to enable IFMIS to yield the desired results...	66
5.5 Recommendations.....	67
5.6 Areas of future research .....	68
5.7 Chapter summary .....	69
<b>REFERENCES.....</b>	<b>70</b>

## LIST OF TABLES

Table 2.1: Summary of reviewed literature.....	35
Table 4.1: Response rate.....	47
Table 4.2: Summary Output for Pearson Colleration Coefficients and P-Values.....	52

## LIST OF FIGURES

Figure 2.1: Open Data.....	10
Figure 2.2: Code restructuring model.....	32
Figure 2.3: Technology Acceptance Model.....	33
Figure 3.1: Flow of primary data collection.....	37
Figure 3.2: Model of the dissertation.....	44
Figure 4.1: Gender of respondents.....	46
Figure 4.2: Age of respondents.....	47
Figure 4.3: Marital status of respondents.....	47
Figure 4.4: Highest level of education attained.....	48
Figure 4.5: Work experience of the respondents.....	49
Figure 4.6: Citizens access to financial data on IFMIS system.....	51
Figure 4.7: Vendors access to IFMIS system.....	52
Figure 4.8: IFMIS enhancing transparency because other members have access to procurement data.....	53
Figure 4.9: IFMIS reducing financial leakages in public sector.....	54
Figure 4.10: IFMIS has reduced misapplication of funds by budget holders.....	55
Figure 4.11: IFMIS has enhanced efficiency in procurement processes.....	56
Figure 4.12: IFMIS has increased speed in procurement data.....	57

## **LIST OF APPENDICES**

Appendix 1: Questionnaire for ACC and Ministry of Works and Supply.....	72
Appendix 2: Questionnaire for Ministry of Finance.....	77

# **CHAPTER ONE**

## **GENERAL INTRODUCTION**

### **1.1 Introduction**

The Government has been implementing the Public Service Reform Programme (PSRP) from 1993. The aim of the PSRP is to improve the quality, efficiency and effectiveness of Public Service delivery. In 1999 a concern arose as to whether the measures taken under the PSRP framework had resulted in improved performance.

It was acknowledged then that these measures had not led to tangible improvements in the delivery of public services. Therefore, Public Service Capacity Building Project (PSCAP) was designed to support the implementation of the Public Service Reform Programme.

PSCAP is financed by the World Bank and managed at Cabinet Office. One of the PSCAP components was the “Financial Management, Accountability and Transparency”. IFMIS is a project within the “Financial Management, Accountability and Transparency” component. IFMIS is implemented based on the Treasury Single Account where funds for government expenditures are drawn from.

### **1.2 Background of the study**

Globally, the financial sector contributes to the general wellbeing of mankind. World leaders are always seeking for safer financial systems to avoid crisis. In 2010, the US enacted the Dodd Frank Act. This is a very important law that promotes financial reforms. In his research Peterson (2011) pointed out that public sector reforms are common in Africa. Only few countries such as Ethiopia have transformed the public finance management systems to match international standards. This has an effect of increased aid flows into those countries.

Since the promulgation of revising the public finance Act by the Government of Zambia, many reforms have taken place. The revision of the Public Finance Management Act has created new positions such as: Office of Controller of Budget, the position of Accountant General elevated to Permanent Secretary Level. This was aimed at promoting efficiency in the finance sector at the national and provincial levels. In 2006 the Ministry of Finance introduced IFMIS to digitalize government transactions. Running of IFMIS is based on operating the Treasury Single Account



(TSA).

The International Monetary Fund (IMF) defines a Treasury Single Account (TSA) as a unified structure of government bank accounts enabling consolidation and optimum utilization of government cash resources. The TSA separates the control of cash at the transaction level as well as overall cash management. This means that the TSA is a bank account, or a set of bank accounts linked to each other. The government uses the account/accounts to transact all payments and receipts and it can get the consolidated view of its cash position at the end of each business day. This banking system for government transactions is majorly based on the principles of fungibility of all cash its end use notwithstanding.

Globally, TSA has been implemented with a high level of success in Indonesia, United Kingdom, Sweden, India, France and most recently in Nigeria. These nations adopted the TSA in order to do away with the idle cash balances in the government bank accounts. They realized that idle bank balances in commercial banks are never idle for those banks. They are used to extend loans to their customers.

The IFMIS was launched to monitor how ministries, departments and other state agencies spend funds on a real-time basis in order to improve budget implementation. The objectives of IFMIS are to attain transparency, reduce financial leakages and accountability in the way Government resources are being spend. This has impacted public procurement because payments to the vendors/customers on behalf of the ministries, departments and other spending agencies is being implemented by Ministry of Finance through IFMIS linked to the Treasury Single Account (TSA). This research thus seeks to find out how the implementation of IFMIS has impacted Public procurement in promoting Transparency, Efficiency, Speed, less financial leakages as a means of paying vendors/customers on behalf of Ministries, departments and other state agencies.

### **1.3 Statement of the problem**

Public procurement in Zambia has made a lot of headlines with huge procurements that have not realized the value of money such as the procurement of Fire Tenders by ministry of Local Government and Housing, Procurement of Ambulances by the Ministry of Health and exaggerated road contracts in Zambia being the most expensive in the entire southern region of Africa. Recently in 2018, many employees under the Ministry of General Education were

fired for failing to account for funds. In the same year, the Ministry of Community Development lost donor funds meant to alleviate poverty in Zambia.

The Government of Zambia has introduced IFMIS to monitor how ministries, departments and other state agencies spend funds on a real-time basis in order to improve budget implementation. The objectives of IFMIS are to attain transparency, reduce financial leakages and accountability in the way Government resources are being spend.

Despite the implementation of IFMIS by the government of Zambia, transparency, financial leakages and efficiency and speed in the procurement process still has a lot to be desired.

This research thus seeks to find out how the implementation of IFMIS has impacted Public procurement in promoting Transparency, Efficiency, Speed, less financial leakages as a means of paying vendors/customers on behalf of Ministries, departments and other state agencies.

#### **1.4 Purpose of research**

The purpose of this study is to determine the impact of IFMIS on the procurement process in terms of Transparency, reducing financial leakages, efficiency and speed.

#### **1.5 Research objectives**

1. To determine if IFMIS has brought transparency, reduced financial leakages, enhanced efficiency and speed in the procurement process of the public sector.
2. To provide a model on how IFMIS can yield the desired results that will improve transparency, reduce financial leakages, efficiency and speed in public procurement processes.

#### **1.6 Research questions**

1. Has IFMIS yielded transparency, reduced financial leakages, enhanced efficiency and speed in the procurement processes in public sector?
2. What model can be applied for IFMIS to yield the desired results that can improve transparency, reduce financial leakages, enhance efficiency and speed in public procurement processes?

### **1.7 Research hypothesis**

H0: There is no correlation between IFMIS and procurement in terms of transparency, financial leakages and efficiency and speed

H1: There is a correlation between IFMIS and procurement in terms of transparency, financial leakages and efficiency and speed

### **1.8 Scope**

This research focused on the impact of IFMIS on procurement processes in public procurement. The research relied on information that was provided by respondents from the ministry of Finance, ministry of Works and Supply and the Anti-Corruption Commission. This is because Ministry of Finance are the pioneers of IFMIS, and ministry of works and supply and Anti-Corruption Commission are on IFMIS and have been using it. The implementation of IFMIS is the same from one Ministry to another thus choosing to get information from Anti-Corruption Commission and the Ministry of works and supply.

### **1.9 Justification for the research**

The research is significant in the following ways advanced below. The study has revealed the impact assessment and has provided the model and recommendations that shall enhance the implementation of IFMIS to enable it to achieve its objectives in the execution of the procurement process.

The research has provided a model that recommends for code restructuring. Code restructuring can make the system proactive rather than reactive to detect any criminal activities being done on the system in order to reduce financial leakages.

The study acts as an advocacy to the Ministry of Finance on the impact of IFMIS on the procurement processes in public procurement; this will enable the ministry to enhance the implementation of IFMIS and enable the system to meet the desired objectives by making the necessary improvements that have been recommended.

The research has provided empirical evidence on the impact of IFMIS on procurement processes and has filled the gap that exists in the body of knowledge.

The research provided the procurement staff a platform to express their views on how IFMIS has impacted them and make recommendations on improvements that are urgently needed to be made to the system.

Lastly, the research also equipped the researcher with the necessary skills on how to conduct a research and fulfill the requirement for the award of a master's degree from the University of Zambia.

### **1.10 Delimitation of the study**

The study was confined to Ministry of Finance, Works and Supply and the Anti-Corruption Commission as such it was not possible to generalize the findings to other private sector procurement processes in Zambia.

### **1.11 Organization of the Dissertation**

The study was divided into five (5) main chapters or components.

Chapter One - Dealt with the introductory aspect of the study, the background of the study, objectives of the study, significance of the study and the scope of the study.

Chapter Two devoted to the reviewing of relevant literature.

Chapter Three – Methodology outlined detailed account on the instruments that were used to gather and analyse information.

Chapters Four-This chapter presented the analysis and research findings

Chapter Five- This chapter set out the conclusions about the research objectives through linking the research findings with the findings of chapter 2, it further outlined the recommendations.

### **1.12 Chapter summary**

This chapter outlined the background of the study, statement of the problem, purpose of research, research objectives, research questions, scope and justification of the study. Chapter one provided the baseline and direction of the entire research.

# **CHAPTER TWO**

## **LITERATURE REVIEW**

### **2.1 Introduction**

This chapter looks at what other literatures have revealed concerning this work, it critically and argumentatively looks at various literatures to this study. The understanding of these different literatures enabled to connect with the research findings and make a good inference or conclusions of the work.

This chapter reveals literature on IFMIS implementation, Treasury Single Account (TSA) and how these have impacted public procurement processes in terms of reducing financial leakages, bringing efficiency and speed and transparency in public procurement processes. The focus of this chapter brings out the relevance of different literatures in line with the research study.

### **2.2 Public finance management reform**

As African countries continue their journey of growth and development, pressure on governments to deliver basic services and improve living conditions for their people is steadily mounting (Chene, 2009). One of the factors often touted as being imperative to improving overall governance and the lives of citizens in general is Public Finance Management (PFM) reform.

In the past, PFM reform in Africa has often been driven by the need to comply with the requirements of international donors and development partners. Increasingly, though, African governments are seeing the broader value in improving the management of their public finances (Boulder, 2015). PFM reform is a process that different countries will conduct in different ways, depending on their varying levels of maturity. PFM reform may start with ensuring the production of a regular and accurate set of national accounts, and range to the implementation of a comprehensive Integrated Financial Management Information System (IFMIS) covering all tiers of government.

The Government has been implementing the Public Service Reform Programme (PSRP) from 1993. The aim of the PSRP is to improve the quality, efficiency and effectiveness of Public

Service delivery. In 1999 a concern arose as to whether the measures taken under the PSRP framework had resulted in improved performance (White and Lawrence, 2009).

It was acknowledged then that these measures had not led to tangible improvements in the delivery of public services. Therefore, Public Service Capacity Building Project (PSCAP) was designed to support the implementation of the Public Service Reform Programme (Khemani and Diamond, 2012).

PSCAP is financed by the World Bank and managed at Cabinet Office. One of the PSCAP components was the “Financial Management, Accountability and Transparency”. IFMIS is a project within the “Financial Management, Accountability and Transparency” component (Mutui, 2014). The key elements for PFM reform need to work in a collaborative way. This collaborative governance underpins the development of an Integrated Financial Management Information System (IFMIS), which in turn supports better governance and decision-making.

### **2.3 What is IFMIS?**

An IFMIS is a standardised monitoring and reporting system, which consolidates all the information needs of a government into one information database. It facilitates consistent recording and reporting of information, to enable a government to take macro decisions that affect the country (Khemani and Diamond, 2012).

IFMIS would integrate across several disciplines. This could include budget, payroll and HR management, procurement, financial reporting and performance information (non-financial reporting on key performance indicators). The level of integration would depend on the needs and maturity of the individual government’s PFM system (Yusuf and Chejina, 2015).

Monitoring the financial performance of individual government institutions by National Government is a challenge as many intuitions may have their own legacy finance functions and systems in place (Yusuf and Chejina, 2015).

In the government realm, IFMIS systems must be designed to support distinctly public sector functions. They must be able to handle and communicate all the financial movements for the complex structure of budget organizations (White and Lawrence, 2009). In Rwanda, IFMIS was built and suited to the needs of the Rwandan government and that has resulted to the

system yielding the intended purposes. Moreover, they must be designed to ensure compliance with budget laws and public finance rules and restrictions. Integration is critical to the operation of an IFMIS. Integration, using a common “data warehouse”, ensures that every unit and every user adhere to common standards, rules, and procedures and helps safeguard against unauthorized or imprudent uses of budget funds (Phelama and Botha, 2012). However, in Zambia Corruption Scandals have continued to be in the news of the day despite the IFMIS being operational and being used by a lot of government ministries and agencies. It also allows users anywhere within the IFMIS network to access the system and extract the specific information they need. A variety of reports can be generated to address different budgeting, funding, treasury, cash flow, accounting, audit, and day-to-day management concerns. “Best Practices in Fiscal Reform and Economic Governance (Reneau and Grabski, 2013).

The integrated information will allow governments to be more transparent about their processes and increase accountability. An integrated system would also facilitate effective “whole of government” reporting and preparation of consolidated financial statements. This is what this dissertation aims to find out on if the introduction of IFMIS in Zambia has increased transparency and accountability on public finances particularly in public procurement (Mumbai, 2011). The standardisation of information across government institutions can also contribute to fighting corruption, by incorporating both preventive and detective controls, including exception reporting and trend and data analyses (ibid).

In summary, an IFMIS provides government with reliable management information to assist with decision-making. The information is also easily accessible, as the information is centralised into one database. The more integrated the IFMIS the more valuable and useful the information and reports generated from the system would be and the better the intended benefits of IFMIS can be recouped.

### **2.3.1 Overview on IFMIS**

A Financial Management Information System (FMIS) can be broadly defined as a set of automation solutions that enable governments to plan, execute and monitor the budget (Stannack, 2009). Whenever FMIS and other Public Financial Management (PFM) information systems (e.g. HRMIS/Payroll, Procurement) share the same central database to record and report all daily financial transactions, offering reliable consolidated results for

decision support, performance monitoring and web publishing, they can be referred to as an integrated FMIS (or IFMIS) (Dener and Min, 2013).

Governments around the world are at various stages of implementing public financial management (PFM) reforms designed to improve the strategic allocation of resources (to promote growth and reduce poverty), efficiency (to minimize waste and align spending with revenues), and fiscal discipline (to improve the credibility of the budget). As part of this effort, most have made substantial investments in capacity building and technology for the development of financial management information systems (FMIS).

Within the last decade, the use of FMIS has become a critical part of improving budget transparency. Disclosure of public finance (PF) information to citizens through FMIS platforms can improve transparency, if the published budget data are accurate, easily accessible, and meaningful (Dener and Young Min, 2013). Fiscal transparency in turn can improve trust in government, if the public interprets the motives for publishing the open budget data positively and the transparency is maintained for long periods. However, designing robust FMIS solutions to capture all financial activities and publish open budget data, and measuring the effects of FMIS on budget transparency, continue to be major challenges.

IFMIS solutions are rare in practice, and it should not be used as a synonym for core FMIS functionality to avoid unrealistic expectations. Modern FMIS platforms help governments comply with domestic and international financial regulations and reporting standards and support decentralized operations through centralized web-based solutions providing access to a large number of authorized budget users at all levels. In summary, FMIS solutions offer a great potential for increasing participation, transparency, reducing financial leakages and improve government accountability (Waters, 2015).

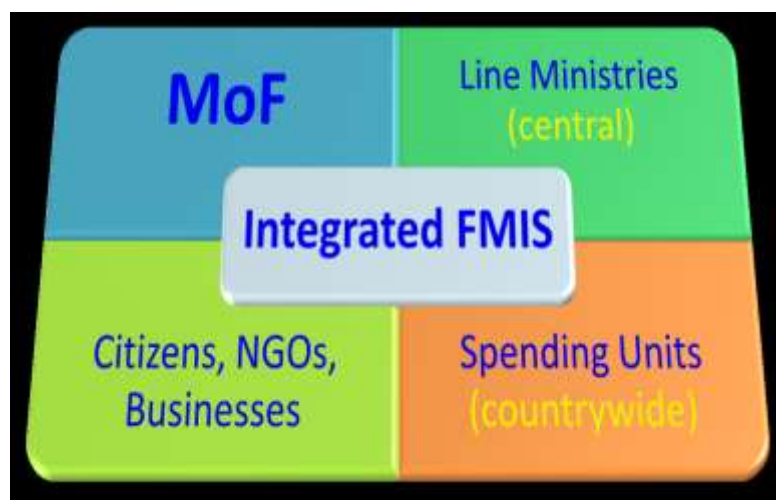
### **2.3.2 Transition to integrated FMIS**

In many economies, the first-generation PFM reforms concentrated on establishing well-functioning IFMIS and TSA to improve transparency, efficiency and reduce financial leakages (Atkinson, 2009).



Next generation FMIS solutions are being designed to combine PFM operational systems with powerful data warehouse capabilities and multi-dimensional analytical queries to assist in effective forecasting/planning, performance monitoring and decision support (ibid).

There is a growing interest in the disclosure of public finance information from “Open Data” (to improve transparency, accountability, efficiency and reduce financial leakages). Figure 2.1 below shows open data.



**Figure 2.1: Open Data**

Source; Atkinson (2009)

### **2.3.3 Publishing of public finance to the public**

Disclosure of public finance (PF) information to citizens through FMIS platforms can improve fiscal transparency, if the published budget data are accurate, timely, easily accessible, and meaningful to ordinary citizens (CIPS, Australia, 2016). Open Data is generally defined as the government data which is accessible to the public (online) in editable (machine readable) format, without any restriction (free). Fiscal Transparency is defined as the ready availability of meaningful open data on fiscal policy and achievements to the public (Cox, 2015).

Trust in Government is defined as the public's overall assessment of government's current entitlement to enforce its policy decisions, laws and regulations based on past performance, and the view of how government and its institutions are likely to act in the future. The people are able to have trust in the government if they have improvements in the economy through the performance of the exchange rate, stability of prices and interest rates stability prevailing in the country.

Fiscal transparency can improve trust in government, if the public interpret the motives for publishing the Open Budget Data positively, and the transparency is maintained for long periods, benefiting from reliable FMIS solutions.

### FMIS and Fiscal Transparency

Key information supporting fiscal transparency:

- Budget plans
- Budget execution results (revenues + expenditures)
- Procurement / Contracts
- Assets & Liabilities
- Budget performance reports
- Financial statements / Audit reports

In order to ensure the reliability and integrity of Public Finance (PF) information published on the web sites of finance organizations or used as a basis for PFM diagnostic studies, relevant Open Budget Data should ideally be obtained from the FMIS / DW databases. Despite all efforts, designing robust FMIS solutions as the source of reliable open budget data, and measuring the effects of FMIS on budget transparency continue to be major challenges in many economies and Zambia is not an exception.

Most of the country specific PF datasets do not allow for comparisons and benchmarking. Publishing “Open Budget Data” from FMIS databases is not a common practice. Presentation of budget performance in a user-friendly format (Citizens Budget) is important to improve participation in the budgeting process. IFMIS system in Zambia does not have sufficient disclosure of budget data to the public because accessing the information through IFMIS is highly restrictive. Integration of Government Procurement Systems with FMIS Procurement Modules is essential for monitoring the commitments and performance of the contracts and reporting the results (Emment and Crocker, 2016).

### **2.3.4 Budget Transparency**

Most public finance organizations publish routine reports on their websites in developed countries. Some Ministries link their websites directly to the underlying FMIS database, allowing users to run queries, searches and define criteria to generate reports that meet their

needs (Carter and Kibby, 2011). FMIS can generate all budget and procurement related data at various levels of detail. In some countries where FMIS is not available, additional instruments can be used to present available data in a meaningful structure (ibid).

The WBG has developed a methodology, BOOST, to facilitate the compilation of public expenditure data (collected from FMIS or other information systems) for analytical purposes (Batenburg and Versendaal, 2014). Governments are also using information technology to make public procurement more transparent. Procurement applications can be used to post procurement plans, consolidate shopping across agencies, advertise bidding and manage the contracting process. These initiatives bring immediate benefits in terms of reduced costs through efficiencies in procurement and by reducing the opportunities for corruption (ibid).

Benefits of integrated FMIS and e-Services:

- Timely delivery of public services to citizens and businesses
- Effective management of public expenditures and revenues
- Improved reliability and security of PFM databases
- Support for forecasting, decision making and performance monitoring
- Improved transparency, accountability and participation

## **2.4 Treasury Single Account**

A Treasury Single Account (TSA) is a unified structure of government bank accounts that gives a consolidated view of government cash resources. Based on the principle of unity of cash and the unity of treasury, a TSA is a bank account or a set of linked accounts through which the government transacts all its receipts and payments to enable to know the cash balance from all transactions of the day that have been done (Thompson, 2009). The principle of unity follows from the fungibility of all cash irrespective of its end use. While it is necessary to distinguish individual cash transactions for control and reporting purposes, this purpose is achieved through the accounting system and not by holding/depositing cash in transaction specific bank accounts. This enables the treasury to delink management of cash from control at a transaction level.

The basic three essential traits of TSA are First, the government banking arrangement should be unified, to enable ministry of finance (Mof) (or treasury) oversight of government cash

flows in and out of these bank accounts. A unified structure of government bank accounts allows complete fungibility of all cash resources, including on a real-time basis if electronic banking is in place (IMF, 2013). The TSA structure can contain ledger sub-accounts in a single banking institution (not necessarily a central bank) and can accommodate external zero-balance accounts (ZBAs) in a number of commercial banks. Second, no other government agency operates bank accounts outside the oversight of the treasury. Options for accessing and operating the TSA are mainly dependent upon institutional structures and payment settlement systems. Third, the consolidation of government cash resources should be comprehensive and encompass all government cash resources, both budgetary and corresponding cash flows are subject to budgetary control or not (Martin, 2015).

#### **2.4.1 Purpose of TSA**

The primary objective of a TSA is to ensure effective aggregate control over government cash balances (Burt et al, 2006). The consolidation of cash resources through a TSA aggregate control of cash is also a key element in monetary and budget management. There are other purposes for setting up a TSA. They include: minimizing transaction costs during budget execution, notably by controlling the delay in the remittance of government revenues (both tax and nontax) by collecting banks and making rapid payments of government expenses; facilitating reconciliation between banking and accounting data; efficient control and monitoring of funds allocated to various government agencies; and facilitating better coordination with the monetary policy implementation (ibid). Lastly, the specific objectives are as follows:

- To provide greater transparency in the Public Financial Management (PFM);
- To gain greater clarity to national financing needs and the management of the public debt;
- To increase fiscal savings (less transaction charges, more revenues);
- To improve financial markets;
- To provide more accurate accounting and improved reporting.

### **2.5 Procurement process**

#### **2.5.1 Definition of Procurement Process**

Lysons and Gillingham (2013) defined a process as a set of sub processes or stages focused on achieving an output. Procurement process is a cycle or chain that shows the activities that procurement goes through in obtaining a given need for operational and strategic purpose.

Chopra and Meindl (2009) argue that process consists of flow chart and blue print to describe a process in pictures using symbols with arrow lines connecting each operational step.

These stages will differ according to the law of procurement available from one country to the other and also the nature of procurement and the individual organization in question. This means that, if the product is straight re-buy, modified re-buy and new task all together will determine the stages that will be involved or chosen in obtaining that particular need(s) from an identified and evaluated source. Artely and Stroh (2013) postulated that procurement or procurement process has ten stages from need identification to payment of respective procurement. This is so because most organization combines some stage as one in the process to reduce the lead time and other administrative cost. For instance, some organizations or corporate institutions join the expediting and evaluating as one stage. Based on these facts, there is no unique number of stages of the procurement process. Most writers in this discipline are all in agreement of the fact that, some of the stages will not feature in every procurement activity some of these stages will be taken out if the order is a repeated order.

For example, source identification and selection will be omitted if these sources have been prequalified initially to assess their capabilities as is been done in some public sector institutions. (Lyson and Gillingham 2013) and (Weele, 2010) introduced a modern way of conducting procurement activity using electronic means (e - procurement). They suggested that, the long process can be shortened using electronic procurement because most of the stages that are difficult manually become simple when they are digitized. This is one of the main reasons why procurement has been incorporated in FMIS to ensure that there is speed in making payments, reduce financial leakages and improve transparency in the procurement processes in public sector.

## **2.5.2 Procurement Processes**

### **2.5.2.1 Introduction**

The Procurement Process model shows the various steps and stages that a particular procurement activity follows in satisfying the need identified (Baily and Farmer, 2015).

### **2.5.2.2 Need Identification**

The procurement process begins with identification of need for operational sustainability of the organization. These needs are determined by daily activities of individuals and departments which are consolidated to become the overall organization need. This information on most organization become the basic information or input for the budget and procurement plan for a given period (Centre of Excellence London, 2012). Lysons and Farrington (2012) also argue that this stage is characterized with the notification of need to purchase by either requisition that will be raised by the stores stock control or any potential user. However, requisitioning of need to be fulfilled should be done in line with the procurement plan to give enough time to procurement to prepare and follow proper procurement methods needed to fulfill the need.

Public sector procurement process has a similar phase which starts with the identification of operational requirements which are determined and specified by the user which are subsequently consolidated as a composite requirement for the procurement of annual procurement plan which according to the procurement Act, Act of 2008 is mandatory for every public sector institution to have. Procurement planning is key in having efficient and effective sourcing of good and services. The approach is decided; including consideration such as whether to produce the product(s) in house or source them externally depending on which one is most cost effective and efficient way of applying resources available (ibid). The goods work or services may be available under existing framework contract. Decision will be taken on funding the applicable procurement rules and the method of procurement, which should be used.

### **2.5.2.3 Determine Specification**

Specification is second stage of the procurement process after the need has been identified. Specification can therefore be defined as a communication tool used by procurement to communicate the need of the organization to the external users that has interest in the product or service in question. However, specifications are not developed by procurement alone but with the end users, procurement can only facilitate or help as the end users together with the technical experts in coming up with specifications which are feasible and attainable (Burt et al, 2006). There are various forms of specification which are technical, functional,

performance, sample, brand and design (Lysons and Gillingham 2013). The technical specification gives a highly detailed description of technical properties and activities that should be performed by the product. Performance gives the output range within which the item must function; whereas the function type ensures the product performance; fit for the purpose or what it has to achieve. Sample type gives a guide as suitability especially where specification is very difficult to write. This however limits competition to some extent in perfect competitive environment. Brand specification also denotes customers' preference. One of these of specification is usually adopted in any procurement. However, each has its own merit and demerit side which need to be identified and analyzed before choosing a type. Procurement contributes by providing information on the available supply; identification of risk on suppliers and products, where to use standardization to avoid unambiguous specification and promote competition. In Zambia, the public procurement Act, of 2008 requires that, specification preparation should be devoid of brands which will not limit competition but rather present specification which open to everybody to participate in order to achieve value for money.

#### **2.5.2.4 Sourcing**

Under this stage, the procurement unit/staff is identifying location of supply in the market place based on the product that is required. As part of the activities at this stage, the attractiveness of the market in terms of its expansion and contraction will influence the number of suppliers. This source can be identified through the catalogues, internet trade journals, trade exhibition yellow pages of telephone directorate and suppliers' data base of the organization (Moberg et al, 2011). In Zambia, the public sector Act of 2008 defines sourcing to include pre - qualification of potential suppliers, preparation and issue of tender documents, requests for quotation or for proposals, evaluation of responses and the selection of successful tender which constitute the entire sourcing process. Lysons and Farrington (2012) also argue in the same line by saying that, sourcing stage includes, activities or processes like enquires or request for quotation which are sent to suppliers, accompanied by additional documents, such as drawings, specification and any document or information that will enable potential suppliers to submit a quotation.

#### **2.5.2.5 Enquiry and Evaluation**

Under this stage, the quality and fitness for use of the product is determined to ensure that there is value for money from the product that the procuring entity is about to purchase. Of all the processes of procurement this one is very important because it determines the quality of the product that the organization intends to purchase. Suppliers are asked to give information on the following: details of the organization, financial details, equipment and facilities, management skills and reference to assess the capabilities of that particular source before it will allow providing information (quotation or tender) on the product or service (Amaratunga and Badley, 2012). This stage determines the technical and financial capabilities and competencies of the source identified. The Zambia Public Procurement Act of 2008 defined this stage as the analysis of information that has been submitted by potential sources. This stage has been divided into four distinct stages which start from the preliminary selection of tender with already determined criteria. The second stage is the commercial evaluation which emphasis on delivery period proposed by the buying institution and supplying institution. The terms of payment are also evaluated at this stage and other terms which are considered as commercial and at this stage to form part of the contract.

#### **2.5.2.6 Negotiating**

Negotiation is the process of resolving substance issues properly, relationship can be developed, and an agreement reached in enhancing performance to attain efficiency and harmonization (Stannack, 2009). Negotiation practices differ in the public and private sectors in terms of when it can apply during the procurement process. Most private sector organization will start to negotiate with supplier after source evaluation which subsequently leads to the award of contracts. In most cases negotiation has to do with request in discounts with regards to the prices submitted by the vendor to the procuring entity. Negotiation has the ability to improve buyer-supplier relationship and can be adopted as a means of conflict resolution instead of going to courts of law.

All these writers have suggested adequate preparation should go into planning and information gathering and analysis, clear objectives should be to serve as a guide for the negotiation team in terms of what needs to say and done to arrive at a win-win situation. Based on this premise, conclusion can be drawn by saying that negotiation can only be successful if adequate plan is done by the buyer and negotiation team.



### **2.5.2.7 Ordering and Progressing**

After evaluating and negotiation is signing of contract based on the agreement reached at the previous stage of the process. A notification of order or contract will be issue to the successful supplier or contractor to deliver the product or service.

In Zambia, the public procurement Act, (2008) requires that a formal contract document be drawn up, using the agreed terms and condition and signed by both parties. Simpler requirements may use a procurement order or where framework contract exist, contracting may consist of placing a call-off order under an existing contract. In another way; buyers will negotiate call-off agreement which will be valid for some specific period. This presupposed that the activities of contracting and ordering will be different activities (Padgett et al, 2012).

Padgett et al (2012) postulates that procurement function can add value at this stage if corrective measures are developed such as such; efficient ordering and routine checking that will ensure that all procurement orders are received and confirmed by suppliers; maintenance of a data base of critical procurement and supplier information and taking effective and immediate decision when required. On the other hand, Monczka et al (2013) argue that it is not important to spend time progressing and expediting orders which to them are seen as being an admission of defeat. They continue to suggest that collaborative supply chain thinking will solve major problems that are likely to come up and improved performances tremendously.

### **2.5.2.8 Delivery of Goods**

Under this stage, the supplier delivers the goods that were ordered to the agreed place according to the purchasing order or contract at hand. Dependable suppliers deliver far early even before the due date rather than delivering on the actual date. This can be achieved where the procurement staff expedites the delivery from the supplier. Delivery involves checking products and services with agreed specification and notified the system of receipts and payments. The time taken to do this will impact on the overall (National Consumer Council, 2012).

In Zambia, the public sector procurement Act of 2008 stipulates that the contract should be managed by both the buyer and the supplier to ensure early delivery. Activities may include; expediting, arranging inspection or freight forwarding chock bank guarantees, establish

letters of goods, verification of document and making payment. In order to enhance early delivery of order Lysons and Farrington (2013) are of the view that expedite work should be done to ensure that delivery is done within agreed period to avoid contractual disputes.

#### **2.5.2.9 Payment and Receiving**

If the supplier has delivered the goods and the procuring entity stores has accepted the goods, forwarding invoices to procurement triggers payment to the supplier. The procurement staff 's job does not end when they have received the goods from the supplier. They must ensure that the supplier is paid in time and according to the agreed terms and conditions from the contract. Which means that the procurement has to arrange all the documents needed and forward them to accounts for payments with everything needed backing such a payment. If payment is not done in time and according to the terms and conditions of the purchase, the purchasing organization is likely to be sued by the supplier and end up paying for damages (Burt et al, 2014).

Payment of goods procured will largely depend on the terms of contract (payment terms). If the payment terms indicate pre-payment or finance of contract, then payment is probably effected at the early stage of the procurement process before goods are delivered (Emmet and Crocker, 2016). However, if the payment terms affirm payment after delivery and submission of the approved documentation, then that will be the last before reviewing of the entire procurement process.

Reviewing of the whole contract process can be done from any angle of the procurement process. It is done to know the performance of procurement function and subsequent improvement if any. The extent of reviewing, monitoring and control allocated will depend on the importance of the product or service being procured in relation to the business strategy (IMF, 2013). This reactive approach to procurement can be avoided if corrective measures are taken to obtain the right products or services. If not properly managed can lead to a dispute arising. Proactive strategies can be adopted by procurement management to solve problems raised at this stage of the process. Payment in public sector procurement in Zambia is a hot issue due to inadequate fund for payment with the agreed payment period in the contract payments. Payments are done within thirty days or more which result in poor

delivery and overall performance of the supplying firm and operational of procurement function of shortages.

### **2.5.3 Electronic Procurement (E-Procurement) Process**

In the last four decades, both public and private sector organization have been making good use of information technology system in an attempt to shorten and also automate their procurement and other process. It is recently that e-procurement systems have recorded the needed attention deserves as a means of enhancing the procurement process (Padgett et al, 2012).

According to chartered Institute of purchasing and supply (CIPS) e-procurement buying process covers requisition against agreed contract, authorization, order, receipt and payment. The success of these depends on the ability of the system to communication across boundaries, Krishor et al (2006) have indicated that quite a number of public institutions are in the process of implementing e-procurement as part of e-government agenda and Zambia is no exception. Many public sector ministries and agencies in Zambia are implementing e-procurement through IFMIS and e-government procurement introduced by Zambia Public Procurement Authority (ZPPA).

Slack et al (2016) defines e-procurement as Business to Business procurement and sale of supplies and services over the internet. It is digitizing the whole process of procurement from the manual process to online thus eliminating the paper handling with the process of procuring the goods and services (ibid).

Many authors mentioned the use of internet in conducting e-procurement, which presupposes that, certain information communication technology infrastructures such as, computers, server database and platform should be available exchange of information amongst partners. has also contributed to this topic by saying that, e-procurement exist to support the procurement process through available database exchange.

Morberg et al (2011) defined e-procurement as a system that allows companies to automate the tactical process and workflow associated with procurement. They go on to say that,

procurement managers can reduce paperwork trails and make critical strides in efficiency. E-procurement includes aspect of procurement of function of various forms of electronic communication and takes different forms when it comes to the user in both public and private sector.

Burt, Dobler and Starling (2006) contributed to this by given three models for which public sector can use e-procurement which are; notification model for new solicitation to set of suppliers while the second model allow suppliers to read and respond the solicitation with the last model for reverse auction. The whole idea of e-procurement is to reduce cost and activities efficiencies in the procurement function. Cost Reduction can be achieved through reduction in paperwork, man hours and little space needed for files and goods. Various writers who have contributed to this area have all emphasized on the indirect benefits that e-procurement contributed to the procurement process by making the process short between ordering and the use of suppliers; and, there is a greater flexibility in ordering goods from different sources at the same time.

A review of e-procurement literature, primarily from the last five years, shows a lack of core contracts around critical success factors. The reason for this might be that implementation of e-procurement initiatives in the public sector is still on the early stages, Waters (2015) argues there is little history of extensive use of e-procurement in the public sector and therefore, the academic literature covering early public sector adoption of e-procurement is limited.

#### **2.5.4 Link between procurement process, efficiency, effectiveness and performance**

Lysons and Farrington (2012) suggested that procurement performance starts from purchasing efficiency and effectiveness in the procurement function in order to change from being reactive to being proactive to attain set performance levels in an entity. In order to achieve this, procurement planning is inevitable and imperative to allow proper procurement methods to be engaged that are right.

According to Cox (2015) purchasing performance is the result of two elements: purchasing effectiveness and purchasing efficiency. Performance provides the basis for an organization to assess how well it is progressing towards its predetermined objectives, identifies areas of

strengths and weaknesses and decides on future initiatives with the goal of how to initiate performance improvements. This means that purchasing performance is not an end but a means to effective and efficient control and monitoring of the purchasing function (ibid).

Purchasing efficiency and purchasing effectiveness represent different competencies and capabilities for the purchasing function. CIPS Australia (2005) presents the differences between efficiency and effectiveness. Efficiency reflects that the organization is “doing things right” whereas effectiveness relates to the organization “doing the right thing”. This means an organization can be effective and fail to be efficient, the challenge being to balance between the two.

For any organization to change its focus and become more competitive, Chopra and Meindl (2009) suggest that performance is a key driver to improving quality of services while its absence or use of inappropriate means can act as a barrier to change and may lead to deterioration of the purchasing function. Organizations which do not have performance means in their processes, procedures, and plans experience lower performance and higher customer dissatisfaction and employee turnover.

Measuring the performance of the purchasing function yields benefits to organizations such as cost reduction, enhanced profitability, assured supplies, quality improvements and competitive advantage as was noted by Carter and Kibby (2011). Until an organization measures purchasing performance, they will never know how well they are performing and why they should measure purchasing performance. Department of Public Works, Queensland Government (2006) identified four reasons for measuring purchasing performance:

- i) It provides feedback on the extent to which the planned outcomes for purchasing are being achieved in the organization.
- ii) It provides information for analysis and decision making.
- iii) It provides information to executive management about the effectiveness, efficiency, value and contributes to the recognition of the procurement function.
- iv) It provides focus and motivation for purchasing staff.

## **2.6 Case studies on IFMIS**

### **2.6.1 Case study on IFMIS in USA**

The U.S. Department of Homeland Security (DHS) Federal Emergency Management Agency's (FEMA) Office of the Chief Financial Officer (OCFO) owns and operates the Web Integrated Financial Management Information System (Web-IFMIS) (Thargard, 2013). Web-IFMIS is FEMA's official accounting and financial management system that pulls all of FEMA's financial data from other FEMA, DHS, and Government-wide systems (subsystems), and is the source of data for both internal and external financial reporting. The system records and tracks all financial transactions. FEMA is conducting this PIA because Web-IFMIS collects, uses, maintains, retrieves, and disseminates personally identifiable information (PII) from the subsystems (Cantor, 2013). This PIA replaces the previously published DHS/FEMA/PIA-020 Integrated Financial Management Information System Merger (IFMIS - Merger). Overview Web-IFMIS is FEMA's official accounting and financial management system that tracks all of FEMA's financial transactions.

Web-IFMIS does not collect information directly from individuals; the information contained in the system is pulled from other systems (ibid). Web-IFMIS provides FEMA's financial managers a global view of all FEMA's financial systems. Web-IFMIS uses information provided through these various subsystems in order to make payments to entitled groups (grantees), FEMA employees for payroll and travel reimbursement, and contractors and other vendors for payment of services. Web-IFMIS is also used to account for the expenditure of public funds as mandated under various statutes, Executive Orders, Office of Management and Budget (OMB) guidance, regulations, and DHS and FEMA policies. To facilitate the processing of accounting and financial information, Web-IFMIS is comprised of various modules. Web-IFMIS collects information on grantees, payrollers, employee travelers, contractors, and vendors (Thargard, 2013).

To account for expenditures, Web-IFMIS generates report invoices, payment receipts, cash receipts, commitments, obligations, receiving reports, expenditures, and advanced charges. Web-IFMIS carries out the budgeting, management of vendor accounts, payment approval, and accounting for FEMA's finances (ibid). The process begins when Congress appropriates, and OMB approves FEMA's funding. Next, FEMA's OCFO establishes accounts within Web-IFMIS to correspond with the funding appropriated by Congress and approved by

OMB. FEMA program offices then request allocation of funds, via Web-IFMIS' subsystems, as part of FEMA's annual and ongoing budgeting, financial, and accounting processes. FEMA's OCFO receives funding requests from the various program offices and processes these requests by first reviewing the request and determining whether funds are available for the transaction. If funds are available then FEMA commits the funds in Web-IFMIS to prevent those funds from being used for any other purpose (Cantor, 2013). FEMA's OCFO also reviews the requests to make sure that vendor accounts are established for each individual, entitled group, or entity identified on the requests. FEMA establishes vendor accounts using PII, including name and a unique identifier (e.g., social security number).

On May 15, 2003, IFMIS-Merger underwent a change in servers/platform and a system name change to reflect the new server/platform change. IFMIS-Merger is now known as Web-IFMIS, due to the system moving to a new web accessible platform. When the system is accessible on the Web, transparency and efficiency is enhanced because many people are able to view public finance data from wherever they are with less challenges. In addition, this means that users can use any gadget to access the data on IFMIS which is Web based. This dissertation further wants to find out if the IFMIS implementation that has been rolling in developing countries can be accessed on the Web (Micheal, 2014).

Privacy Impact Assessment Web-Integrated Financial Management Information System (Web-IFMIS) Federal Emergency Management Agency. Once funding is appropriated and committed and the proper vendor accounts are established, FEMA is able to process payments or provide reimbursements to those individuals, entitled groups, or entities referenced on the initial requests. As program offices receive invoices, they review and send payment approval to FEMA finance analysts. FEMA finance analysts approve payments within Web-IFMIS and transmit an electronic and encrypted file to the Department of the Treasury (Treasury) on a daily basis. Treasury is then responsible for collecting the electronic files, processing payments, and returning a control number for each batch file to FEMA. FEMA finance analysts verify payments by reconciling Treasury control numbers with the payment requests and Web-IFMIS deducts the paid funds from the appropriate accounts (Jonathan, 2014).

### **2.6.2 Case study on Treasury Single Account (TSA) in Nigeria**

Successive governments in Nigeria have continued to operate multiple accounts for the collection and disbursing of government revenues in flagrant disregard to the provision of the constitution which requires that all government revenues be remitted into a single account (Okerekeoti and Okoye, 2017). Treasury Single Account (TSA) came as a quick fix to regulating the level of accountability and transparency in the financial resources of the government of the country. Treasury Single Account (TSA) is a unified structure of government bank accounts enabling consolidation and optimal utilization of government cash resources (Adeolu, 2015). Through this bank account or set of linked bank accounts, the government transacts all its receipts and payments and gets a consolidated view of its cash position at any given time. However, this paper theoretically examined Treasury Single Account in Nigeria with a view to providing the way forward for the country. In above mentioned research, the researchers proposed that government should engage in massive public enlightenment about the importance of the policy at all levels (Okerekeoti and Okoye, 2017). The study further outlined that government should adhere to the provisions of Section 162(1) of the Constitution of the Federal Republic of Nigeria (as amended) for the maintenance of Federation accounts and avoid using private contractors. Though Section 162(1) has made provisions for maintenance of Federation accounts, the legislature should look inwards and address the operational details. Furthermore, the research recommended that government should overhaul the capacity of the Federal Ministry of Finance and the CBN to cope with challenges associated with enforcement of the provisions of the TSA.

The Government of Nigeria saw Treasury Single Account as a useful tool to establish centralized control over its revenue through effective cash management. It enhances accountability and enables government to know how much is accruing to its accounts on a daily basis (Akande, 2015). In Nigeria, it is expected that the implementation of TSA will help tame the tide of corruption of financial leakages and embezzlement. The implementation of Treasury Single Account (TSA) is expected to block revenue leakages within the MDAs as the Ministry of Finance will be able to monitor the inflows and outflows, hence, augment the reduction in oil revenue due to falling oil prices. CBN (2015) reasoned in the same direction and said that the implementation of TSA will enable the Ministry of Finance to monitor fund flow as no agency of government is allowed to maintain any operational bank account outside the oversight of the ministry of finance. The implementation of the TSA would have a



positive effect on the national economic planning, swift & full budgetary implementation; reduce leakages and other irregularities in the MDAs, aid appropriate planning, data collection, analysis and timely aggregation of Federal Government Revenue. Realization of the government revenue on time causes its effective allocation.

The primary benefit of a Treasury Single Account is to provide for proper monitoring of government receipts and expenditure. In the Nigerian case, it would help to block most, if not all, the leakages that have been the bane of the economy (Akande, 2015). In Zambia TSA and IFMIS are implemented and run coherently in order to have a more cohesive approach of managing finances for the country. The researchers further observed that in Nigeria they had a situation where some Ministries, Departments, and Agencies manage their finances like independent empires and remit limited revenue to government treasury. But, under a properly run Treasury Single Account, it can no longer be possible, as agencies of government are meant to spend in line with duly approved budget provisions (Yusuf and Chiejina, 2015). This is a common practice not only in Nigeria but in many other developing countries where IFMIS and TSA has not been implemented yet and Zambia has not been an exception before the implementation of TSA and IFMIS.

Oyedele (2015) said that “Government should make banking arrangements for efficient management and control of government's cash resources”. It should be designed to minimize the cost of government borrowing and maximize the opportunity cost of fund. TSA ensures that all money received is available for carrying out government's expenditure program and making payments on time. Many low-income countries have fragmented systems for handling government receipts and payments. In these countries, the ministry of finance/treasury lacks a unified view and centralized control over government's cash resources. As a result, this fund lies idle for extended periods in numerous bank accounts held by spending agencies while the government continues to borrow to execute its budget. The surprising thing is that the same money that lies idle in these banks, the banks makes money on this money by lending it out to customers as loans while the Government is busy is getting loans from the international partners and this situation was really saddening to many developing countries not only Nigeria.

Udoma (2016) opines that maintenance of TSA would enhance funding government budget rather than depend on Federal allocation. In any economy where the budget is fully funded, the aim certainly will be accomplished. The consequence should be; improved economic system, political and social development. It is clear that a government that lacks effective control over its cash resources can pay for its institutional deficiencies in multiple ways. They are as follows:

- Idle cash balances in bank accounts often fail to earn market-related remuneration.
- The government, being unaware of these resources, incurs unnecessary borrowing costs on raising funds to cover a perceived cash shortage.
- Idle government cash balances in the commercial banks are not idle for the banks themselves, and can be used to extend credit (Oyedele, 2015).
- These have been the case in Nigerian economy. Nigeria still owes a huge amount in both external and internal debts. Therefore, the implementation of TSA will promote a healthy economic system.

#### **2.6.2.1 Conclusion & Way Forward made from the above research**

The study noted that it was obvious that TSA policy was anticipated to go a long way in blocking the identified financial leakages in revenue generation and promote transparency and accountability in the public financial system if it is fully implemented. It would equally pave way for the timely payment and capturing of all revenues going into the government treasury, without the intermediation of multiple banking arrangements. The policy would also enable the government at the centre to know its cash position at any given time without any hindrance. The system would likely reduce round-tripping of government deposits. The study also noted one shortcoming being the inadequacy of literature because the policy was fairly new. On the whole, the adoption of TSA would be positive for the economy in general and also the tax system in particular. The appropriate authorities would have to now embrace transparency and accountability more than ever before. The study made the following recommendations;

- 📌 To cushion the liquidity impact on the financial system, an orderly migration of cash balances from the commercial bank accounts to the TSA should be considered and complemented with monetary policy measures.
- 📌 Also, the legal framework should be reviewed and amended where necessary while training should be provided to relevant staff of CBN and MDAs to ensure efficient

implementation.

- ✚ Tax authorities should use the opportunity to start presenting robust tax revenue reporting to include tax collection by tax types; industry sectors, states, number of tax payers, demography, tax credits, unpaid refunds, and value of tax incentives granted, and so on.
- ✚ The FIRS and Joint Tax Board should fast-track the implementation of their e-filing projects which should help ultimately in ensuring that instant credits are granted to tax payers for remittances to TSA via commercial banks.

### **2.6.3 Case study on the impact of ifmis on performance of public institutions in Rwanda**

A study of assessing the contribution of adoption of IFMIS on performance of Public institutions in Rwanda was carried out under the period 2012-2016. The study was descriptive in nature where raw data was used (Harelimana, 2017). Data were collected from 51 out of 197 total population sampled based on available respondents. Methods such as questionnaire, observation, interview and documents were used together both primary and secondary data (ibid). After data collection, SPSS Version 32 program was been used for gathering data and cleaning them. The Software also was used to perform statistical techniques that including percentages, mean, standard deviation, and correlation, this was helped the researcher in getting findings for the research conclusion and recommendation.

Findings revealed that IFMIS was fully adopted in MINECOFIN with mean of 4.05 which indicated that respondents are strongly agree that IFMIS was adopted fully in MINECOFIN: the implementation of the system was done following all required steps, (mean of 3.86 and standard deviation of .721) and it was also increased the capacity building of its personnel by offering the necessary training (with mean of 4.43 and standard deviation of .7). the adoption of IFMIS helped in budgeting system (mean of 3.990, cash management (with mean of 4.15), financial reporting (with mean of 4.02) and internal control system (with mean of 4.16). This affected positively the performance of the organization where the correlation between the adoption of IFMIS and performance of MINECOFIN was .976 means the perfect correlation. By conclusion, we confirm the research of Rodin (2008) and (Diamond and Khemani, 2006), that they are significant contribution of integrated financial management information system on performance of public institutions in Rwanda, where it generates timely, the accurate

information for the management decision making.

### **2.6.3.1 Conclusions and Recommendations**

#### **2.6.3.1.1 Conclusion**

The study noted that it was clear from the discussions above that the successful implementation of an IFMIS was a major component, if not one of the goals, of PFM reform. Although it may not fully prevent fraud and corruption in government institutions, the standardized information that management receives should assist in identifying and investigating unusual transactions or activities, which may increase Government's ability to root out corruption (Harelimana, 2017).

The success and sustainability of IFMIS was dependent on an effective sustainable strategy and the effective implementation of other PFM reforms such as a review of the country's PFM Act, review of budgeting process, development of a Standard Chart of Accounts etc. These aspects should be supported with clear political leadership and commitment and the appropriate resources, capacity building and change management strategies.

The study also noted that IFMIS was considered to be the over-arching reform which aligns all other PFM processes. It gave effect to the overall objective of PFM and is a valuable tool for decision-making in the public sector. However, it was important for governments to realize that there was no "one-size-fits-all" solution where IFMIS is concerned. Each country is unique and consequently a tailored solution is required to address the specific system requirements, information needs and users (Khemani and Diamond, 2006).

The conclusions of the study also are drawn from the most significant factors presented in the preceding sections. The study thus concluded that there has been a moderate level of implementation of IFMIS in Government institutions. Training/capacity building, employee commitment, human resources available, top management support, technological infrastructure, governance system, reporting accountability, incentives structure and legal framework in place affected the implementation of IFMIS in Rwanda. IFMIS forms part of the financial management reform practices of developing countries globally. It holds benefits such as effective control over public finances, contributes to the enhancement of transparency

and accountability and serves as a deterrent to corruption and fraud.

#### **2.6.3.1.2 Recommendations**

In order to tap the many benefits associated with adoption of IFMIS implementation this study recommended that; The National government needs to inject further support to the Public institutions with change management trainings to overcome resistance noted posing a challenge in adoption (Harelimana, 2017). The staffs at the institution level required an appreciation on the need for IFMIS through trainings and hand holding which can be facilitated through additional budget not available due to limited funding at institution. Now that IFMIS is already deployed to the institutions a lot of sensitization needs to be done to the users and all stakeholders for it to be successful. This recommendation fits in well with what the Technology Acceptance Model guides in order for every technology to be easily adopted. Consequently, non-adoption has resulted to continuous manual processes in public institutions that had not adopted IFMIS thus inhibiting effective service delivery, effective corporate governance from manual procurement processes, manual budgeting processes as well as un-computerized human resource management (Mutui, 2014).

Clear objectives on the need to implement IFMIS need to be reframed based on the intent to increase customer satisfaction, reduce wastage, increase efficiencies and eliminate graft amongst other evils like unproductive workers. A clearer understanding on the global e-government system trends designed to accommodate all financial transactions within the government to geared towards reducing wastage, enhanced record keeping, for planning and reduction of corruption must be emphasized (ibid).

The study further noted that there was need to ensure that the requisite infrastructure was in place especially in outlying areas out of Rwanda where ICT connectivity was a challenge due to electricity shortages. If the infrastructure cannot be put in place in the whole institution, the result will be that it would be branded as a Rwanda “project” while in the other areas manual systems would have continued as usual.

Further, a strong IFMIS project implementation and coordination working committee championing the counties’ level implementation coordinated by a secretariat derived from the national IFMIS need to be constituted providing regular updates on implementation status

and challenges met.

## **2.7 Theoretical Framework**

The research reviewed a lot of theories and models done by other researchers in line with the research topic in order to have an in depth understanding and be able to develop a model that will provide a solution to the problem of research. The following theories were reviewed; Meta Theory model, Circumvention Innovation Theory, Agency theory, Systems theory, Software Restructuring model and Technology Acceptance Model.

### **2.7.1 Meta Theory Model**

Ruchala and Mauldin (2016), argue that; previous applications of information technology in accounting systems were mainly processes of transactions that would reciprocate the manual processes. Meta theory is the integration and the synthesis of technical orientations, cognitive as well as the overarching model into the research on AIS. The meta theory has helped in addressing the IT limitations that are imminent and addressed in previous researches such as the failure to recognize the task to which IT is being applied, the failure to recognize the adaptive nature of the artificial phenomena, the failure to account for the design science in the actual field research and the failure to direct the act of making or choosing the necessary decisions and treating all the transactions in an equal manner (Gorry and Scott-Morton, 2012). This theory directly relates to this research to assess if IFMIS is built to eliminate the manual type of making payments in Public Procurement or if it has remained the same without changing thus not bringing efficiency with its existence.

Reneau and Grabski (2013) assert that; information systems in accounting are used by accountants and other key decision makers that employ the accounting information or make use of the accounting data. The Meta theory model is built on past frameworks on the management information systems.

### **2.7.2 Circumvention Innovation Theory**

American economist Kane in 1981 pioneered circumvention innovation theory. He thinks that many forms of government regulations and controls which have the same property of implicit taxation embarrass the profitable activity engaged by the company and the opportunity of earning profit, so the market innovation and regulation innovation should be

regarded as the continuous fighting process between independent economic force and political force (Reneau and Grabski, 2013). Because financial industry is special, it has the stricter regulations. Financial institutions deal with the status such as the reduction of profits and the failure of management induced by government regulations in order to reduce the potential loss to the minimum (Ammerlaan, 2014).

Therefore, financial innovation is mostly induced by the purpose of earning profits and circumventing government regulations. It comes true through the game between government and microcosmic economic unity. Kane's theory is different from the reality. The regulation innovation he assumed is always towards the direction of reinforcing regulation, however, the regulation innovation in reality is always towards the direction of liberal markets innovation, the result of the game is release of financial regulation and markets become more liberal. But his theory is better than constraint-induced financial innovation theory. It not only considered the origin of innovation in the market but also researched the process of regulation innovation and their dynamic relation.

### **2.7.3 Agency Theory**

In its most basic form, agency theory states that the principal (citizens) cannot trust the agent (civil servant) to act in the principal's best interest, but, to their own (Steger and Amann, 2008). The principal's problem is that the agent knows the situation much better than she/he does, due to the information asymmetry and that, furthermore, supervising the agent means that the principal incurs agency costs.

Agency theory proposes that a utility-maximizing economic agent may take actions that are consistent with the interest of the principal. However, in some situations, civil servants may prefer to undertake actions that run counter to the preference of citizens, for instance paying of excessive salaries to staff (Mishra, Kumari and Kiranmai, 2008). The Organization of Economic Cooperation and Development (2009) also notes that pressure on governments and on the business sector to improve corporate governance arrangements has arisen often in the context of the failure of large companies and particularly marked instances of corporate fraud, and much the same has taken place since 2000.

According to Gurbaxani and Kemerer (2016), an agency relationship can be said to occur whenever one party depends on the actions of another party. Moreover, an agent relationship is a contract under which one or more persons (the principals) engage another party (the agent) to perform some services on their behalf which involves delegating some decision-making authority to the agent. Agency theory argues that this occurs because: (a) the goals of the principal and the agent are often inconsistent with one another (“goal incongruence”) and (b) the principal cannot perfectly and costless monitor the actions and information of the agent (information asymmetries). Since agents are usually better informed than their principals about their tasks, organizations would do better if all information could be shared at zero cost, or if there was no divergence between the goals of the principals and the agents. The economic loss that occurs due to the absence of such optimal conditions is called the agency costs. The components of agency costs are monitoring costs extended by the principal to observe the agent.

Agency theory will be applied because various accounting scholars have discussed its significance for explaining efficient management control devices. For instance, in the 1980s, agency theory appeared extensively in the managerial accounting realms to determine the optimal incentive contracting among different individuals and establishing suitable accounting control mechanisms to monitor their behaviors and actions (Namazi, 2012). Since IFMIS allow internal controls to be exercised by governments (Beschel and Ahern, 2012), it can be said that it constitutes agency costs discussed in Agency Theory.

#### **2.7.4 Systems Theory**

The origination of systems theory is credited to Ludwig von Bertalanffy in the 1970s (Bevir, 2010). According to Smith-Acuna (2010), systems theory can be defined as a set of unifying principles about the organization and function of systems; where systems are defined as meaningful wholes that are maintained by the interaction of their parts. According to Daft (2009), a system functions by acquiring inputs from the external environment. In classical systems theory, bureaucracies are a complex web of interrelationships both organizational and individual. Public audit systems seek to give some transparency to bureaucracies’ financial operations and acts to mitigate a natural tendency to pursue individual and organizational self-interest at the expense of public welfare. Its support for values such as



probity, propriety and good stewardship may help to sustain these civil service cultures which are motivated by a concern for the proper use of public money (Bourn, 2009).

According to Mayers (2013), concepts and techniques of systems theory are important in financial management for a number of reasons. First, they are the bases for the development of computerized information systems, found in all types of organizations today. An organization systems analysis is an integral part of the planning and development of a computerized information system; and modern auditing today includes in its valuations a system review. In order to meet today's operating challenges, regional and local governments are turning to ICT to enhance the services for residents, businesses and visitors, and improve internal efficiencies by lowering costs and increasing productivity (Ngugi and Mugo, 2012). Systems management ensures that the system's infrastructure is maintained and that the system is meeting its objective (Bevir, 2009).

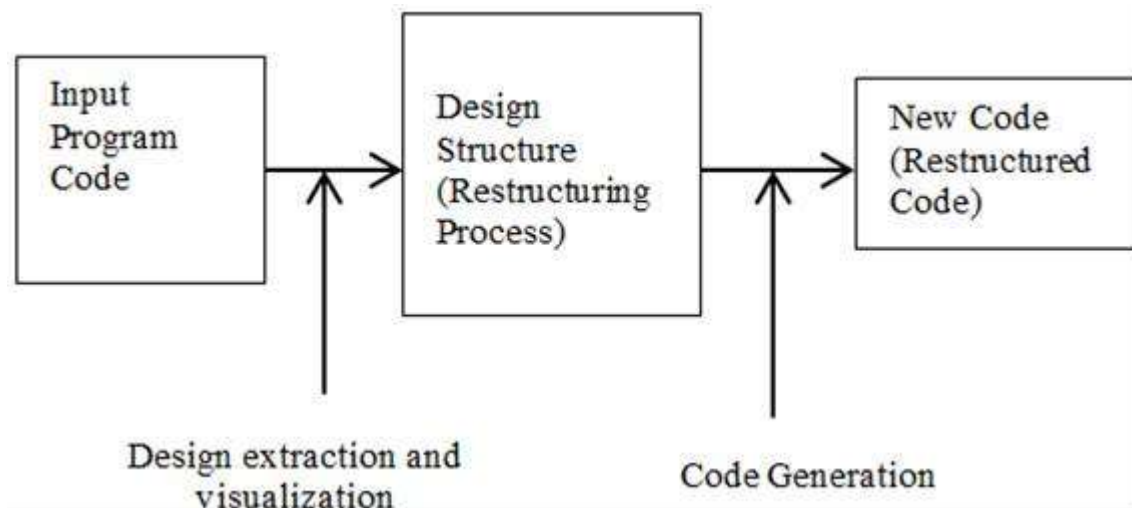
#### **2.7.5 Software Restructuring Model**

According to Micheni (2016), software restructuring model focuses on inventory analysis, document restructuring, reverse engineering, code reengineering, data restructuring and forward engineering. It provides abstracted design information derived from program code and the module interface information needed for restructuring.

IFMIS has a number of components and modules that aid in its operations. These modules include; procurement module, accounts payable module, accounts receivable module, tax module, cash management module, budget planning module and transactions module. Code restructuring can be done around the modules to enhance delivery outcomes of the system (Kimwele, 2015).

In this study, the model was used to enhance understanding of IFMIS reengineering and how code reengineering can be used to yield positive impact of IFMIS on public procurement processes.

The model is presented in Figure 2.1 below.



**Figure 2.2 Code Restructuring Model.**

**Source, Micheni (2016)**

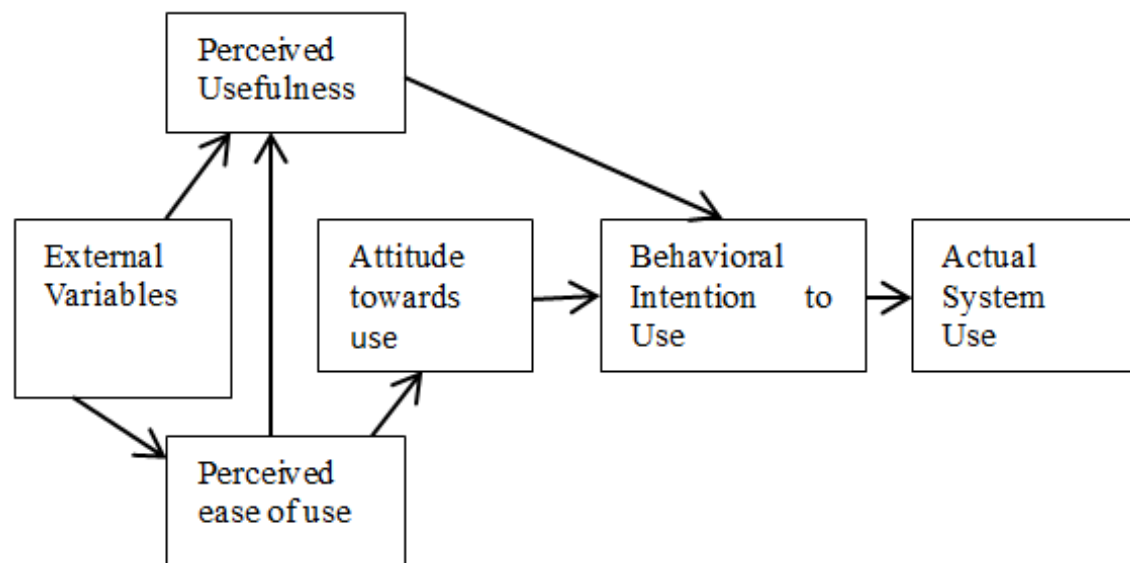
Furthermore, software restructuring model was used to conceptualize software code restructuring and potential outcome on the impact of IFMIS on public procurement processes. IFMIS system is designed to connect, accumulate, process, and provide information to all intended parties on a continuous basis.

### **2.7.6 Technology Acceptance Model**

The Technology Acceptance Model (TAM) suggests that there are a number of factors determine the decision about how to adopt and use a new technology (Micheni, 2016, Soneka, 2019). The theory proposes a relationship between users' acceptance of a new information system and the users' perceptions of the ease of use and usefulness of the information system. The theory proposes that adoption of new technology requires integration of the external factors and internal organizational factors such as; perceives usefulness of the system, perceived ease of use, attitude towards use of the system, behavioral intention behind adoption and use and the actual systems' use (Ammerlaan, 2019).

User acceptance of a new technology is based on the influence of perceived usefulness and perceived ease of use of the system (Kahari et al, 2015). The model explains that user perceptions of usefulness and ease of use determine attitudes toward using the system are influencers of acceptance. Behavioral intentions to use are determined by users' attitudes

toward using the system. Behavioral intentions to use the system then determine actual system use. The model provides a direct link between perceived usefulness and behavioral intentions to use. Figure 2.2 presents the technology acceptance model.



**Figure 2.3: Technology Acceptance Model.**

**Source, Soneka, (2019)**

In this study, the model provides an insight on how personal factors could influence the impact of IFMIS on procurement processes in public sector. IFMIS use in public procurement in the public sector involves people literally at all stages. From the perceived link between personal factors and impact of IFMIS on procurement processes, government policy makers need to make rational decisions that enhance people participation and consequently yield the desired benefits of IFMIS that can enhance transparency, enhance efficiency and speed and reduce financial leakages (Rozner, 2008).

## **2.8 Chapter summary**

The reviewed literature shows that IFMIS has been in implementation in Zambia for quite some time. The literature further shows that using e-procurement or systems that digitize procurement can enhance effectiveness and efficiency, speed and reduce on financial leakages in public procurement.

However, there has not been any study done to investigate the Impact of IFMIS on procurement processes in public sector in Zambia. It is this gap in literature that this study is trying to fill in. Table 2.1 shows the summary of relevant literature reviewed.

**Table 2.1: Summary of reviewed literature**

<b>NO.</b>	<b>TITLE OF RESEARCH</b>	<b>YEAR</b>	<b>AUTHORS</b>	<b>FINDINGS</b>	<b>GAPS</b>
1.	Adoption of Code Restructuring to Enhance Full Cycle End-to-End Integrated Financial Management Information System in the Public Sector in Kenya.	2016	Elyjoy Muthoni Micheni	The study revealed that Code restructuring can be used to enhance quality of IFMIS outcome.	The study only focused on adoption of restructuring without assessing the impact on procurement processes in public sector.
2.	Impact of Integrated Financial Management Information System on Performance of Public Institutions in Rwanda.	2017	Jean Bosco Harelimana	The study revealed that there is significant contribution of IFMIS on performance of public institutions in Rwanda.	The study assessed impact in general without picking a specific module and assess it against its performance.
3.	IFMIS Current Status, Challenges and Future Development.	2013	World Bank	The findings revealed that many countries do not publish financial data to their citizens extensively.	The study grouped all the findings world wide from different regions thus questioning the validity of the conclusions.
4.	The Treasury Single Account (TSA) as an Instrument of Financial Prudence and Management: Prospects and Problems	2016	Ahmed Adamu Isa	The study revealed that TSA system requires political will, honesty and determination so as to overcome the various challenges identified in the paper.	The study only assessed TSA even though it is run concurrently with IFMIS. However, this study assessed the impact of IFMIS on procurement processes with TSA in consideration.
5.	Procurement processes and performance:	2010	Patrick Kakwezi and	The paper concludes that other than	The study did not take into consideration the

	efficiency and effectiveness of the procurement function		Sonny Nyeko	financial measures, non-financial measures also contribute significantly in the procurement process and performance.	electronic procurement systems as measures that can contribute significantly in the procurement processes and performance.
6.	Integrated Financial Management Information System: a conceptual framework for Migori County, Kenya	2017	Otieno Okello Jared, Stephen Migiro and Emmanuel Mutambara	The paper identified the key factors to be incorporated in the proposed IFMS framework. The key factors include technical, organizational, environmental, cultural and ethical behavior.	The paper was highly restricted to its conceptual framework.

**Source, Author (2019)**

## **CHAPTER THREE**

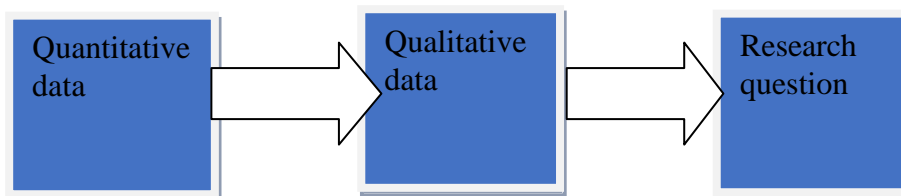
### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

Under research method, this part explains the basic research design, gives a description of the population sample methods that will be employed and instruments that will be used in the collection of data and states the reasons for their use. Furthermore, the chapter outlined the types of data that was used in the research, the software and statistical technique that was used to analyse the data that was collected and also the ethical considerations of the research in the process of data collection.

#### **3.2 Research design**

The research design that was used was mixed methods. Mixed method design combines qualitative and quantitative methods to answer a research question. Under mixed methods, explanatory design was used where quantitative data was collected first from Ministry of Works and Supply and Anti-Corruption Commission and then qualitative data was collected from the pioneers of IFMIS at Ministry of Finance in order to answer research questions. The Figure 3.1 below shows the flow of data collection at different times used to answer the same research questions.



**Figure 3.1: Explanatory research design flow of data collection**

**Source, Author (2019)**

#### **3.3 Targeted population**

Government Departments, Agencies and Ministries have a large population in Zambia hence the researcher would attempt to use a representative sample for the entire population due to budget and time constraints. The target population for this research was Ministry of Finance Headquarters, Ministry of Works and Supply and the Anti-Corruption Commission. Ministry of Finance was selected because they are the pioneers of IFMIS and the Ministry of Works and Supply and Anti-Corruption Commission were selected because they are the ones that

have been on the system of IFMIS for a long time.

### **3.4 Sampling method**

The respondents and participants were carefully and purposefully selected. This careful selection was coupled with convenience sampling which facilitated the collection of valuable information on the impact of IFMIS on the procurement processes. The sampling method used was appropriate because the researcher intended to collect information from the respondents who could give the right information in relation to the topic.

### **3.5 Sample characteristics**

#### **3.5.1 Inclusion criteria**

The study included staff that oversaw IFMIS and the procurement and supplies department at the Ministry of Finance, also the staff in procurement and supplies unit and finance unit at the Anti-Corruption Commission and Works and Supply. The study had chosen these because Ministry of Finance were the pioneers, and the Ministry and Agency that were on the system longer were preferred to outline how IFMIS has impacted procurement process in terms of transparency, financial leakages, efficiency and speed.

#### **3.5.2 Exclusion criteria**

Members of staff who work in other departments other than procurement and finance units at ACC did not participate in the study. Furthermore, members of staff who were not in the IFMIS department and Procurement department at the Ministry of Finance did not participate in the study. This was because the research intended to collect information from the respondents who will give the correct position on how IFMIS has impacted procurement processes.

### **3.6 Sample size**

The researcher adopted a sample size using purposive sampling method.

The sample size to determine the number of respondents was calculated based on Yamane's formula (Polit and Hungler, 2010) coined by Yamane, (1967).

$$n = \frac{N}{[1 + N (e^2)]}$$

Where:

N= the size of population

n=the desired sample size.

e=the error of 5 percentage points

### Calculation

Sample frame =100

$$n = \frac{100}{[1+100(0.05^2)]}$$

$$\frac{n=100}{[1+100(0.0025)]}$$

$$n = \frac{100}{1+ 100 \times 0.0025}$$

$$n = \frac{100}{1.25}$$

$$n = \frac{100}{1.25}$$

=80

n =80 total number of respondents.

Eighty (80) respondents was adequate representation of the population to represent the staff from the Ministry of Finance, Ministry of Works and Supply and the Anti-Corruption Commission.



### **3.7 Data collection**

The following are methods that were used in data collection:

#### **3.7.1 Interviews**

Interviews were conducted by the researcher with the respondents at the Ministry of Finance where qualitative data was collected. This method was appropriate because the pioneer respondents needed to divulge as much information as possible in order to appreciate the implementation of IFMIS.

#### **3.7.2 Questionnaires**

Structured questionnaires were designed and used to collect quantitative information from the Ministry of Works and Anti-Corruption Commission on the impact of IFMIS on the procurement process in terms of transparency, financial leakages and efficiency and speed. These questionnaires were designed to suit information required on the topic of the research. The questionnaires had questions on the demographics of the respondents and focused on the questions that answered the objectives of the research.

### **3.8 Types of data**

#### **3.8.1 Primary data collection**

Data collection for this study was primarily through questionnaires and interviews. Questionnaires were used to collect quantitative data and interviews were used to collect qualitative data.

#### **3.8.2 Secondary data collection**

This data was collected from published and unpublished material, articles in print and electronic media, and records of complaints from the users of the system. Other secondary data was sourced from various publications such as journals, compiled reports.

### **3.9 Data analysis**

Considering the type of research design, the MS excel and SPSS version 20 was used to analyse primary data. The specific statistical method that was used was correlation and multiple regression and descriptive statistics from SPSS version 20, the main purpose of this

software was to analyze the data using quantitative and qualitative techniques such as correlation, regression, cross tabulations, pie charts, frequency tables and graphs. Data collected was analysed using quantitative and qualitative methods of analysis. According to Gichuki et al (2014) who cited Mugenda and Mugenda (2013), data obtained from the field in raw form is difficult to interpret unless it is cleaned, coded and analyzed.

### **3.10 Ethical considerations**

Since this research was dealing with people, ethical issues were highly considered. Ethics are simply moral principles that guide our behaviour and based on shared values and beliefs about what is good or bad (Yin, 2016). Ethical principles actually helped ensure that research is directed towards achieving worthwhile goals. Respondents were not coerced to participate in the research and data that was collected was kept confidential and only used for academic purposes.

### **3.11 Source of the model of this research**

The research reviewed a lot of theories and models done by other researchers in line with the research topic in order to have an in depth understanding and be able to develop a model that will provide a solution to the problem of research. The following theories were reviewed; Software Restructuring model and Technology Acceptance Model.

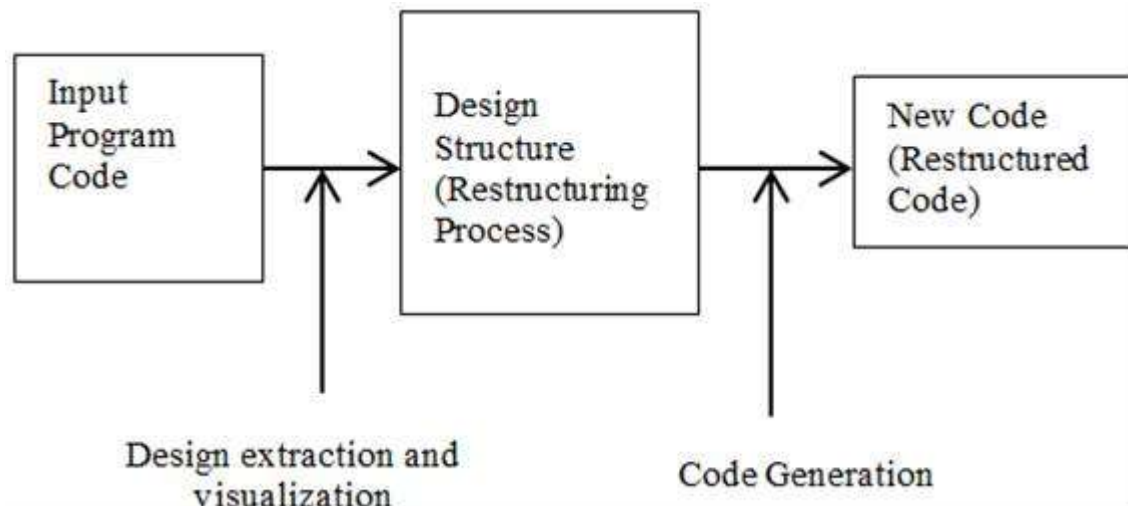
#### **3.11.1 Software Restructuring Model**

Software restructuring model focuses on inventory analysis, document restructuring, reverse engineering, code reengineering, data restructuring and forward engineering (Micheni, 2016). It provides abstracted design information derived from program code and the module interface information needed for restructuring (ibid).

IFMIS has a number of components and modules that aid in its operations. These modules include; procurement module, accounts payable module, accounts receivable module, tax module, cash management module, budget planning module and transactions module. Code restructuring can be done around the modules to enhance delivery outcomes of the system (Kimwele, 2015).

In this study, the model was used to enhance understanding of IFMIS reengineering and how code reengineering can be used to yield positive impact of IFMIS on public procurement processes.

The model is presented in Figure 2.2



**Figure 2.2 Code Restructuring Model.**

**Micheni (2016)**

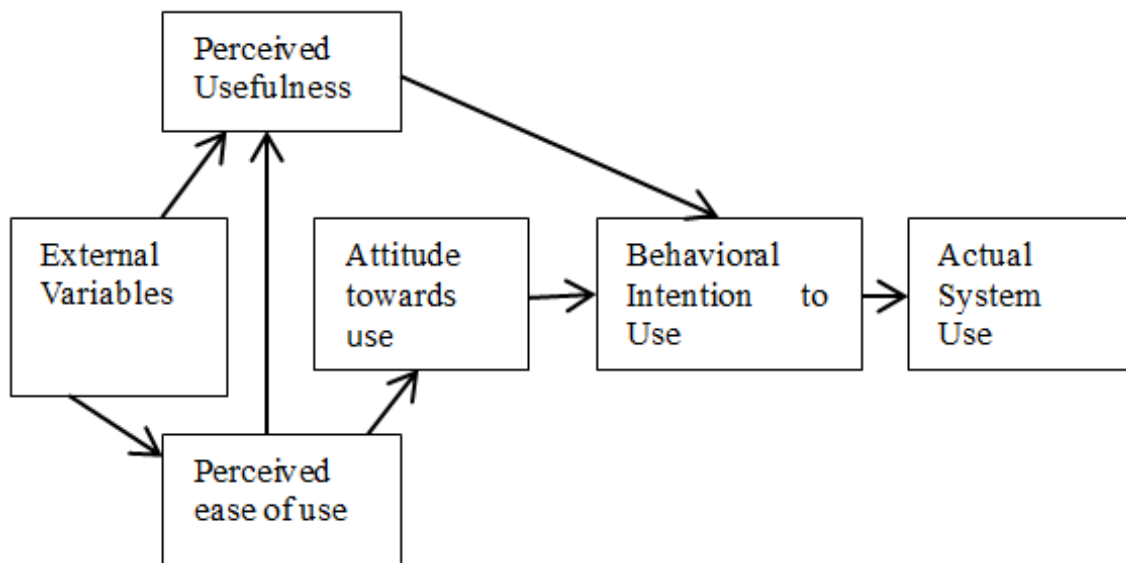
Furthermore, software restructuring model was used to conceptualize software code restructuring and potential outcome on the impact of IFMIS on public procurement processes. IFMIS system is designed to connect, accumulate, process, and provide information to all intended parties on a continuous basis.

### **3.11.2 Technology Acceptance Model**

The Technology Acceptance Model (TAM) suggests that there are a number of factors determine the decision about how to adopt and use a new technology (Micheni, 2016). The theory proposes a relationship between users' acceptance of a new information system and the users' perceptions of the ease of use and usefulness of the information system (Mumbai, 2011). The theory proposes that adoption of new technology requires integration of the external factors and internal organizational factors such as; perceives usefulness of the system, perceived ease of use, attitude towards use of the system, behavioral intention behind adoption and use and the actual systems' use (Ammerlaan, 2014).

User acceptance of a new technology is based on the influence of perceived usefulness and perceived ease of use of the system (Kahari et al, 2015). The model explains that user

perceptions of usefulness and ease of use determine attitudes toward using the system are influencers of acceptance (ibid). Behavioral intentions to use are determined by users' attitudes toward using the system. Behavioral intentions to use the system then determine actual system use. The model provides a direct link between perceived usefulness and behavioral intentions to use. Figure 2.3 presents the technology acceptance model.



**Figure 2.3 Technology Acceptance Model.**  
**Source, Soneka (2019)**

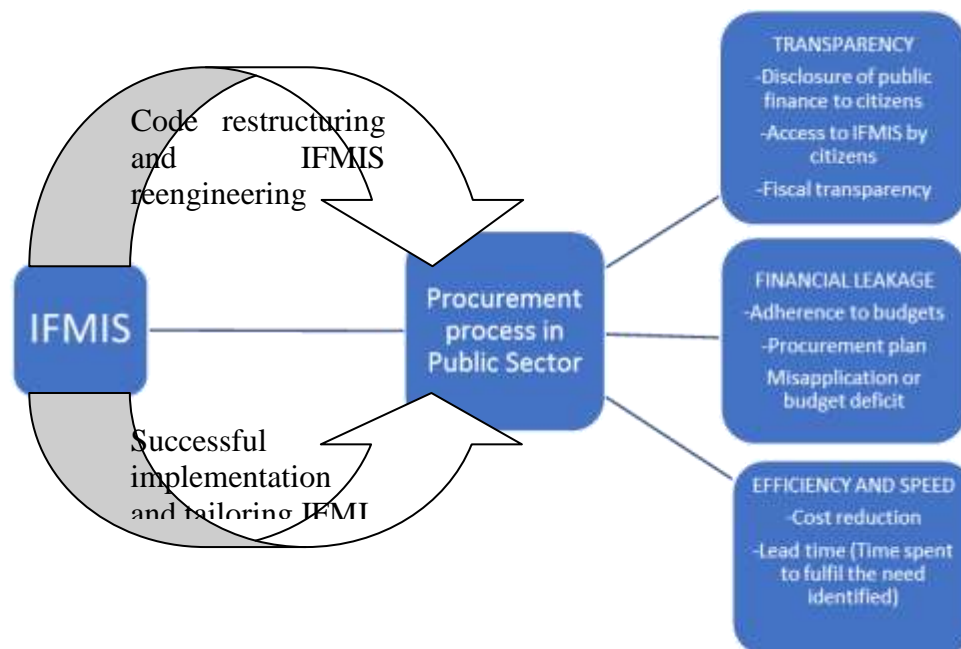
In this study, the model provides an insight on how personal factors could influence the impact of IFMIS on procurement processes in public sector. IFMIS use in public procurement in the public sector involves people literally at all stages. From the perceived link between personal factors and impact of IFMIS on procurement processes, government policy makers need to make rational decisions that enhance people participation and consequently yield the desired benefits of IFMIS that can enhance transparency, enhance efficiency and speed and reduce financial leakages (Rozner, 2008).

### **3.11.3 IFMIS impact on procurement processes model**

The model that was used in this research was a prescriptive research model. According to Tan and Teo (2014), prescriptive models are representations which along with identifying dependent and independent variables, focus on the understanding of the explicit and implicit relationships among these variables. Under prescriptive model, the specific research model

that was used in this dissertation was Multi-Tier Influence model. Multi-tier influence model is an extension of simple influence model involving multiple levels. Level 1 consists of independent variables; the last level has the final dependent variables and other levels contain intermediate variables.

As can be seen below on Figure 3.2, the independent variable is IFMIS, which has an impact on procurement processes in public sector which ultimately influences transparency, financial leakages and efficiency and speed in the public procurement processes. This dissertation aims to use this model to yield positive impact of IFMIS on procurement processes and act as an advocacy to the Ministry of Finance who are the implementer of IFMIS in public sector in Zambia. Figure 3.2 below shows the model of the dissertation.



**Figure 3.2: Model of the dissertation**  
Source, Author (2019)

### 3.12 Limitations to the study

**Time:** The research was conducted within limited time; the researcher relying, to a large extent on availability of free hours from work and study.

**Finances:** The research was not externally funded. The researcher applied personal finances to meet the costs of the study to a limited extent.

**Lack of Experience in Research software's:** The researcher lacked essential experience in academic research software's such as SPSS, stata etc.

**Other unexpected occurrences:** Other factors that affected successful completion of the study were: family and social commitments.

### **3.13 Chapter summary**

This chapter outlined the targeted population, sample size of where data was collected to answer the research questions of this study. The chapter further outlined the instruments that were used to collect data from the field and the software's that were used to analyze the data in order to answer the research questions posed in chapter one of this research. This chapter further outlined the model that was used to solve the problem of this study.

## CHAPTER FOUR

### PRESENTATION OF FINDINGS

#### 4.1 Introduction

This chapter looked at the results collected from the research study through the use of questionnaires, observations, personal interviews and other secondary data collected from various relevant research papers and reports with the sole purpose of assessing the impact of IFMIS on the procurement processes in Zambia. The research objectives were to:

1. To determine if IFMIS has brought transparency, reduced financial leakages, enhanced efficiency and speed in the procurement process of the public sector.
2. To provide a model on how IFMIS can yield the desired results that will improve transparency, reduce financial leakages, efficiency and speed in public procurement processes.

#### 4.2 Response rate

During the process of collecting data, questionnaires were specifically addressed to Ministry of Finance, Ministry of Works and Supply and the Anti-Corruption Commission respondents. Table 4.1 below shows response rate.

**Table 4.1: Response rate**

NUMBER OF QUESTIONNAIRES GIVEN OUT	NUMBER OF QUESTIONNAIRES ANSWERED	NUMBER OF QUESTIONNAIRES NOT ANSWERED
80	75	5
100%	94%	6%

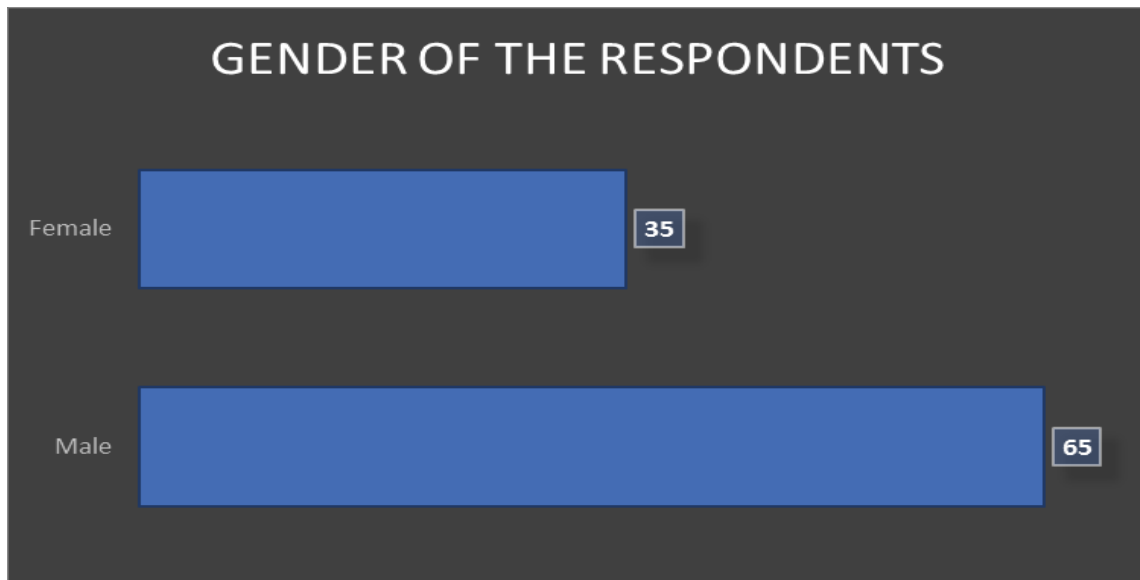
**Source, Author (2019)**

The response rate of 94% questionnaires was exciting and was representative of the sample size. In addition, the interviews were conducted with a lot of respondents to supplement the responses where clarity was needed.

### 4.3 Demographic information

#### 4.3.1 Gender

The study had to find out gender of respondents, thirty five percent (35%) indicated female and sixty five percent (65%) indicated male. The Figure below shows responses on the gender of respondents. Figure 4.1 below shows gender of respondents.



**Figure 4.1: Gender of respondents**

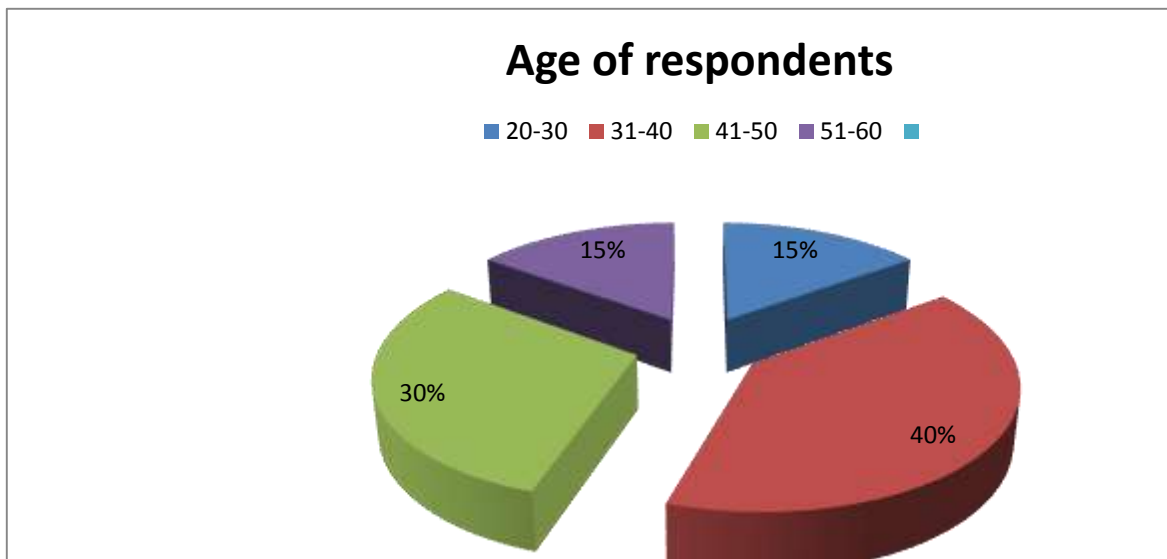
**Source, Author (2019)**

The study findings above show that they were more male respondents as compared to females in all the three institutions that were sampled.

#### 4.3.2 Age of respondents

The study responses reveal that fifteen percent (15%) of respondents were 20-30 years old, forty percent (40%) indicated 31-40 years of age, thirty percent (30%) indicated 41-50 years old and fifteen percent (15%) indicated 46-50 years old. The Figure 4.2 below shows response on age of the respondents.





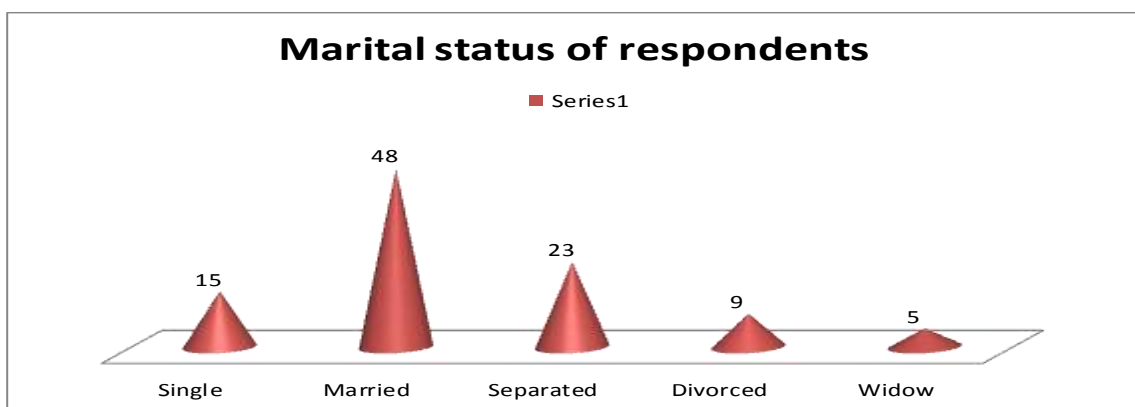
**Figure 4.2: Age of respondents**

Source, Author (2019)

The study findings show that majority of the respondents are in between 31-40 years of age which was a good age mix for the work force in the institutions where data was collected.

#### **4.3.3 Marital status of respondents**

The study responses reveal that fifteen percent (15%) of the respondents were single, forty eight percent (48%) of the respondents were married, twenty three percent (23%) of the respondents were separated from their marriages, nine percent (9%) were divorced and five percent (5%) were widows. The Figure 4.3 below shows responses on marital status of respondents.



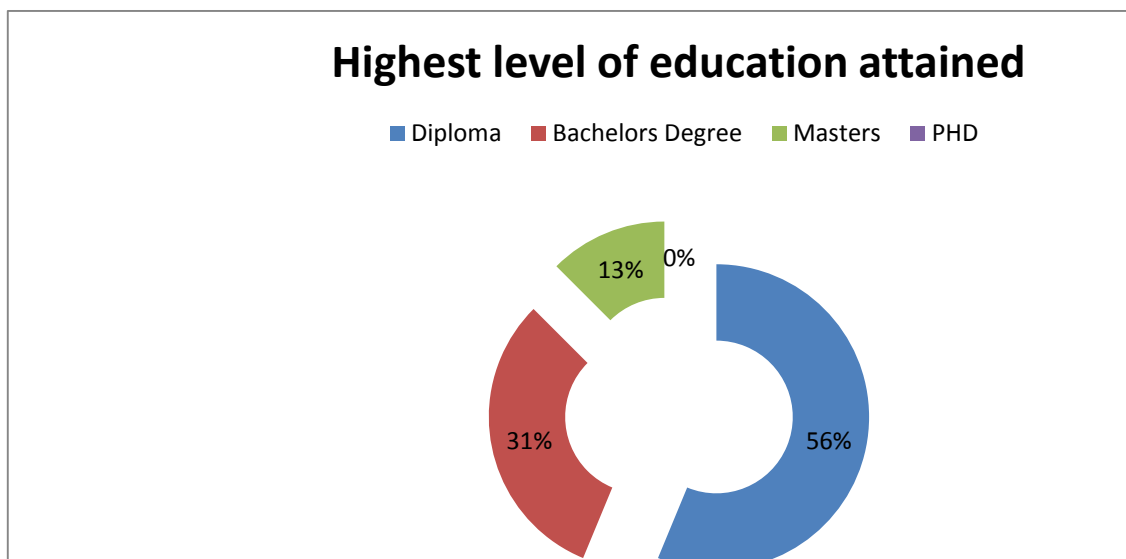
**Figure 4.3: Marital status of respondents**

Source, Author (2019)

Majority of respondents indicated they were married, this shows that majority of the respondents were married.

#### 4.3.4 Highest level of education attained

The study responses reveal that ten percent (10%) of respondents indicated primary education as the highest level of education attained, twenty percent (20%) indicated school certificate as highest level of education attained, thirty percent (30%) indicated school certificate as the highest level of education attained and forty percent (40%) indicated junior secondary as the highest level of education attained. The Figure 4.4 below shows responses on the highest level of education attained.



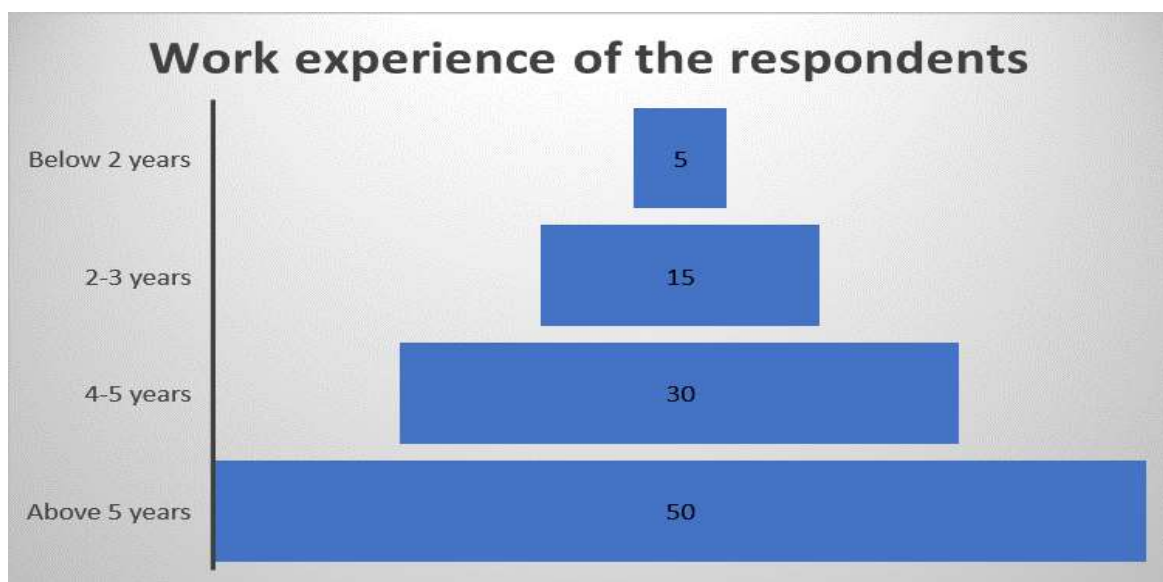
**Figure 4.4: Highest level of education attained**

**Source, Author (2019)**

The study findings show that majority of respondents' attained Diploma's and bachelor's degrees. Master's degree was rare to find and there was none of the respondents that had a PHD.

#### 4.3.5 Working Experience with the current employer

The study had to find out how long the respondents had worked with the current employer to determine the authenticity and accurateness of the information provided. The findings indicated that fifty percent (50%) of the respondents had work experience above 5 years, thirty percent (30%) indicated 4-5 years, fifteen percent (15%) indicated 2-3 years and five percent (5%) indicated below 2 years work experience at their current employers. The findings on this simply proves that government is a keeper and offers employment with a lot of security in that majority of the respondents had worked in one place for more than five years. On the other hand, the findings show reliability of the data that was collected from the respondents who had enormous experience working for government in their various departments. The Figure 4.5 below shows the work experience of the respondents in their current workplaces.



**Figure 4.5: Work experience of the respondents**  
Source, Author (2019)

#### 4.4 Correlation and Multiple Regression

The study had to determine the correlation between IFMIS and transparency, financial leakages, efficiency and speed. IFMIS was the independent variable and transparency, financial leakages, efficiency and speed were the dependent variables.

Table 4.2 below highlights the Pearson Correlation and P-values for the variables used in this research; IFMIS and transparency, financial leakages, efficiency and speed. In

statistics, the correlation coefficient  $r$  measures the strength and direction of a linear relationship between variables on a scatterplot. The value of  $r$  is always between +1 and -1.

Table 4.2 shows the correlation Coefficient. From this figure below, the correlation coefficient( $r$ ) is -0.690 ( $r = -0.690$ ) which indicates a strong negative statistical relationship between IFMIS and transparency, financial leakages, efficiency and speed because it is closer to -1.

**Table 4.2: Summary Output for Pearson Correlation Coefficients and P-Values**

SUMMARY OUTPUT FOR PEARSON CORRELLATION COEFFICIENTS AND P-VALUES								
<i>Regression Statistics</i>								
Multiple R	-0.690							
R Square	-0.477							
Adjusted R Square	-0.455							
Standard Error	0.962							
Observations	75							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	3.00000	59.91767	19.97256	21.56328	0.0000000			
Residual	71.00000	65.76233	0.92623					
Total	74.00000	125.68000						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	0.567	0.299	1.895	0.062	-0.030	1.163	-0.030	1.163
Transparency	-0.320	0.150	-2.134	0.036	-0.618	-0.021	-0.618	-0.021
Financial Leakage	-0.356	0.111	-6.825	0.000	-0.538	-0.094	0.538	0.983
Efficiency and Speed	-0.356	0.119	-2.624	0.011	-0.075	-0.548	0.075	0.548

**Source, Author (2019)**

#### 4.4.1 Statistical Significance (P-Values)

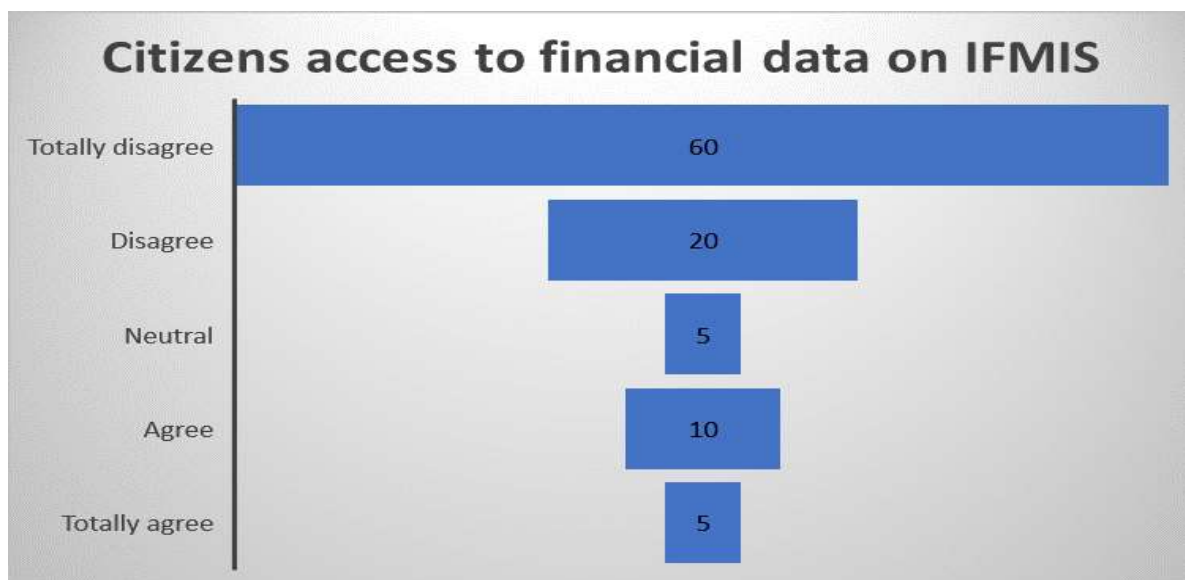
A small P-Value of 0.00000001 as can be seen on the figure above provides strong evidence to reject the null hypothesis. From this study we are able to see that the P-value is 0.0000001 is less than ( $P \leq 0.05$ ) as shown in Figure 4 which indicates a significant negative statistical relationship between IFMIS and transparency, financial leakages and efficiency and speed. Therefore, the alternative hypothesis is maintained that there is a significant relationship between IFMIS and transparency, financial leakages and efficiency and speed.

## 4.5 IFMIS and Transparency

One of the objectives of IFMIS was to enhance transparency of financial information that is shared to the citizens of Zambia in order to keep government accountable. Under objective one of this research, part of it was to determine if IFMIS has enhanced transparency on the procurement processes carried out in the public sector.

### 4.5.1 Citizens access to IFMIS to access financial data

The study wanted to determine if IFMIS has enhanced transparency through open sharing of procurement data to citizens. The findings revealed that sixty percent (60%) totally disagreed, twenty percent (20%) disagreed, five percent (5%) were neutral, ten percent (10%) agreed and five percent (5%) totally agreed that IFMIS has enhance transparency through citizens access to financial data. The Figure 4.7 below shows respondents responses on citizens access to financial data.



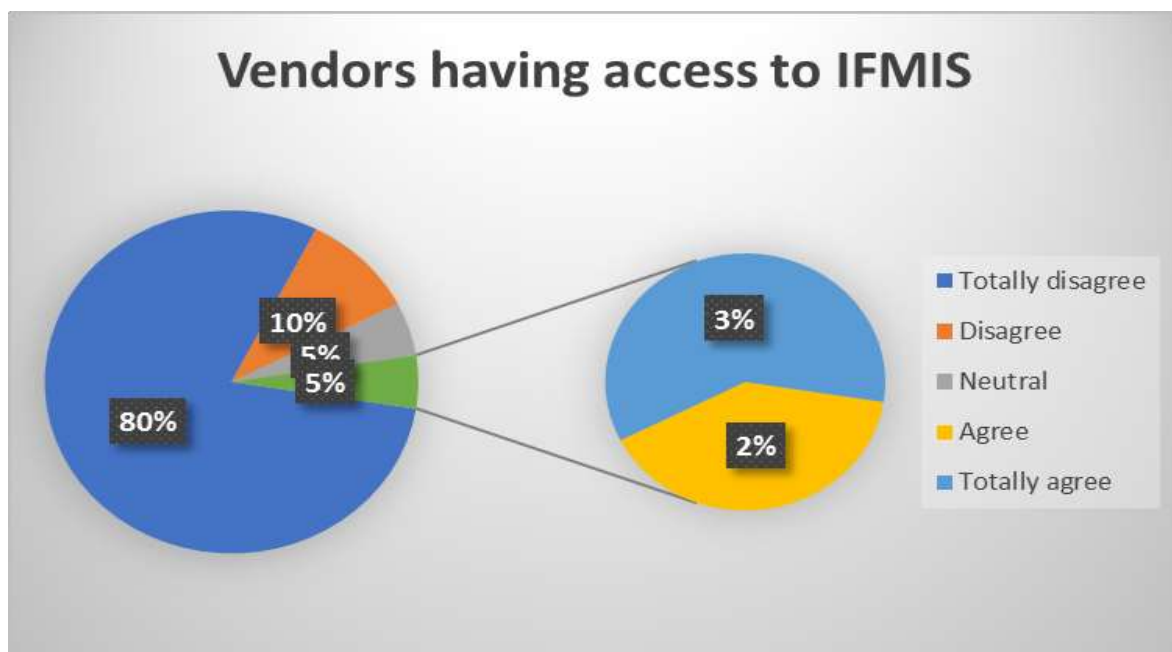
**Figure 4.6: Citizens access to financial data on the IFMIS system**  
Source, Author (2019)

Majority of the respondents disagreed that Citizens have no access to the system and access financial data with regards to certain procurements that are being carried by different ministries and spending agencies. As the result citizens are still not able to keep government accountable because they have no access to the information that is on IFMIS. One respondent indicated that *“Access to IFMIS system is limited to users only who have passwords to access it and that the system is SAP based, this means that the even the users can only access the system where the SAP application has been installed. Citizens who wish to have access to information on the system can only be given upon request in writing through the Accountant*

*General's office. However, the Accountant General reserves the right to determine if the information can be given to the applicant through thorough analysis of the request.”*

#### **4.5.2 Vendors having access to the system**

The study had to find out if the vendors have access to IFMIS, the findings revealed that eighty percent (80%) totally disagreed, ten percent (10%) disagreed, five percent (5%) were neutral, three percent (3%) agreed and two percent (2%) totally agreed that vendors had access to IFMIS. The Figure 4.8 below shows responses on vendor's access to IFMIS.



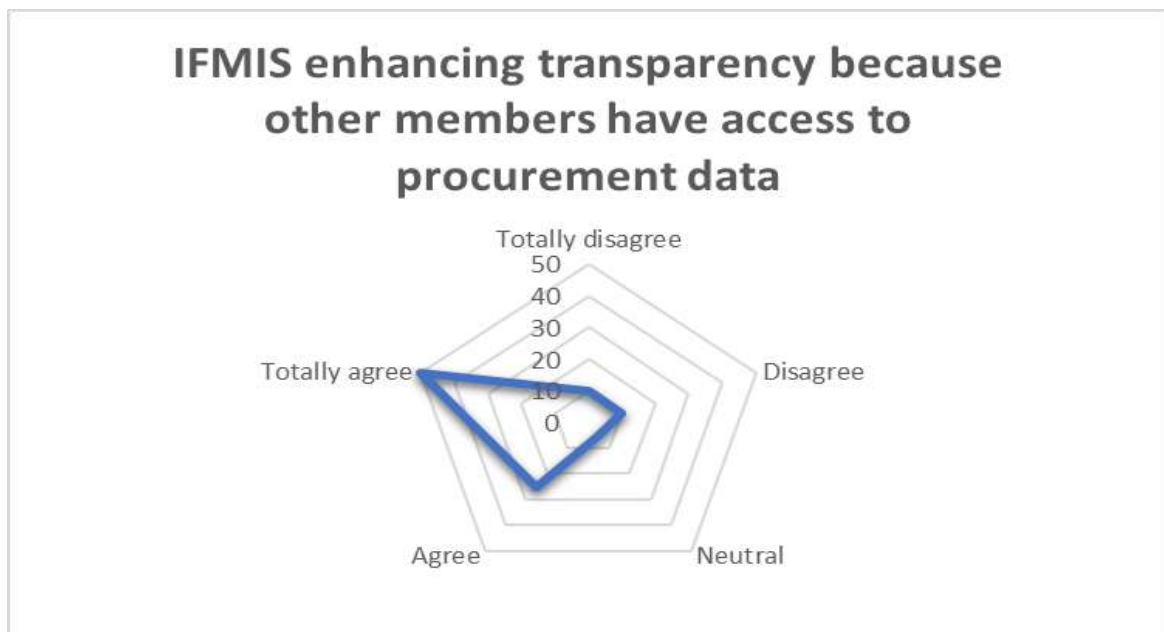
**Figure 4.7: Vendors having access to IFMIS**

**Source, Author (2019)**

Majority of the respondents totally disagreed that vendors have access to IFMIS system. This was one of the major indicators that procurement processes are being carried out outside the system and IFMIS is just being loaded with the already done procurement outside the system. One of the respondents indicated that *“IFMIS is working on integrating with other systems such as the E-Government procurement systems in order to capture the aspect of the vendor because currently procurement is being carried outside the system.”*

#### **4.5.3 IFMIS has enhanced transparency because other members are able to view information**

The study had to find out if IFMIS has enhanced transparency on the procurement processes because other members are able to view the procurement information thus able to detect manipulation and fraud. The findings revealed that fifty percent (50%) totally agreed, twenty five percent (25%) agreed, five percent (5%) were neutral, ten percent (10%) disagreed and ten percent (10%) have totally disagreed. The Figure 4.9 below shows responses on IFMIS enhancing transparency due to many members able to view the procurement and financial information.



**Figure 4.8: IFMIS enhancing transparency because other members have access to procurement information**

**Source, Author (2019)**

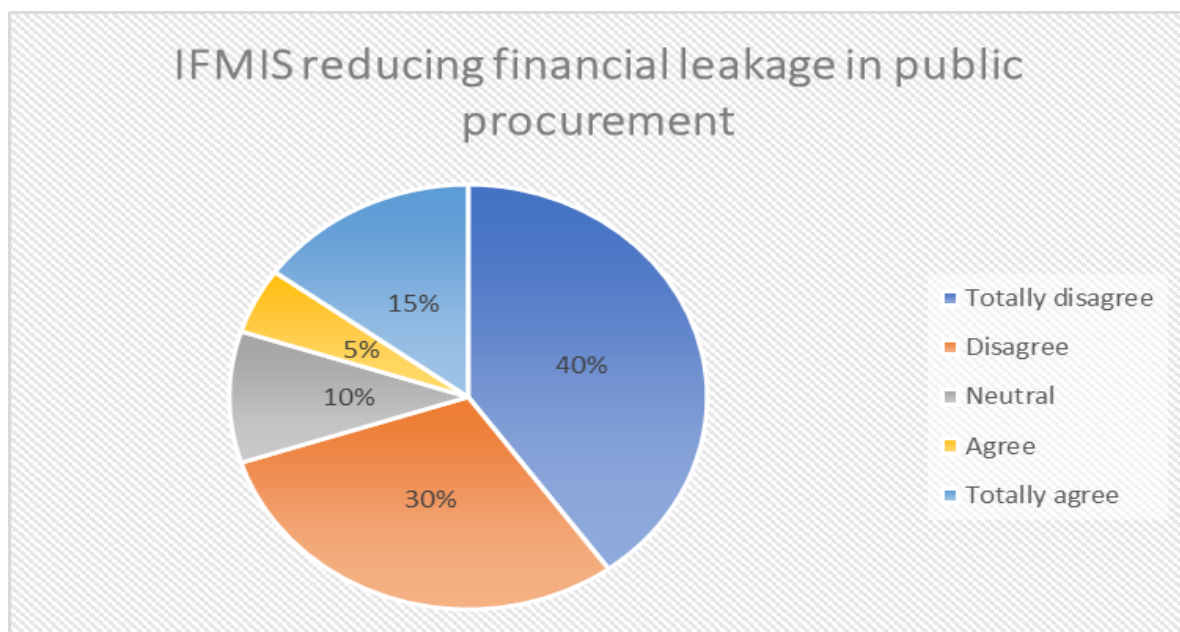
Majority of the respondents totally agreed that transparency has increased in that more than one person is able to view information loaded on the system thus able to detect manipulation and fraud. The information on the system makes it easier to carry out investigations and even all the ministry wings such as defence are on the system thus enhancing transparency in that aspect.

## 4.6 IFMIS and financial leakage

The study further had to determine if IFMIS has reduced financial leakages on the procurement of goods and services in the public sector. The foundation of this comes from the problem statement where the study noted a lot of misapplication of funds, misappropriation of funds captured in the auditor general's report of the financial year of 2017 and news on the procurements which have not shown value for money such as the fire tenders and ambulances under the ministry of local government and the ministry of health.

### 4.6.1 IFMIS reducing financial leakages because of payments being effected through TSA direct to vendors

The study had to find out if IFMIS has reduced financial leakages because payments to vendors for goods and services are being effected direct from the Ministry of Finance to vendors without passing through the end users accounts. The findings revealed that forty percent (40%) totally disagreed, thirty percent (30%) disagreed, ten percent (10%) were neutral, five percent (5%) agreed and fifteen percent (15%) totally agreed that IFMIS has reduced financial leakages in public sector. The Figure 4.10 below shows responses on IFMIS reducing financial leakages in public procurement.



**Figure 4.9: IFMIS reducing financial leakages in public sector**

Source, Author (2019)

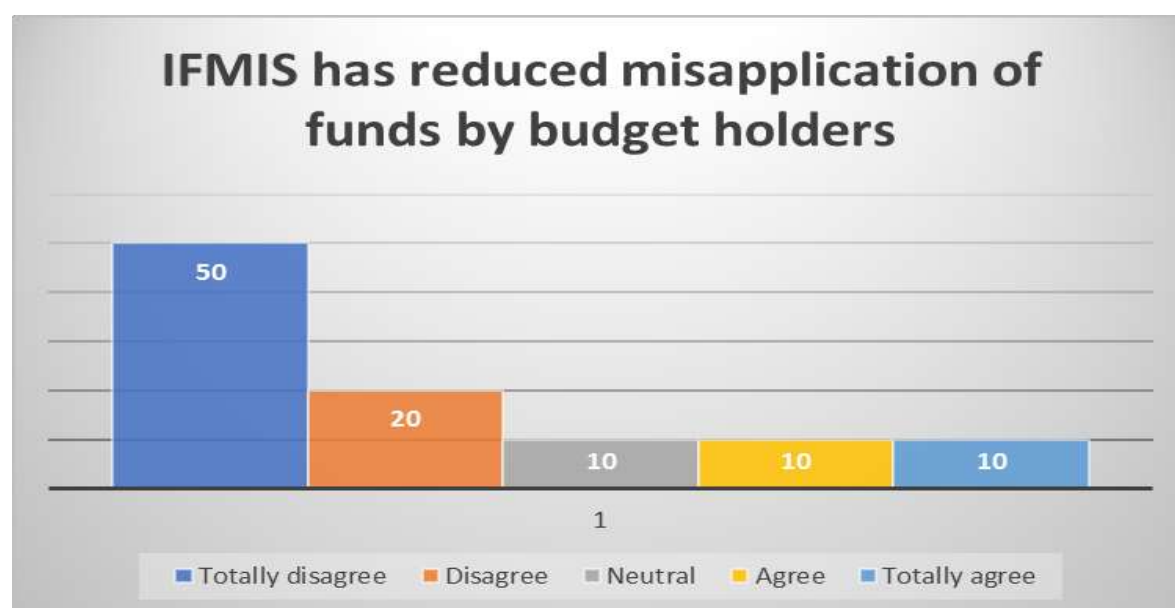


Majority of the respondents disagreed that IFMIS has reduced financial leakages because the actual procurement processes are conducted outside the system and are only loaded afterwards. One respondent indicated that: *“Until all procurement processes are done on the system including the vendor that is when there shall be change in the financial leakages.”*

On the other hand, to those who agreed that IFMIS has reduced financial leakages they indicated that the scandals of financial leakages are less as compared to the previous number of scandals that were captured before many ministries were on the system.

#### 4.6.2 IFMIS reducing misapplication of funds

The study also had to find out if IFMIS had reduced misapplication of funds by budget holders in ministries and spending agencies. The findings revealed that fifty percent (50%) totally disagreed, twenty percent (20%) disagreed, ten percent (10%) were neutral, ten percent (10%) agreed and ten percent (10%) totally agreed. The Figure 4.11 below shows the responses on IFMIS reducing misapplication of funds by budget holders.



**Figure 4.10: IFMIS has reduced misapplication of funds by budget holders**

**Source, Author (2019)**

Majority of the respondents indicated that IFMIS has not reduced misapplication of funds because controlling officers are still able to vary the funding to other issues which they see to be important rather than sticking to the budget. One of the objectives of IFMIS was to enhance budget adherence by funding the budget lines according to the profiles and expect that the money should be used according to the budget. One respondent indicated that:

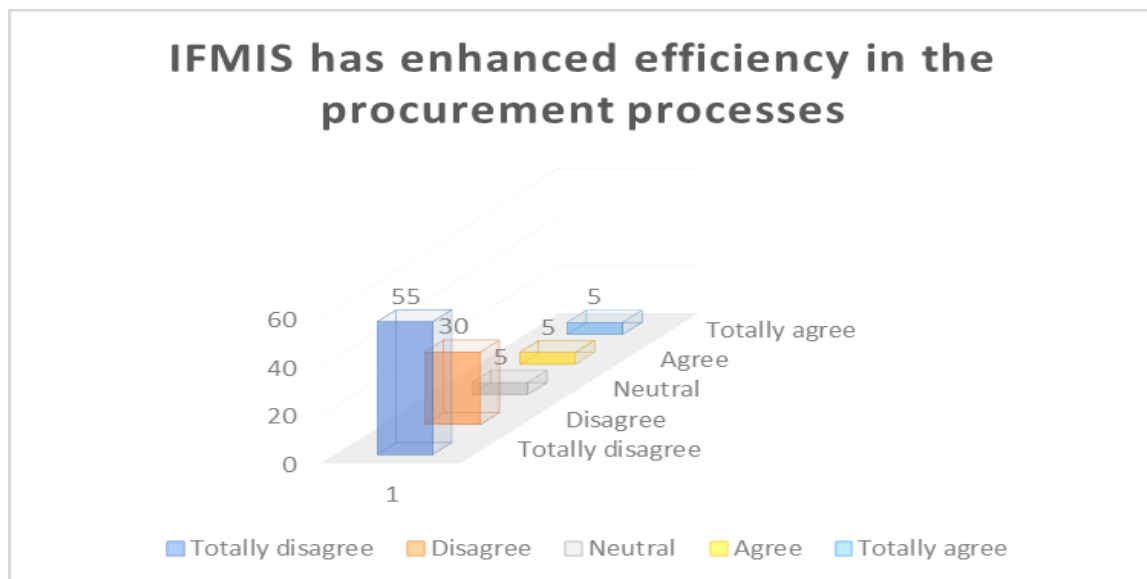
*“Inspite the budget being available, events not covered in the budget but with high political influence are always varied such as a visiting president from other countries, purchase of personal to holder motor vehicles by newly appointed CEO’s in spending agencies.”*

#### **4.7 IFMIS and efficiency and speed**

The study had to find out if IFMIS has enhanced efficiency and speed in the way procurement processes are being carried out presently. Efficiency had to determine the cost aspect of procurement processes, on the other hand, speed had to determine the lead time procurement processes are taking from need identification and initiation to the point when the need is fulfilled.

##### **4.7.1 IFMIS has enhanced efficiency in the procurement processes**

The study had to find out if IFMIS has reduced the cost of procurement processes. The findings revealed that fifty five percent (55%) totally disagreed, thirty percent (30%) disagreed, five percent (5%) were neutral, five percent (5%) agreed and five percent (5%) totally agreed. The Figure 4.12 below shows responses on IFMIS enhancing efficiency on procurement processes.



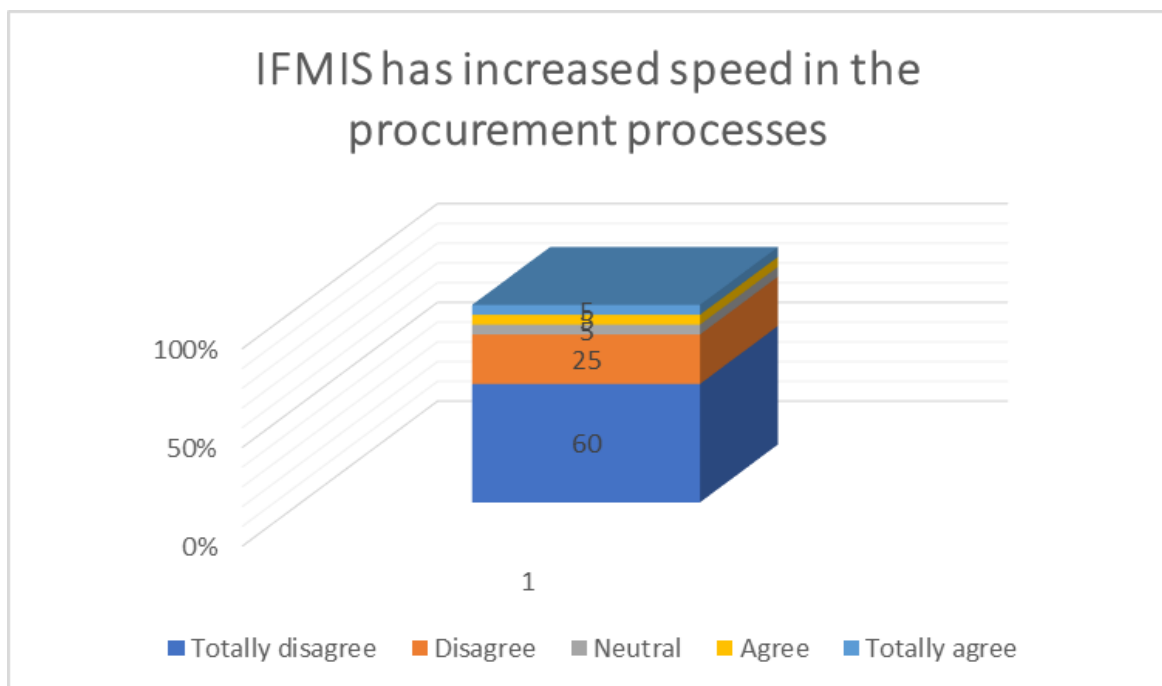
**Figure 4.11: IFMIS has enhanced efficiency in procurement processes**

**Source, Author (2019)**

Majority of the findings totally disagreed that IFMIS has enhanced efficiency in carrying out procurement processes. One respondent indicated that: *“IFMIS has double the work and the cost of carrying out procurement processes because work is being done twice on hard copies and also on the system. In addition, many players have also been added on IFMIS procurement processes in order to have a good number of authorities approve the procurement being carried out. Many basic functions such as loading a vendor on the system have been centralised by the Ministry of Finance through the IFMIS department with insufficient capacity.”*

#### 4.7.2 IFMIS has increased speed in procurement processes

The study had to find out if IFMIS has increased speed in the way procurement processes are being carried out on the system. The findings revealed that sixty percent (60%) totally disagreed, twenty five percent (25%) disagreed, five percent (5%) were neutral, five percent (5%) agreed and five percent (5%) totally agreed. The Figure 4.13 below shows responses on IFMIS increasing speed in procurement processes.



**Figure 4.12: IFMIS increasing speed in procurement processes**

**Source, Author (2019)**

The study findings clearly show that IFMIS has not increased speed in procurement processes. One respondent indicated that: *“IFMIS has not increased any speed in the procurement processes because works has tripled, more people are delaying flow of work*

*and many functions have centralised by Ministry of Finance with inadequate capacity. Furthermore, the system has no room for emergency procurements thus delaying even the emergency procurements that are urgently needed.”*

#### **4.8 Chapter summary**

This chapter presented the research findings from the analysed data that was collected from the field. The findings answered the research questions with information that was collected from the experts of the system from the field. The findings revealed from this chapter provided the basis of discussions and conclusions for this study.

# **CHAPTER FIVE**

## **DISCUSSIONS AND CONCLUSIONS**

### **5.1 Introduction**

This chapter presents the discussions and conclusions emanating from the findings and discussion of the study. The objectives were to:

1. To determine if IFMIS has brought transparency, reduced financial leakages, enhanced efficiency and speed in the procurement process of the public sector.
2. To provide a model on how IFMIS can yield the desired results that will improve transparency, reduce financial leakages, efficiency and speed in public procurement processes.

### **5.2 Discussions**

The study had to determine the correlation between IFMIS and transparency, financial leakages, efficiency and speed. IFMIS was the independent variable and transparency, financial leakages, efficiency and speed were the dependent variables. Figure 4.6 above revealed the correlation Coefficient (r) of -0.690 ( $r = -0.690$ ) which indicated a strong negative statistical relationship between IFMIS and transparency, financial leakages, efficiency and speed because it is closer to -1. Furthermore, A small P-Value of 0.00000001 provided a strong evidence to reject the null hypothesis. From Figure 4.6 above the P-value was 0.0000001 which was less than ( $P \leq 0.05$ ). This indicated that there was a significant negative statistical relationship between IFMIS and transparency, financial leakages and efficiency and speed. Therefore, the alternative hypothesis was maintained that there was a significant negative relationship between IFMIS and procurement process in terms of transparency, financial leakages and efficiency and speed.

#### **5.2.1 Demographic information**

The study findings show that majority of the respondents were male which showed that in departments where data was being collected, which was procurement and accounts department, there are more males as compared to females. The study further reveals that there

were dominant age group from the respondents was between 41-50 years of age. On the other hand, majority of the respondents were married, and the highest level of education attained commonly was diploma. The work experience of the respondents was also good as majority of the respondents had worked for above five years thus guarantying the credibility of the information that was collected from them with regards to this research.

## **5.2.2 IFMIS AND Transparency**

### **5.2.2.1 Citizens access to IFMIS to access financial information**

The study findings reveal that citizens have no access to the system and access financial information with regards to certain procurements that are being carried by different ministries and spending agencies. As the result citizens are still not able to keep government accountable because they have no access to the information that is on IFMIS. This finding reveals that IFMIS has not meant its objective of enhancing transparency of ensuring that citizens have access to financial information. According to Mutui (2014) IFMIS project can enhance transparency which in turn supports better governance and decision making. The findings of this study are not in agreement of with what Mutui (2014) postulated.

### **5.2.2.2 Vendors having access to the system**

The study findings reveal that vendors have NO access to IFMIS system. This was one of the major indicators that procurement processes are being carried out outside the system and IFMIS is just being loaded with the already done procurement outside the system. According to the World Bank (2013) Fiscal transparency can improve trust in government, if the public interpret the motives for publishing the Open Budget Data positively, and the transparency is maintained for long periods, benefiting from reliable IFMIS solutions.

### **5.2.2.3 IFMIS has enhanced transparency because other members are able to view information**

The study findings reveal that IFMIS has enhanced transparency because more than one person is able to view information loaded on the system thus able to detect manipulation and fraud. The information on the system makes it easier to carry out investigations and even all the ministry wings such as defence are on the system thus enhancing transparency in that aspect. However, because procurement processes are carried outside the system of IFMIS, it is more reactive than proactive.

### **5.2.3 IFMIS and financial leakages**

#### **5.2.3.1 IFMIS reducing financial leakages because payments are being effected through TSA direct to vendors**

The study findings reveal that majority of the respondents disagreed that IFMIS has reduced financial leakages because the actual procurement processes are conducted outside the system and are only loaded afterwards. This finding was in agreement with what Wanyoike (2015) argued that accounting systems mainly reciprocated the manual processes. On the other hand, to those who agreed that IFMIS has reduced financial leakages they indicated that the scandals of financial leakages are less as compared to the previous number of scandals that were captured before many ministries were on the system.

#### **5.2.3.2 IFMIS reducing misapplication of funds**

The study findings reveal that majority of the respondents indicated that IFMIS has not reduced misapplication of funds because controlling officers are still able to vary the funding to other issues which they see to be important rather than sticking to the budget. One of the objectives of IFMIS was to enhance budget adherence by funding the budget lines according to the profiles and expect that the money should be used according to the budget.

### **5.2.4 IFMIS and Efficiency and Speed**

#### **5.2.4.1 IFMIS has enhanced efficiency in the procurement processes**

The study findings reveal that majority of the findings totally disagreed that IFMIS has enhanced efficiency in carrying out procurement processes. The findings reveal that IFMIS has doubled the work and the cost of carrying out procurement processes because work is being done twice on hard copies and also on the system. The study further reveals that many players have also been added on IFMIS procurement processes in order to have a good number of authorities approve the procurement being carried out. Many basic functions such as loading a vendor on the system have been centralised by the Ministry of Finance through the IFMIS department with insufficient capacity. According to White and Lawrence (2009), Public Service Reform Programme (PSRP) was being implemented by government to improve efficiency and effectiveness of public service delivery. The findings of this study on IFMIS and efficiency are not in agreement with what White and Lawrence postulated.

#### **5.2.4.2 IFMIS has increased speed in procurement processes**

The study findings indicate that IFMIS has not increased speed in procurement processes. The study findings further reveal that IFMIS has not increased any speed in the procurement processes because work has tripled, more people are delaying flow of work and many functions have centralised by Ministry of Finance with inadequate capacity. Furthermore, the study revealed that IFMIS has no room for emergency procurements thus delaying even the emergency procurements that are urgently needed.

### **5.3 Conclusions**

#### **5.3.1 IFMIS and Transparency**

The study thus concludes that IFMIS has not enhanced transparency in procurement processes carried out in public sector because citizens and vendors have no access to the system as such the information that is on the system is not open and accessible to them. As the result citizens are still not able to keep government accountable because they have no access to the information that is on IFMIS. Vendors have no access to IFMIS because procurement processes are being carried outside the system and IFMIS is just being loaded with the already done procurement outside the system.

#### **5.3.3 IFMIS and Financial Leakages**

The study concludes that IFMIS has not reduced financial leakages because procurement processes are still being conducted outside the system. Procurement processes are conducted outside the system and are only loaded afterwards. Furthermore, research findings indicate that IFMIS has not reduced misapplication of funds because controlling officers are still able to vary the funding to other issues which they see to be important rather than sticking to the budget. One of the objectives of IFMIS was to enhance budget adherence by funding the budget lines according to the profiles and expect that the money should be used according to the budget and this is not being achieved currently.

#### **5.3.4 IFMIS and Efficiency and Speed**

The study thus concludes that IFMIS has neither enhanced efficiency nor increased speed in the way procurement processes are carried out in the public sector. This conclusion emanates from the findings of the study which revealed that IFMIS had doubled the work and the cost



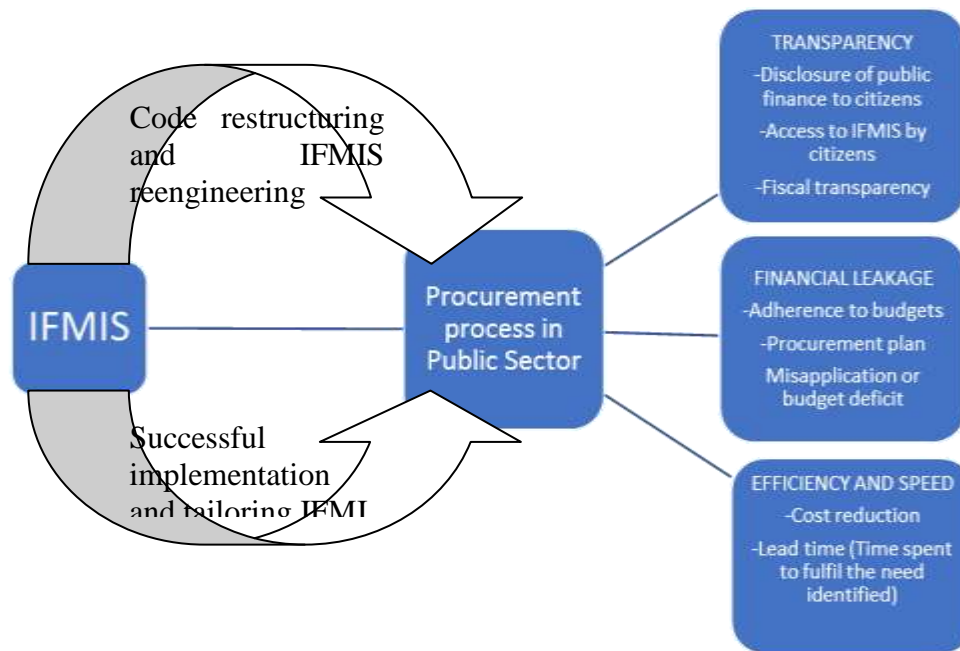
of carrying out procurement processes because work was being done twice on hard copies and on the system. In addition, many players have also been added on IFMIS procurement processes in order to have a good number of authorities approve the procurement being carried out. Many basic functions such as loading a vendor on the system have been centralised by the Ministry of Finance through the IFMIS department with insufficient capacity.

The study further reveals that IFMIS has not increased speed in procurement processes because work has tripled, more people are delaying flow of work and many functions have been centralised by Ministry of Finance with inadequate capacity. Furthermore, the system has no room for emergency procurements thus delaying even the emergency procurements that are urgently needed.

#### **5.4 Dissertation model providing the solution to enable IFMIS to yield the desired results**

The model of this dissertation outlines how the negative significant relationship between IFMIS on procurement in terms of transparency, financial leakages and efficiency and speed can be turned into a positive relationship.

As can be seen below, the independent variable is IFMIS, which has an impact on procurement processes in public sector which ultimately influences transparency, financial leakages and efficiency and speed in the public procurement processes. This model outlines that code restructuring and IFMIS reengineering would result in successful implementation of IFMIS. IFMIS should be web based and tailored to suit the public procurement guidelines in Zambia as outlined by ZPPA Act. This ultimately will result in positive impact of IFMIS on public procurement processes in Zambia which would result in enhanced transparency, reduced financial leakage, and enhanced efficiency and speed. Figure 3.2 shows the model of the dissertation.



**Figure 3.2: Model of the dissertation**  
Source, Author (2019)

## 5.5 Recommendations

Based on the research findings attained in the analysis of field research, the author is inclined to make the following recommendations:

- i. Vendors and citizens should be given access to IFMIS in order to meet the objective of transparency. Vendors should be able to communicate with the procurement specialists through the system. Granting vendors access to the system will eliminate the aspect of conducting procurement processes outside the system and loading them afterwards. This means that vendors can send quotations, invoices and bids through the system thus promoting transparency as they are able to see what their competitors have sent on the system. On the other hand, citizens should have access to the system in order to make government accountable about the works, goods and services government is procuring. For example, if citizens are aware of the cost of certain projects, the start and the completion period in relation to the payments, many projects would have been completed on time because citizens would have been whistle blowers on projects where vendors have been paid without completing the works relative to the payment.

- ii. IFMIS system should undergo code restructuring and reengineering to enable it enforce budget adherence thus reducing misappropriation and misapplication of funds. IFMIS should not be used as a tool for reporting or loading fraudulent type of procurements, the system should be proactive and not reactive to detect fraud and manipulation before it happens. Code restructuring should be coupled with strong human enforcement to ensure that the users follow the laid down guidelines by the system without breaking them.
- iii. Procurement processes should be done on IFMIS only once the vendors have access to the system in order to enhance efficiency and reduce the cost of performing work both on system and on paper. IFMIS should promote paperless procurement processes which shall be cheaper, sustainable and be able to promote the green environment. On the other hand, procurement processes such as vendor creation should not be centralized by Ministry of Finance in order to enhance speed in the way procurement processed are being carried out. Furthermore, IFMIS should have room for emergency procurements that arises from different ministries and agencies because this is necessary for smooth running of government.
- iv. An organization should be formed to manage IFMIS and TSA in Zambia which should be equipped with enough resources and authority to manage the above-mentioned systems. This is a system that is controlling funds for the whole country thus needs to be backed by people with authority and the right equipment to execute the work effectively.
- v. The study recommends that when IFMIS breaks down, a report should be done and published to all users stating the cause of the break down, the rectification of the problem and the disciplinary charges imposed on the person who caused the breakdown.

## **5.6 Areas of future research**

The researcher further recommends other possible areas of research to add to the body of knowledge as follows:

- An assessment on the impact of code restructuring of IFMIS.
- An assessment on the implementation of IFMIS in Zambia.
- An assessment on the integration of IFMIS with other electronic procurement systems

in Zambia.

### **5.7 Chapter summary**

This chapter outlined the discussions of the study in relation to the objectives. The chapter further outlined the conclusions of the study, the study further made recommendations based on the findings and conclusions of the study. The chapter also outlined other areas of future research to fill to the body of knowledge.

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## **APPENDICES**

### **APPENDIX 1: QUESTIONNAIRE FOR ACC AND MINISTRY OF WORKS AND SUPPLY**



## **The University of Zambia Graduate School of Business**

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**AN ASSESSMENT ON THE IMPACT OF IFMIS ON THE  
PROCUREMENT PROCESS IN PUBLIC SECTOR.  
(A case study of Ministry of Finance, Works and Supply and  
Anti-Corruption Commission)**

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**By Timothy Muwema**

MSC Operations, Projects and Supply Chain Management



For more information or any queries, kindly get in touch on 0976 175084

Dear Respondent,

I am a student at the University of Zambia in my final stage pursuing a Master of Science in Operations, Projects and Supply Chain Management. As partial fulfillment for the award of a Master of Science degree, I am conducting a research on: “***Assessment on the impact of IFMIS on procurement processes***”

You have been purposively sampled to provide information for the topic indicated above. The information being collected is purely for academic purposes as such, it will be treated with maximum confidentiality. Subsequently, you are not supposed to indicate your name or any personal information that can lead to revealing of your identity.

Your co-operation will be greatly appreciated.

For more information or any queries, kindly get in touch with the following:

**Project Supervisor:** Dr. Jackson Phiri (0966 693 731)

## INSTRUCTIONS

1. Do not write your name on the questionnaire
2. Please ensure that all the questions are answered
3. Please tick (✓) the appropriate answer and write the comments in the space provided
4. If you are not clear with any of the questions, feel free to seek clarification

### **1.0 SECTION ONE: DEMOGRAPHIC PROFILES**

- 1.1 What is your gender? Male ☐ Female ☐
- 1.2 What is your age? .....  
20-30 years ☐ 31-40 years ☐ 41-50 years ☐ 51-60 years ☐
- 1.3 Marital status  
Single ☐ Married ☐ Separated ☐ Divorced ☐
- 1.4 What is your highest level of education attained?  
School certificate ☐ Diploma ☐ Bachelor's degree ☐ Masters ☐ PHD ☐
- 1.5 For how long have you been working with your current employer?  
Below 2 years ☐ 2-3 years ☐ 4-5 years ☐ Above 5 years ☐

### **2.0 SECTION TWO: TRANSPARENCY**

**2.1 Please tick in the following box depending on the extent to which you agree with the following statements (on a scale between 1 and 5 where 1=totally disagree, 2=disagree, 3=neither agree nor disagree, 4=agree and 5=totally agree)**

	Item	1	2	3	4	5
a.	IFMIS has enhanced transparency in procurement of goods and services in government because every citizen has access to financial data and its intended purpose more especially procurement budget.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	IFMIS has brought about openness in communicating financial information by government to its people because almost every citizen has access to financial information of the country.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c.	IFMIS has enhanced transparency because information regarding procurement is accessed by different members thus able to detect manipulation and fraud.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d.	IFMIS has enhanced transparency because vendors have access to the system and are able to exchange information with the purchasing entity through the system.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### **3.0 SECTION THREE: FINANCIAL LEAKAGE**

**3.1 Please tick in the following box depending on the extent to which you agree with the following statements (on a scale between 1 and 5 where 1=totally disagree, 2=disagree, 3=neither agree nor disagree, 4=agree and 5=totally agree)**

	Item	1	2	3	4	5
a.	IFMIS has reduced financial leakages because payment is effected by Ministry of Finance through Treasury Single Account direct to Suppliers/Vendors account.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	IFMIS has reduced financial leakages and misappropriation because funding is made by Ministry of Finance according to the procurement activities submitted in the budget of the institution and funds are able to be locked upon creating a requisition.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c.	IFMIS has not reduced any financial misappropriation because controlling officers are able to divert the funds to other activities which are emerging emergencies rather than sticking to the intended purpose to which the money was budgeted for.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### **4.0 SECTION FOUR: EFFICIENCY AND SPEED**

**4.1 Please tick in the following box depending on the extent to which you agree with the following statements (on a scale between 1 and 5 where 1=totally disagree, 2=disagree, 3=neither agree nor disagree, 4=agree and 5=totally agree)**

	Item	1	2	3	4	5
a.	IFMIS has reduced the lead time from which it takes when the need is identified to the time when the need is fulfilled.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	IFMIS has enhanced efficiency because it has reduced the cost of the procurement process being that the process is done purely online.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c.	IFMIS has enhanced efficiency because it has completely eliminated the use of paper in the procurement processing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d.	IFMIS has enhanced efficiency and speed because it is the SAP system is tailor made to Zambian environment and suitable to the needs of purchasing entity and vendor/suppliers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e.	IFMIS systems have international standards embedded in it thus making it easy to use by international suppliers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**8.0 RECOMMENDATIONS**

8.1 What recommendations would you give on how IFMIS can improve and yield the desired results in public procurement of goods and services?

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**END OF QUESTIONNAIRE**  
**THANK YOU FOR YOUR PARTICIPATION**

## APPENDIX 2: QUESTIONNAIRE FOR MINISTRY OF FINANCE

### THE UNIVERSITY OF ZAMBIA



### GRADUATE SCHOOL OF BUSINESS

I am student of the above-mentioned university pursuing a master's degree in Operations, Project and Supply Chain Management. It is the requirement of the University that I carry out an independent academic research project as a partial fulfillment for the award of the master's degree. My research title is: **AN ASSESSMENT ON THE IMPACT OF IFMIS ON THE PROCUREMENT PROCESS IN PUBLIC SECTOR.**

All the information provided on this questionnaire will only be used for academic research and will be kept confidential.

Yours faithfully,

Timothy Muwema

## INSTRUCTIONS

5. Do not write your name on the questionnaire
6. Please ensure that all the questions are answered
7. Please explain your answers in the spaces provided below
8. If you are not clear with any of the questions, feel free to seek clarification

## PART ONE: IFMIS & TRANSPARENCY

- 1.) How well do you think IFMIS is tailored to the Zambian Government Procurement Processes, explain;.....  
.....  
.....  
.....

- 2.) What kind of financial data is published on IFMIS to all Zambian Citizens to enhance transparency?

Please explain;.....  
.....  
.....  
.....  
.....

- 3.) How accessible is IFMIS to Zambian citizens who may want to access financial information and data?

Please Explain.....  
.....  
.....  
.....  
.....

## PART TWO: FINANCIAL LEAKAGES AND BUDGET ADHERENCE

- 1.) Has IFMIS improved budget adherence and implementation since it was launched? If yes? If yes why has there been continuous news of funds being misappropriated through the Auditor General's report such as scandals of theft at Ministry of General Education, Ministry of Local Government (Fire Tenders)?

Please explain and recommend how IFMIS can close those leakages

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### **PART THREE: IFMIS & EFFICIENCY AND SPEED**

- 1.) Do you think that IFMIS has reduced the cost of procurement processes? If yes or no please explain?

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.....  
.....

- 2.) Has IFMIS completely removed the use of paper in procurement processes? If yes or no please explain the impact of such in terms of cost and efficiency

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- 3.) Do you think IFMIS has reduced the lead time from the time the need is identified to the time the need is fulfilled? If Yes or No please explain the cause and its impact

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### **PART FOUR: RECCOMENDATIONS FROM THE PIONEERS**

Outline improvements on IFMIS Ministry of Finance is working in order to yield desired results with regards to public procurement in Zambia

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