**BINDURA UNIVERSITY OF SCIENCE EDUCATION**

**FACULTY OF COMMERCE**



**DEPARTMENT OF ECONOMICS**

**AN ANALYSIS ON FACTORS AFFECTING ADOPTION OF E- PROCUREMENT CASE OF ZIMRA**

**BY**

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A dissertation submitted to the ***Bindura University of science education*** in partial fulfilment of the requirement of master of science degree in purchasing & supply chain management

**December 2021**

# APPROVAL FORM

The undersigned certify that they have read and recommend to ***Bindura University of science education*** for acceptance, a research project entitled: ‘An analysis on factors affecting adoption of e-procurement, Case of ZIMRA, submitted by ***Mutale Johan*** in partial fulfilment of the requirements of the Master of Science degree in Purchasing & Supply Chain management

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**Degree Tittle:** Master of Science degree in Purchasing & Supply Chain

**Year:** 2021

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# DEDICATION

To Mutale family and my supervisor, I share and dedicate to you this piece of work, the long dream that could hardly be imagined.

# ABSTRACT

This study was built upon the thrust to analyses the adoption of electronic procurement and its impact on the procurement capabilities in the public sector in Zimbabwe, citing the case of Zimbabwe Revenue Authority (ZIMRA). The objective that drove this study was: to identify drivers to the development, adoption and implementation of electronic procurement systems in the public sector in Zimbabwe, to identify the benefits of adopting and implementation of electronic procurement systems in the public sector in Zimbabwe, to examine the extent of electronic procurement systems adoption and implementation in public sector in the public sector in Zimbabwe and to explore the challenges or barriers in the adoption and implementation of electronic procurement in the public sector in Zimbabwe. The benefits of electronic procurement adoption were examined in the literature basing on the research objectives to create rapport between theory in the literature and empirical findings. A mixed research methodology was applied for this study. Both qualitative and quantitative research designs were adopted in this study. To enhance the validity and reliability, both probability and non-probability sampling techniques were employed. 30 respondents were sample out of the targeted population of 300 and these involved 8 revenue officers, 12 procurement assistants, 5 procurement managers and 5 administration supervisors. Research instruments used were questionnaires, with both open-ended and closed-ended questionnaires, interviews, and observations. Empirical evidence from this study revealed that, Zimbabwe government policies (legal framework), lack of adequate funding, lack of proper employee training, lack of necessary hardware and software, exorbitant implementation costs, lack of upper management support (poor coordination) and knowledge gap among other contributed significantly to the failure of electronic procurement development, adoption, and implementation in the Zimbabwe Revenue Authority (ZMRA). The study concluded that, if electronic procurement had been adopted effectively and efficiently, it can deliver more benefits than the manual procurement system in the public organizations. Therefore, recommendations were passed in the study that, the government of Zimbabwe is supposed to create an enabling environment so that organizations in the public sector can consolidates its own resources and strive to develop, adopt, and implement electronic procurement not just wait for government assistance or funding. Therefore, the adoption of electronic procurement in the public sector needs to be a stakeholder wide intervention and inclusive in nature.

# ACKNOWLEDGEMENT

*Jeremiah Chapter 29: 11* “*For I know the plans I have for you’’ declares the lord ‘Plans to prosper you and not to harm you, plans to give you hope and a future’*.

I would like to thank the almighty God for guidance throughout my studies.

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# CHAPTER ONE: INTRODUCTION AND BACKGROUND

## 1.1 INTRODUCTION

The focus for this chapter is to introduces the essential issues related to the review. This study focuses on the adoption of e-procurement in Zimbabwe's parastatals. In doing as such, the section elaborates, foundation of study, the problem statement, explaining the significance and objectives of the review and describing the rationale of the review and the constraints underlying this review.

## 1.2 BACKGROUND

Studies have shown that through globalization it has become inevitable to compete without the use of technogy. Private and public institutions are seen adopting e-procurement as opposed to manual procurement. This study is a case study for ZIMRA.Through public procurement ZIMRA can enhance its procurement through the use of technology in order to achieve and Utilise time productively. Industry 4.0 is one of the key technologies that ZIMRA can make use of in order to manage its value chain.

Just like any other system, adoption of e-procurement undeniably requires funding. The organisation must be in a position to fund the costs of acquiring the system. These costs may include support costs and license fees on top of the initial investment. According to Ramaseham(2016), a lot of public entities usually fall into a trap of redundancy where they are able to buy a system that they cannot fully utilise or service.

The system does not work in vain, there has to be some computers either laptops or desktops to install the system as well as to give employees for easy access. If that is not done then the system will not achieve the intended results. Therefore, other than just budgeting for the system cost alone is not enough. The organisation still needs to make sure that it has enough resources to buy the infrastructure.

On the other hand the employees who will be using the system need to be trained. Sometimes the training costs comes as a hidden cost that the organisation need to consider. Some Tech companies are very clever that they can sometimes give out the system at a cheaper cost but with high licensing and training fees attached to it.If all these costs are not met then the system may not achieve the best results.

Provision of e-services also entails that the organisation need to strengthen its security since the information inn the system can be easily manipulated or the organisation can be a victim of cyber attacks.It therefore means that some modalities need to be availed just to make sure that the system has got all it needs and that the organisation is safe.

There are a multitude of benefits that comes with the adoption of e-procurement. Technological revolution has exposed government and its entities to the need to adopt e-procurement due to the challenges emanating from manual procurement, mainly to do with tender flighting, selecting and vetting up until the tender is awarded. This process usually takes longer than 6 months from tender flighting up to tender opening and awarding.All this time can be reduced through e-procurement or digitization of the procurement processes probably to a month considering the fact that the procurement board would still need to do some independent checks. Another advantage that comes with procurement is easy retrieval of suppliers records.

These are some of the benefits that e-procurement has brought to other entities this study therefore ought to unpack the e-procurement capabilities to the public entities giving special emphasis to ZIMRA as the case study.

## 1.3 STATEMENT OF THE PROBLEM

Technological changes has exposed government and its entities to the need to adopt e-procurement due to the challenges emanating from manual procurement, mainly to do with tender flighting, selecting and vetting up until the tender is awarded. This process usually takes longer than 6 months from tender flighting up to tender opening and awarding.All this time can be reduced through e-procurement or digitization of the procurement processes probably to a month considering the fact that the procurement board would still need to do some independent checks. Another advantage that comes with procurement is easy retrieval of suppliers records.These are some of the benefits that e-procurement has brought to other entities this study therefore ought to unpack the e-procurement capabilities to the public entities giving special emphasis to ZIMRA as the case study.

## 1.4 STUDY OBJECTIVES

1. To assess the drivers for adoption of e-procurement in the Zimbabwe Revenue Authority
2. To establish the extent at which e-procurement is being utilised in Zimbabwe Revenue Authority’s procurement activities
3. To assess the barriers facing Zimbabwe Revenue Authority in the adoption of E-Procurement in its procurement activities
4. To establish the strategies which can be utilised to facilitate the adoption of E-Procurement in Zimbabwe Revenue Authority

## 1.5 RESEARCH QUESTIONS

“Based on study objectives, the following are research questions:”

* What the drivers of e-procurement in the Zimbabwe Revenue Authority
* At which extent is e-procurement being utilised in Zimbabwe Revenue Authority’s procurement activities
* What the barriers facing Zimbabwe Revenue Authority in the adoption of E-Procurement in its procurement activities
* Which strategies can be utilised to facilitate the adoption of E-Procurement in Zimbabwe Revenue Authority?

## 1.6 CONCEPTUAL FRAMEWORK

“While the researcher developed conceptual framework on his own, but it was guided by various theories to explain the mechanism behind that influences the shape and user's acceptance to a new technology.” In this study, the key concepts of the models provide comprehensive guidelines on drivers of certain technological aspects. The following conceptual framework will guide the coming of study hypothesis and subsequently testing the importance of each driver in the adoption of E-Procurement in ZIMRA:

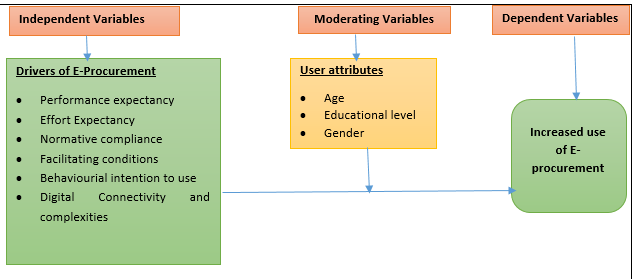


Figure 1.1: Conceptual framework

***Source: Developed by Author.***

Aside from direct drivers, the researcher added moderating variables which can influence (both positively and negatively) the adoption of E-Procurement in ZIMRA. "Based on the above proposed conceptual framework, performance expectancy focuses on to the degree to which an individual perceives that utilizing a system will help that person to accomplish an increase in work performance." "Effort expectancy as the level of easiness related while utilizing any system and normative compliance entails on how the adoption of technology meet regulatory environment." "Working with conditions refers the degree to which a person believes that the existing hierarchical and technical infrastructure can uphold the use of technology." "Behavioral intention to use refers to degree to which a person has formulated cognizant designs to perform or not perform some specified future behavior." “Digital Connectivity and complexities entail the availability technological infrastructure and skills to use E-Procurement once it is adopted.” User attributes refers to degree at which demographic variables influence the adoption of technological system.

## 1.7 RESEARCH HYPOTHESIS

Based on the conceptual framework, the following hypotheses will guide the study:

* **H1**: Perceived performance expectancy has a positive effect on E-procurement adoption in ZIMRA
* **H2**: Perceived effort expectancy has positive effect on E-procurement adoption in ZIMRA
* **H3**: Normative compliance has a positive effect on E-procurement adoption in ZIMRA
* **H4**: Facilitating conditions has a positive effect on E-procurement adoption in ZIMRA
* **H5**: Behavioural intention to use has a positive effect on E-procurement adoption in ZIMRA
* **H7**. Digital connectivity and complexities have a positive effect on E-procurement adoption in ZIMRA
* **H8**: User attributes have a positive effect on E-procurement adoption in ZIMRA

## 1.8 SIGNIFICANCE OF THE STUDY

**The researcher**

The researcher shall benefit from the knowledge gained through the course of the study on e-procurement. The researcher will again sharpen his research skills through conducting this study.

**To the government of Zimbabwe and society**

The government of Zimbabwe will benefit from the recommendations of this study.The study will also enrich the government officials with relevant information on e-procurement.The society will ultimately benefit from the study through improved of efficiency in public entities provided that the government has adopted the recommended strategy.There will also be a potential for local companies to offer the e-procurement services to public entities since procurement Act 51 chapter 5 gives priority to local firms as opposed to foreign entities.

**To the Zimbabwe Revenue Authority**

ZIMRA will not only benefit from efficiency and productivity but also improves the process flows and all other procedures that depend on procurement.

## 1.9 CHAPTER SUMMARY

In this section, the study background locating the issue of e-procurement was highlighted. This resulted in the introduction of statement of the problem, study objective and conceptual framework to show the direction of the study. In the next chapter, literature review is highlighted including theoretical lenses to elaborate on e-procurement in parastatals.

# CHAPTER TWO: LITERATURE REVIEW

## 2.1 INTRODUCTION

The chapter reviewed literature on e-procurement.It went on to define models of e-procuremnt adoption as well as the theory which influenced this study.In the chapter, the researcher reviewed some objective based literature so as to get an understanding on how e-procurement can be used for the betterment of the organisation.

## 2.2 THEORETICAL FRAMEWORKS

In this section, key theoretical underpinnings which influence the adoption of e-procumbent are presented. This permits the researcher to locate the contexts under which e-procurement is understood and implemented depending on the nature association and its environment as indicated in the selected theories below:

## 2.3 TECHNOLOGY ACEEPTANCE MODEL

Technology acceptance model was the main theory of this study.The the theory dates back to ancient times by Rogers (1995).The main idea advocated by the technology acceptance is that people will only accept a change provided that there is a performance improvement expectancy, effort expectancy, anxiety, self efficacy as well as facilitating conditions.At the second stage are the behavioural intentions are said to have an impact on adoption as well and these are social influence , perceived society and attitude towards using technology.This therefore entails that the attitude and behavioural intentions of management and decision makers at ZIMRA plays a pivotal role on the adoption of e-procurement.It is therefore the duty of the management and ICT department to advocate through providing enough information about procurement for relevant authorities to see the need for adoption.

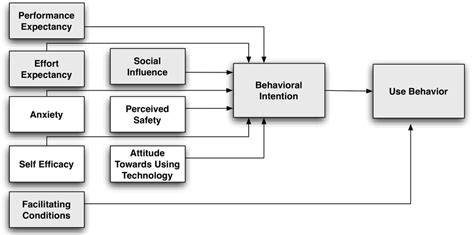


Figure 2.1: Technology Acceptance Model

*(Davis et al, 1989, Venkatesh et al, 2003)*

Technology acceptance model was the main theory of this study.The the theory dates back to ancient times by Rogers (1995).The main idea advocated by the technology acceptance is that people will only accept a change provided that there is a performance improvement expectancy, effort expectancy, anxiety, self efficacy as well as facilitating conditions.At the second stage are the behavioural intentions are said to have an impact on adoption as well and these are social influence , perceived society and attitude towards using technology.This therefore entails that the attitude and behavioural intentions of management and decision makers at ZIMRA plays a pivotal role on the adoption of e-procurement.It is therefore the duty of the management and ICT department to advocate through providing enough information about procurement for relevant authorities to see the need for adoption.

## 2.4 FACTORS INFLUENCING E-PROCUREMENT ADOPTION

There are so many factors which influence the adoption of procurement apart from the availability of information. These factors include the availability of the service at an affordable cost, the organisation need to be ready technically, there is a need to have the financial resources as well as availability of support services.

Despite the existence of consolidated line of studies focusing on the adoption and implementation of E-Procurement on various operations aspects of the firms, there are a lot of researchers who have shown academic interests on the impact of E-Procurement on the procurement capabilities. These researchers include Schoenherr and Tummala (2007), Ramasehan, (197), Putland et al (1999), Croom (2003) and Kaufaman (1999). Most of the researchers find out that, there is a positive relationship between two variables, that is E-Procurement and organisational performances. These researchers did their research and results show that, E-Procurement plays a pivotal role in positively impacting the procurement capabilities in both private and public sector.

The research into the uptake and application of E-Procurement has focused on several themes, as identified by Schoenherr and Tummala, (2007) who noted that early research into E-Procurement focused on EDI (Ramasehan, 1997), the automation of formerly manual to automated processes (Putland et al, 1999) and the impact on the business environment (Croom 2003). The importance procurement in the cost of organisation was researched by Kaufman (1999) who concluded that ‘procurement is more significant than sales in terms influence on company figures. The impact of E-Procurement on the ‘bottom line’ was also noted by Kalakota and Robinson (2001) who concluded that more capital is spent on the purchase of materials and service to support business operations than on all expense items.

Reddick (2004) postulated that e-procurement adoption is held back by supplier’s providing wrong product data for its electronic catalogs. He also noted that the inability of suppliers to make easy catalogs frustrate many organizations thus affecting the use of procurement technologies. Davila et al., (2006) observed that the automobile electronic markets have product descriptions that are imperfect and show inexact unit measures thus making it difficult for companies to fully implement e-procurement. Davila et al., (ibid) asserts that e-procurement is also inundated by the challenge of the digital divide. They also pointed out that supplier understanding with respect to the procurement technologies can be an important handicap leading to inadequate catalog choices to satisfy the requirements of their customers. This view was epitomized by Reddick (2004) who emphasized that not all suppliers have the same right of entry to internet knowledge and the different technology learner curves hinder the flawless adaptation of e-procurement operability. Davila et al., (ibid) concluded that the lack of suppliers accessible through the organization’s e-procurement system would limit the network effects that trigger these technologies further deterring the acceptance and adoption of the technology.

Also critical to E-procurement is top management support. There is little doubt that senior management leadership is critical to the success of an E-Procurement implementation (AGV, 2003). The top management team (steering committee) must involve the project manager, any consultants working with the committee, and agency staff to develop an implementation strategy (ECOM, 2002). In this regard, considerable attention and support need to be provided by senior management to ensure that the procurement reform has been well understood in the agency (S&A, 2003).

Beauvallet et al., (2011) posits that the e-procurement lack of accessibility and confidence affects usability and service level agreements drafting. The European Commission (2012) observed that lack of governmental support for e-procurement affects the confidence level among players. Leadership failures, financial inhibitors, poor coordination, digital divide 20 and choices, workplace and organizational flexibility, lack of trust and poor technical design are some of the barriers affecting e-procurement adoption (European Commission, 2002). The e-procurement adoption is also affected by perceptible lack of standardization of electronically exchanged documents (Kubicek et al., 2009). They further noted that such a challenge has an unswerving impact on the contracting process since the parties must have an ordinary and solid understanding before entering contracts. The e-procurement implementation is affected by commonly low responsiveness, understanding, or skill in relation to growing technologies (World Bank, 2004). An empirical study conducted by the United Nations in 2011 on efficiency and transparency levels in public procurement covering sub-Saharan African countries. The research found that the update of the e-procurement systems across private sector and public sector was dependent on the top management support and technical knowledge of the Chief Executive Officer.

Successful implementation of e-procurement calls for proper strategy implementation. Insufficient strategy implementation and not inadequate strategy formulation have been acknowledged by numerous studies, scholars, and practitioners as the main causes of frequent failure of strategies. The creation of documented and executable strategies prior to the deployment of the e-Procurement solution is an important CSF (Neef, 2001). This notion is further supported by the OSD Report (2001) findings that as the procurement strategy is intended to provide savings enabled by the technology, e-Procurement should be procurement-driven as well as technology-driven.

Mukhopadhyay and Kekre (2002) postulated that technology has played an essential role in the evolution of e-procurement. The predecessors of e-procurement in the 1980s formed the basic technological trends. The progression of Material Requirements Planning (MRP) followed by Manufacturing Requirements Planning (MRP11) and then Enterprise Requirements Planning (ERP) in the mid-1990s (Mahinda, 2015 and Schoenherr et al., 2002). Davila et al, (2006) observed that most organizations adopting or looking forward to adopting e-procurement software already have other systems in use, however failure to integrate e-procurement technologies with existing platforms create duplicative work steps and exposes the dependability of e-procurement information. They also noted that e-procurement adoption is affected by lack of a widely accepted and standardized solution, and this blocks the integration of different e-procurement software across the supply chain.

Beauvallet et al., (2011) pointed out that the adoption of e-procurement can suffer from performance handicaps due to incomplete technological development of the virtualization platforms. Dholakia and Kshetri (2002) in their study on the factors affecting the adoption of internet across small business found that skills and knowledge of employees influence the future adoption of a new technology in a large extent. They also found that implementing new technology needs skills and knowledge to operate in the organization and most organizations do not implement new technologies because their employees are not familiar with new technology. Mahinda (2015) noted that state corporations in Kenya lack appropriate abilities and skills to implement e-procurement. He also noted that implementing e-procurement necessitates knowledge and skills, such reasons may cause delay in e-procurement adoption.

## 2.5 CHALLENGES OF E-PROCUREMENT ADOPTION

Just like any other system, adoption of e-procurement undeniably requires funding. The organisation must be in a position to fund the costs of acquiring the system. These costs may include support costs and license fees on top of the initial investment.

The system does not work in vain, there has to be some computers either laptops or desktops to install the system as well as to give employees for easy access. If that is not done then the system will not achieve the intended results. Therefore, other than just budgeting for the system cost alone is not enough. The organisation still needs to make sure that it has enough resources to buy the infrastructure.

On the other hand the employees who will be using the system need to be trained. Sometimes the training costs comes as a hidden cost that the organisation need to consider. Some Tech companies are very clever that they can sometimes give out the system at a cheaper cost but with high licensing and training fees attached to it.If all these costs are not met then the system may not achieve the best results.

Provision of e-services also entails that the organisation need to strengthen its security since the information in the system can be easily manipulated or the organisation can be a victim of cyber-attacks. It therefore means that some modalities need to be availed just to make sure that the system has got all it needs and that the organisation is safe.

## 2.6 BENEFITS OF ADOPTING E-PROCUREMENT

There are a multitude of benefits that comes with the adoption of e-procurement. Technological revolution has exposed government and its entities to the need to adopt e-procurement due to the challenges emanating from manual procurement, mainly to do with tender flighting, selecting and vetting up until the tender is awarded. This process usually takes longer than 6 months from tender flighting up to tender opening and awarding.All this time can be reduced through e-procurement or digitization of the procurement processes probably to a month considering the fact that the procurement board would still need to do some independent checks. Another advantage that comes with procurement is easy retrieval of suppliers records.

These are some of the benefits that e-procurement has brought to other entities this study therefore ought to unpack the e-procurement capabilities to the public entities giving special emphasis to ZIMRA as the case study.

## 2.7 CHAPTER SUMMARY

The chapter reviewed literature from different authors with regards to the importance of adopting e-procurement system in the public sector.The chapter went on to present potential benefits and challenges of e-procurement. An important model which influenced the study was also reviewed.The next chapter looked at methodology employed for this study.

# CHAPTER THREE: RESEARCH METHODOLOGY

## 3.1 INTRODUCTION

The chapter looked at the research methodology for the study clearly spelling out the research design, philosophy as well as approach adopted. The researcher also defined population of the study and a clear boundary for the study was established. The author went on to discuss the sampling techniques clearly depicting the sample size and how it was obtained.

## 3.2 RESEARCH PHILOSOPHY

This study was underpinned by two major philosophical paradigms that are ontological and epistemological views of interpretivism and positivism on the adoption of E-Procurement in ZIMRA. Positivism focuses on the reductionist, logic, and objective analysis of facts (Lai, 2020). In this context, the philosophy of positivism will be important in unpacking quantitative research which will include the testing of hypothesis. In other context, the study was guided by philosophy of interpretivism which focuses on holistic, reflective, and subjective analysis of the factors (Denzin and Lincoln, 2011). In doing so, interpretivism is crucial in collecting qualitative data. Because E-Procurement is relatively new, the researcher used both the philosophy of positivism and interpretivism to understand the drivers of E-Procurement in ZIMRA.

## 3.3 RESEARCH DESIGN

As indicated by Anderson, (2008) cited that, research designs are plans and procedures for research that range the decisions from wide presumptions to detailed methods of information collection and investigation. A research design is a complete arrangement showing how research information is gathered (Crouch et al, 2003).In this study, the researcher will adopt mixed methodology which included both quantitative and qualitative designs. The review takes on descriptive research design to collect the qualitative information of the adoption of E-Procurement and its effect on procurement capabilities in a public sector in Zimbabwe. A qualitative design will be done utilizing descriptions and is done to help quantitative information.

In social research, "quantitative design is a technique that seeks to understand behavior by utilizing complex mathematical and factual modeling, measurement, and research." "By relegating a numerical value to variables, quantitative examination tries to replicate reality mathematically (Cooper et al, 2008)." "It tends to be done in light of multiple factors for example performance measurement evaluation or valuation of an instrument and can be used to predict real world monetary events". Consequently, qualitative design likewise targets uncovering the 10,000 foot view by utilizing information to describe a phenomenon and what it means. In this study, quantitative design was used to test hypothesis as outlined in the conceptual framework.

## 3.4 TARGET POPULATION

Population of the study is very essential as it determines how testing will be done and it drives the whole research methodology. In this review, the target populace was 255 employees who comprises of senior management, Accounting Department, Assistant clerks, Revenue Officers and Procurement Department who are based at Mhlahladlela government complex, ZIMRA Bulawayo, Region 03. These employees included both those representing Bulawayo and Matebeleland North Province.

## 3.5 SAMPLE SIZE AND SAMPLING TECHNIQUES

Examining refers to a subset of subjects' representative of a populace (Anderson, 2008). It supports research examination as it determines the adequate respondents from the all out number of the targeted populace.

### 3.5.1 SAMPLING TECHNIQUES

Based on quantitative design, simple arbitrary examining was used to select ZIMRA employee for the survey. "A simple irregular sample is a subset of a factual populace where each member of the subset has an equal likelihood of being chosen". "On qualitative design, purposive or judgmental inspecting will be used". The researcher used judgmental examining because there were certain people in view of specific data to such an extent that it was easy to reach representatives who can give substantial data since the researcher was attached at the association. Concentrating on the whole populace in this study is unreasonable because the population is very large therefore, sample size was calculated involving scientific mini-computer as indicated below:

### 3.5.2 SAMPLE SIZE

In this study, sample size was done scientifically using Rasoft Sample Calculator (<https://www.google.com/search?q=raosoft+sample+size+calculator&client=firefox->). To ensure the accuracy of sample size, 95% confidence and 5% (0.05) sampling error is used. Since the target population is 255, the following is sample size for this study:

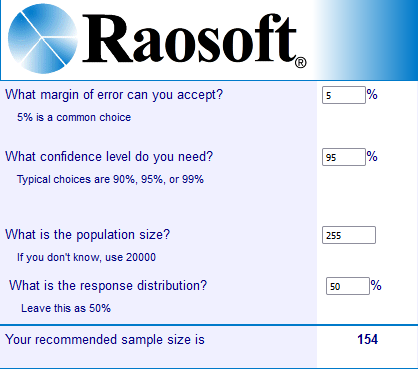


Figure 3.1: Sample size calculation

As indicated above, the final sample size of the study will be 154 ZIMRA employees were first selected using simple random sampling for survey and later using purposive sampling for qualitative data.

## 3.6 DATA COLLECTION METHODS AND RESEARCH INSTRUMENTS

Based on qualitative and quantitative research design, the following were used as data collection methods and instruments:

### 3.6.1 SURVEY QUESTIONNAIRE

To collect data, the researcher used questionnaires for quantitative information. As per Baily et al (2008), suggested that questionnaire is a rundown of carefully structured questions chosen after considerable testing with the end goal of eliciting reliable responses from a chosen sample.The researcher used self-administered questionnaires to get data from respondents. Therefore, the researcher will deliver the questionnaires in person, to ensure that, the questionnaire go under the control of the intended respondents. The questionnaires will be administered by drop and pick method. This was a set of questions prepared by the researcher to get essential information that will address research objectives that is the fundamental scope of the review. The questionnaire was chosen because it gives the researcher the advantage that will give people to fill the information as per their status so information gathered will be relevant and not redundant. The researcher composed the questions and print them to everyone in a simplified manner consequently making collection of information easy. It will enable the researcher to gather every one of the information in less haste and more ease to come up with the correct resolution.

### 3.6.2 IN-DEPTH INTERVIEWS

As a follow up to survey, the researcher conducted in-depth interviews with selected ZIMRA employees to explain some of the patterns of quantitative data. In-depth interviews are a qualitative research method; they want to explore in depth a respondent's perspective, experiences, feelings, and opinions. Based on above, adoption of E-procurement also requires deep insights and holistic analysis to comprehend issues related to barriers and low use of ICT based procurement.

## 3.7 DATA ANALYSIS PLAN

Information from concentrated on instruments will be coded, entered a predesigned excel spreadsheet and cleaned. Factual analyses will be performed utilizing SPSS Version 25 software. Descriptive analyses were performed to summarize information with nonstop variables like age, utilizing mean and their corresponding standard deviations or median with their corresponding inter-quartile ranges.Based on the nature of the study, simple linear regression was used to test hypotheses as indicated in the conceptual framework. Qualitative data will be analysed thematically based on the study objectives.

## 3.8 DATA PRESENTATION METHODS

This study was guided by both qualitative and quantitative data. To present quantitative data, the researcher will use descriptive tables, pie-charts, bar graphs and other visual display of quantitative data. However, qualitative data was presented using narratives and these were mainly used to explain quantitative patterns.

## 3.9 ETHICAL CONSIDERATIONS

Amold and Essig (2002) commended observing ethical issues whenever carrying out a research. Ethical considerations observe what is morally acceptable in carrying out a study. The researcher ensured anonymity, the researcher ensured confidentiality of the findings and sworn to the respondents that the information obtained was solely for academic purposes. The users were not coerced or bribed for them to participate. The researcher made it voluntary such that at any point if the respondent is no longer comfortable, he or she will be allowed to do so.

## 3.10 CHAPTER SUMMARY

The chapter dwelled on the methodology employed when conducting this study. All the data gathered was meant to answer the research questions in Chapter One. The next chapter presents information collected utilizing questionnaires and interviews and it additionally shows examination of the discoveries.

# CHAPTER FOUR: DATA PRESENTATION, INTERPRETATION AND DISCUSSION

## 4.1 INTRODUCTION

Data interpretation enables the filtering or restructuring of investigated problem (Sutton, 2015) and data discussion allows understanding of investigated problem at macro level through synopsis of comparisons and contrasting the findings (Anderson, 2010).Collectively, Ward et al (2015) observe that data presentation, interpretation and analysis allow the study to be citable, discoverable, reusable, reproducible, accessible, preserved, comprehensive, and reviewed. The objectives of the study to be answered were:

* To assess the drivers for adoption of e-procurement in the Zimbabwe Revenue Authority
* To establish the extent at which e-procurement is being utilised in Zimbabwe Revenue Authority’s procurement activities
* To assess the barriers facing Zimbabwe Revenue Authority in the adoption of E-Procurement in its procurement activities
* To establish the strategies which can be utilised to facilitate the adoption of E-Procurement in Zimbabwe Revenue Authority

## 4.2 DEMOGRAPHIC INFORMATION ABOUT RESPONDENTS

Before presenting data study objectives, the researcher presented data on demographic characteristics of respondents. This is key in understanding the source of information which answered the objectives:

**Gender**

The following pie chart shows the distribution of gender which indicates the number of females and males participated in the study.

Figure 4.1: Respondent’s gender

As indicated above, the majority 86(56%) were males while 68(44%) were females. The observation from the study is there were more males who participated in the study compared to females. The differences are solely on willingness of respondents to participate in the study as ZIMRA official statistics shows that there are more females than males in their employment data base.

**Age category**

After gender, the important category of the study was age. In this study, age was put into 10-year interval to have better insights on respondent’s distribution based on age category:

Figure 4.2: Respondent’s age

The majority 56(36%) of respondents were in the category of 36 to 50 followed by 41(27%) which were in the category of 26 to 35 years. This was followed by 34(22%) below age of 25 and the lowest frequency was in the category above 50 years with 23(15%). The learning point was that most of the respondents for this study came from economically active group.

**Highest academic qualification**

The following figure shows the educational level of the respondents. Education is key in determining how respondent view the importance of e-procurement including availability of skills to implement the new concepts in the organisation

Figure 4.3: Respondent’s education

The majority 61(40%) had acquired undergraduate qualifications. This was followed by 44(29%) who were in possession of diploma and 36(23%) who had acquired postgraduate qualification. The lowest category was secondary school which only 13(8%). No primary education qualification was recorded in the study. The learning point was that the majority of employees had tertiary education qualification.

**Experience at ZIMRA**

In any organisation, work experience remains fundamental in understanding certain aspects of management which include strategies, policies and programmes. Based on this, the following staked bar graph shows the number of years the employees had spent at ZIMRA

Figure 4.4 : respondent’s experience

The majority 63(41%) had spent between 6 and 10 years in the organisation. This was followed by 49(32%) had experience below 5 years in the organisation. The third category had 30(19%) for those who had spent 11 to 15 years in the organisation. Finally, lowest category was for those above 15 years who constituted 12(8%) to the total number of respondents. They observation was that increased experience (in years) corresponds to low number of employees due to both job mobility.

## 4.3 LEVEL OF ADOPTION E-PROCUREMENT

One of the key objectives of the study was to understand the level of e-procurement adoption in Zimbabwe’s parastatals. Before establishing the drivers, the researcher was interested in understanding the extent at which e-procurement has been adopted in ZIMRA’s procurement operations and other activities.

### 4.3.1 THE EXTENT OF E-PROCUREMENT ADOPTION AT ZIMRA

The following bar graph shows the extent e-procurement has been incorporated in ZIMRA. Researcher asked the respondents on how they felt about the extent at which e-procurement is being integrated in the organisation.

Figure 4.5: Extent of adoption

As depicted above, the majority 53(34%) of respondents felt that e-procurement has been incorporated to a lesser extent. This was followed by 42(27%) who believed that e-procurement has been incorporated to a certain extent in the organisation. As depicted above, only 21(14%) felt that it has been implemented to an extreme extent the same figure of respondents who felt that e-procurement has not been implemented at all. The learning point from the study was that fully implementation of e-procurement was not yet completed and some respondents felt that there is a lot of things to be done.

### 4.3.2 SUPPORTING FULL IMPLEMENTATION E-PROCUREMENT

After establishing the extent of incorporating e-procurement in the organisation, the researcher also established the extent at which employees support the concept. Using descriptive analysis, the following diagram shows the extent at which employees supported the implementation of e-procurement in ZIMRA.

Figure 4.6: Supporting full implementation

With regards to support of e-procurement, the majority 97(64%) indicated that they fully support the concept with only 9(6%) saying they are not supporting it. On other hand, 48(31%) of respondents were not sure whether they supported the concept of e-procurement or not. The learning point was that most employees supported the concept. Findings from qualitative data revealed that most employees saw the concept as enabler to effectiveness, transparency and strengthening organisation governance systems.

## 4.4 FACTORS AFFECTING THE ADOPTION OF E-PROCUREMENT AT ZIMRA

The major objective of the study was to understand the drivers of e-procurement in Zimbabwe’s parastatals. This section presents the findings on drivers guided by bother descriptive and inferential statistics. The use of descriptive statistics was to understand the general distribution of respondents ‘views while inferential statistics was checking the significance of these drivers.

### 4.4.1 DRIVERS OF E-PROCUREMENT-DESCRIPTIVE ANALYSIS

In this section, both measure of central tendency and dispersion are used to rank the factors focusing mean, standard error and standard deviation. As indicated earlier, descriptive analysis is powerful show the strength of respondents ‘views than general frequencies.

Table 4.1: drivers of e-procurement

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| N=154 | Mean | | Std. Deviation |  |
|  | Statistic | Std. Error | Statistic | Factor ranking |
| Organisational factors | 7.85 | .068 | .838 | 2 |
| Technological factors | 6.38 | .072 | .894 | 4 |
| Behavioural factors | 5.73 | .072 | .888 | 5 |
| Performance related factors | 7.68 | .053 | .664 | 3 |
| Effort related factors | 7.95 | .077 | .959 | 1 |
| Environmental factors | 5.71 | .079 | .971 | 6 |

From the table above, effort related factors (ranked 1st) were most important drivers to e-procurement (M=7.95, SD=.959). This shows that employees supported e-procurement as it ensures ease way of doing things. In this case, effort expectancy was regarded as most influential factors in enabling work and boosting productivity in the organisation. Ranked second was organisational factors (M=7.85, SD=.838). In this study organisational factors included availability of skills, support from top management, organisational policy and firm size. Findings from qualitative data collection revealed that size ZIMRA was influential in the need to implement e-procurement as this would simply the work and ensure that distribution of goods is efficient. There were reservations among employees with regards to top management support as some felt that top brass was not really supporting the concept. Availability skills was considered as key and employees that skills are available to implement e-procurement.

The findings revealed that performance expectancy (M=7.68, SD=.664) was ranked key and it was important in supporting e-procurement. Like effort expectancy, e-procurement was key in improving performance of procurement department. Employees revealed that the concept would ensure that time is not wasted in the procurement including easy tracking of transactions. It was further revealed by employees that the performance of e-procurement would also reduce transactional and operational costs.

Technological factors (ranked 4th) with (M=6.38, SD=.894) was also important despite ranked second from the last. In the study, IT related to technological infrastructure and connectivity issues. It was found that availability of technological factors could be key and fundamental in enabling the implementation of e-procurement. The feeling was that technology is key in the modern management processes.

Finally, respondents did not think behavioral factors such as intention to use were key important compared to other factors as this was ranked 5th with (M=5.73, SD=.888). Another factor was lowly ranked on its influence is environmental factor (ranked 6th). In this study, environmental factors included influence of government policies, external information system and demands from stakeholders. The learning point from this was that internal factors were considered as fundamental compared to external drivers.

### 4.4.2 REGRESSION ANALYSIS: FACTORS WHICH PREDICT INCREASED USE OF E-PROCUREMENT IN PARASTATALS

To achieve the study objective of key drivers to e-procurement and after meeting linear statistics assumptions, the predictive statistical models were passed fit to be tested. As a result, the researcher used linear regression, and other inferential statistics to predict the influence of independent variables (**Drivers**) on dependent variables *(***increased use of e-procurement**). The hypotheses guiding the study framework were as follows**:**

* **H1:** The effort related factors influence the adoption of e-procurement in parastatals
* **H2:** The behavioral related factors influence the adoption of e-procurement in parastatals
* **H3:** The performance related factors influence the adoption of e-procurement in parastatals
* **H4:** The environmental related factors influence the adoption of e-procurement in parastatals
* **H5**: The organisational factors influence the adoption of e-procurement in parastatals
* **H6:** The technological factors influence the adoption of e-procurement in parastatals

### 4.4.3 HYPOTHESIS EQUATION

Like in other linear statistics, regression operate with equations which shows the variables included in conceptual framework. In the model, drivers of e-procurement were included in the equation as independent variables. In doing so, multiple linear regression was used to check the influence of drivers on increased adoption of e-procurement as indicated in regression output table below:

(**EU=α + *β1 E + β2 B + β3 P+ β4 EF+ β5 O+ β6T+ Ɛ***)

|  |
| --- |
| Where, **EU** is E-Procurement Use   * **α-**Constant * **E1**-Effort rated factors * **B2**-Behavioural related factors * **P3**-Performance related factors * **EF4**-Environmental factors * **O5**-Organisational Factors * **T6**-Technological Factors * ***Ɛ-***Equation error |

In the next section, the regression outputs from SPSS showing the how each hypothesized factors influence the adoption of e-procurement in parastatals.

First the researcher presents co-efficient table which summarize the influence of each individual variable. In this study, the researcher used both unstandardized and standardized co-efficient. Unstandardized represents the amount by which dependent variable changes if we change independent variable by one unit keeping other independent variables constant while the standardized coefficient is measured in units of standard deviation. When interpreting these values, negative co-efficient means negative impact of the independent variable while positive value implied positive implies positive impact of independent factor on dependent variable.

Table 4.2: Coefficients

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficientsa** | | | | | | | | | | |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | 95% Confidence Interval for B | | Collinearity Statistics | |
| B | Std. Error | Beta | Lower Bound | Upper Bound | Tolerance | VIF |
| 1 | (Constant) | -2.256 | 1.212 |  | -1.862 | .065 | -4.651 | .139 |  |  |
| Organisational factors | -.716 | .091 | -.911 | -7.901 | .000 | -.895 | -.537 | .179 | 5.594 |
| Environmental Factors | -.207 | .028 | -.489 | -7.269 | .000 | -.263 | -.151 | .524 | 1.907 |
| Technological factors | 1.395 | .133 | 1.568 | 10.523 | .000 | 1.133 | 1.658 | .107 | 9.340 |
| Behavioural factors | .155 | .067 | .141 | 2.332 | .021 | .024 | .287 | .651 | 1.536 |
| Performance related factors | .961 | .094 | .968 | 10.208 | .000 | .775 | 1.147 | .264 | 3.786 |
| Effort related factors | .350 | .057 | .352 | 6.094 | .000 | -.463 | -.236 | .713 | 1.402 |
| a. Dependent Variable: increased use of procurement | | | |  |  |  |  |  |  |  |

As illustrated above, multi-linear regression was conducted to show the influence of various factors on use of e-procurement in parastatals. Organisational factors were found to have a negative impact on adoption of e-procurement and this impact was found to be statistically significance as indicated by (β=-.716548, t=-7.901, ρ= .000). This means a decrease in role of organisational factors will correspondingly decrease the use of e-procurement. The findings revealed that Environmental Factors has also negative influence on adoption of e-procurement. This influence was also found to be statistically significant at (β=-.207, t=-7.269, ρ= .000). This means decreasing in the influence of environmental factors was associated with decrease in the usage of e-procurement. Another important factor was Technological factors. This factor was found to have a positive influence on use of e-procurement as indicated by **(**β=1.395, t=10.523, ρ= .000). This means increase in influence of technology would result in increased use e-procurement.

More so, behavioural factors were found to have a statistically significant positive influence on use of e-procurement. This was indicated by (β=.155, t=2.332, ρ= .021). Performance related factors was found to have a statistically significant positive influence on the use of e-procurement as demonstrated by (β=.961, t=10.208, ρ= .000). This means increase in performance related factors predicted the increase in the adoption of e-procurement. Finally, regression analysis revealed that Effort related factors has positive influence on increased use of e-procurement, and this was statistically significance at (β=.350, t=6.094, ρ= .000).

From above, all drivers to be statistically significant at 95% confidence level and suggested hypothesis were accepted. This means when considering the adoption of e-procurement all above factors should be considered in the planning and management of the concepts. In the following table, the model summary is presented which shows the influence of all six (6) factors combined towards the use of e-procurement in Zimbabwe’s parastatals:

Table 4.3: Regression model summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Model Summaryb** | | | | |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .808a | .653 | .639 | .299 |
| a. Predictors: (Constant), Effort related factors, Behavioural factors, Performance related factors , Environmental Factors , Organisational factors , Technological factors | | | | |
| b. Dependent Variable: increased use of procurement | | | | |

Table above shows the R, R2 and adjusted R2. In this case, R shows the correlation of model variables and its strengths. In this study, the factors which affect e-procurement were positively correlated at (R=.808a). From table above, **R-Square,** which is also called the coefficient of multiple regression, indicates the amount of variance of the dependent variable that is explained by the independent variables. It further illustrates the percentages which is explained by other factors not studied. From the above table, variance for studied was (65.3%) which is high compared to (34.7%) of factors not studied. However, a more accurate measure of determination is the **adjusted R square** which removes sampling errors and bias. Adjusted R2 provide accurate prediction of the model as it removes errors which accompany the studies such as sampling errors. From the table, the model further reveals that drivers studied predicted the adoption of e-procurement by (65.3%). Despite being statistically significant, the variation explained by the drivers shows that there is (34.7%) of influence of drivers of e-procurement which were not studied.

After regression summary model, the next table will show the ANOVA outputs. ANOVA table in regression is used to show explanatory power of the model. This means how fit the model to help in explaining whether the model can be relied upon to predict the dependent variable which is use of evaluation findings. The follow table shows ANOVA table which used to explain whether the model is fit to give explanatory power of independent variables on dependent variables.

Table 4.4: Goodness of fit test

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVAb** | | | | | | |
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 24.594 | 6 | 4.099 | 45.801 | .000a |
| Residual | 13.066 | 146 | .089 |  |  |
| Total | 37.660 | 152 |  |  |  |
| a. Predictors: (Constant), Effort related factors, Behavioural factors, Performance related factors , Environmental Factors , Organisational factors , Technological factors | | | | | | |
| b. Dependent Variable: increased use of procurement | | | | |  |  |

In the regression ANOVA table, the F value is considered as the model fit for data and this shows the variability which regression model can explain. For the model to be fit, the F value in ANOVA table should be positive as negative values implies that the model is not fit to explain how the independent variables affect the dependent variable. More so, ANOVA significance value should be less than 0.05 which is 5% level of significance or alpha error. This means (p<0.05) the model is statistically significant and if (p>0.05) the model is statistically not significant, and it cannot be relied on. From ANOVA table above, it is depicted that (F = 45.801; β = 000a) which means that the regression model is statistically significant. In this case, the drivers studied predicts use of e-procurement in Zimbabwe’s parastatals.

## 4.5 CHALLENGES IN IMPLEMENTATION OF E-PROCUREMENT

As indicated in the previous sections, the findings revealed that implementation of e-procurement is not fully implemented in ZIMRA. Against this background, this section presents barriers to effective implementation of e-procurement in Zimbabwe’s parastatals.

### 4.5.1 ORGANIZATIONAL CHALLENGES

One of the fundamental challenges discussed in the study related to organisational challenges. These included internal issues related to skills, support, and general organisational capacity to implement e-procurement. Using descriptive analysis, the following table shows the dimensions of organisational challenges and their rankings:

Table 4.5: Organisational challenges

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| N=154 | Mean | | Std. Deviation |  |
| Statistic | Std. Error | Statistic | Rankings |
| Lack of skills and knowledge | 9.01 | .058 | .712 | 3 |
| Lack of finances | 6.01 | .058 | .712 | 4 |
| Lack of top management support | 9.55 | .358 | 4.429 | 1 |
| Poor methods of detecting fraud in IT systems | 6.75 | .105 | 1.300 | 6 |
| Resistance to change | 9.25 | .035 | .433 | 2 |
| Firm’s size | 5.50 | .090 | 1.119 | 7 |
| Organisational capacity | 5.76 | .068 | .835 | 5 |

As depicted above, lack of support from top management (M=9.55, SD=4.429) was major barrier under organisational challenges. Respondents felt that the top management were not committed to implement e-procurement. Related to this, resistance to change (M=9.25, SD=.433) was ranked send under organisational challenges. Qualitative revealed that top management did not support more of e-procurement as it has implication on their performance measurements and other issues related to transparency. During interviews, one of the respondents noted that:

*It is apparent that e-procurement is underway to fully implement but the truth is support from top and resistance is high. These concepts unearth corruption and so often those in poor do not feel the urgency in implementing them*

The findings revealed that issue of skill was important in important in the implementation of e-procurement as it was ranked 3rd (M=9.01, SD=.712). However, this was contrasted in qualitative findings were some employees believed skills were available and training could be done to support current human capital. This can be supported by ranking of lack of finance (ranked 4th) with (M=6.01, SD=.712) and organisational capacity (ranked 5th) with (M=5.76, SD=.835). The learning point was that ZIMRA has capacity to implement e-procurement and issues related to capacity was noted important. More so, issue of firm size ranked last was also not considered as a major hindrance in the implementation of e-procurement is parastatals.

### 4.5.2 ENVIRONMENTAL CHALLENGES

The role of external factors is key in the implementation of e-procurement in Zimbabwe’s parastatals. It is also important to appreciate that parastatals in Zimbabwe are accountable to the government through various legislatives. Against this background, the following table shows the dimension of external factors as a challenge in the adoption of e-procurement.

Table 4.6: environmental challenges

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| N=154 | Mean | | Std. Deviation |  |
| Statistic | Std. Error | Statistic | Rankings |
| Government policy regulation | 5.50 | .090 | 1.113 | 3 |
| Poor data management system | 5.88 | .063 | .781 | 2 |
| Political influence in procurement | 8.64 | .119 | 1.467 | 1 |
| External information systems support | 5.25 | .105 | 1.294 | 4 |

As demonstrated above, political influence (ranked 1st) was a major barrier to the implementation of e-procurement (M=8.64, SD=.119). The feeling among employees was that politics always influence procurement in parastatals. One of the respondents noted that:

*In Zimbabwe, parastatals are always under influence of government and politician. The processes is not clear as some individuals always wants to benefit from these organisations. This is the reason why some policies are not clearly implemented as e-procurement will always expose corruptions.*

The findings further revealed that poor data management (ranked 2nd) was key factor with (M=5.88, SD=.781). More so, the influence of government policy regulation was seen as key (ranked 3rd) with (M=5.50, SD=1.113). Despite the existence of other factors, the learning point from the study was that government interference, corruption and nepotism affected the complete implementation of e-procurement.

### 4.5.3 MANAGEMENT CHALLENGES

Related to organisational factors are management challenges which pay attention on administrative barriers. These barriers point to specific administration processes and how they interfere in the smooth adoption of e-procurement in Zimbabwe’s parastatals as indicated below:

Table 4.7: Management challenges

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| N=154 | Mean | | Std. Deviation |  |
| Statistic | Std. Error | Statistic | Rankings |
| Long procedures and bureaucracy | 9.30 | .037 | .460 | 1 |
| Fear of negative exposure in case of procurement scandal | 9.16 | .029 | .365 | 2 |
| Fear of losing control of organization | 5.34 | .085 | 1.046 | 5 |
| Lack of budget allocation | 5.71 | .086 | 1.062 | 4 |
| Lack of trust and poor technical design | 5.73 | .058 | .716 | 3 |

The findings revealed that long procedures and bureaucracy (ranked 1st) was considered as key barrier among management challenges with (M=9.30.SD=.460). It was learnt that management took long to fully implement the concept of e-procurement. Based on qualitative findings, the study revealed that top management did not feel the urgency on finalising the implementation of e-procurement. Related to above, fear of negative exposure in case of procurement scandal was ranked second with (M=9.16, SD=.365). It was learnt e-procurement would enhances transparency and accountability, the concepts which are not well received among top management. One of the study respondents noted that:

*Management knows what should be done and they deliberately delay such important concept for personal benefits. These concepts expose mismanagement and transparency in transactional business will be always improved. As a result, this is not popular, but it needs to be implemented*

Related to above, Lack of trust and poor technical design was ranked third with (M=5.73, SD=.716). as illustrated above, issue of trust was important in the adoption of e-procurement. Factors such lack budget and fear of losing control of organisation were not considered significant as they were ranked 4th and 5th respectively. The learning point from the study is that transparency and accountability were major management factors inhibiting fully implementation of e-procurement.

### 4.5.4 TECHNICAL CHALLENGES

Another key factors which researcher was interested is technical factors. These relate to technological infrastructure such as compatibility, stability, and reliability:

Table 4.8: Technical challenges

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| N=154 | Mean | | Std. Deviation |  |
| Statistic | Std. Error | Statistic | Factor ranking |
| Inadequate ICT infrastructure and networking infrastructure | 9.27 | .036 | .448 | 1 |
| Lack of skilled personnel | 5.18 | .076 | .942 | 6 |
| Lack of compatibility | 5.82 | .076 | .942 | 3 |
| Unreliable internet connection | 5.63 | .052 | .646 | 5 |
| Language variability | 5.65 | .062 | .765 | 4 |
| Lack of tamper-proof software to use | 8.82 | .058 | .720 | 2 |

The findings revealed that implementation of e-procurement cannot be completed with technological infrastructure to support new online system. Against this, employees believed that currently ZIMRA has Inadequate ICT infrastructure and networking infrastructure (ranked 1st) with (M=9.27, SD=.448). The observation is that current ICT networking system need to be upgraded to ensure the ease implementation of e-procurement. Relate to above, the findings revealed that the organisation is yet to procure of tamper-proof software to use (ranked 2nd) with (M=8.82, SD=.720). Based on this, the study learnt that the organisation needs the software which robust and which cannot be tempered so easily. Thus, the reason why Lack of compatibility was ranked third with (M=.5.82, SD=.942). The current ICT system are not compatible with global standards of e-procurement systems.

Barriers such as lack internet connectivity (ranked 4th), language variability (5th) and lack of skilled personnel (6th) were not considered as major barriers under technological issues. From above, the most barrier related to compatibility and lack of standard of e-procurement system.

## 4.6 STRATEGIES TO EXPEDITE THE ADOPTION OF E-PROCUREMENT

The final objective of the study was to establish the strategies which can be used to enhance the implementation of e-procurement. To allow prioritization, respondents were asked to rate the most urgent and important strategy as indicated below:

Table 4.9: Strategies to expedite the adoption of e-procurement

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| N=154 | Mean | | Std. Deviation |  |
|  | Statistic | Std. Error | Statistic | Ranking |
| Allocate sufficient budgets | 8.01 | .054 | .674 | 2 |
| Operate freely from political influence | 8.55 | .040 | .499 | 1 |
| Clear legal framework | 6.88 | .071 | .876 | 5 |
| Training and development of staff | 7.59 | .087 | 1.073 | 4 |
| Stakeholder involvement | 6.18 | .062 | .770 | 6 |
| Top management support | 7.99 | .054 | .674 | 3 |

Based on respondents ‘views, there is need to ensure that ZIMRA Operate freely from political influence (ranked 1st) to ensure that e-procurement can be implemented without external interference. The belief among respondents was that political interference was apparent and it was derailing the implementation of cost-effective systems such as ICT supported procurement. Ranked second was the need to allocate sufficient budgets to the concept of e-procurement. Findings from qualitative data indicated that resources were available, but little was allocated towards ICT supported management software such as e-procurement. Therefore, employees believed that there is a need for top management support (ranked 3rd) in form of finance, attitude, and policy frameworks.

Other factors which considered key were training of staff on ICT based e-procurement (ranked 4th), development of clear legal framework (5th) and Stakeholder involvement (6th). The learning point from the study was that support from top management was the entry point to ensure that the concepts of e-procurement are fully implemented.

## 4.7 CHAPTER SUMMARY

The chapter was mainly anchored on data analysis, presentation coupled with discussion of key findings. Respondents provided valuable data with regards to research questions which the study ought to answer. Conclusions and summary of the findings are given in the next chapter. The next chapter further gives insights into the future areas of study with regards to e-procurement.

# CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECCOMENDATIONS

## 5.1 INTRODUCTION

This chapter is meant to present the synopsis, ends and recommendations emerging out of the discoveries of this research as highlighted in the previous chapter and suggests areas for further review. The chapter likewise provides suggestions for further research and recommendations that will improve the adoption of e-procurement.

## 5.2 SUMMARY

This study investigated the variables affecting the adoption of e-procurement in state Zimbabwe's parastatals. This research was aimed at identifying factors affecting the adoption of e-procurement ZIMRA; to establish the extent of adoption of e-procurement and to investigate the challenges associated with the adoption of e-procurement at ZIMRA. The review reviewed theoretical and empirical literature to assemble the basic concerns on factors affecting the adoption of e-procurement. Considering the extent at which e-procurement is being used in ZIMBRA's activities, the review revealed that just 21% of respondents believed its adoption in movements of every sort. This implies some holes and consequently existence of challenges in the implementation of e-procurement in Zimbabwe's parastatals. These elements included authoritative, management related, environmental and technical.

The review used questionnaires and interviews for information collection. The researcher used a sample of 154 respondents which were comprised of employees at ZIMRA. In terms of barriers, the review revealed the intricacies of challenges which include, the absence of management support, absence of internet access, resistance to change from employees, absence of procurement human resources and high implementation costs as key variables affecting the implementation of e-procurement at ZIMRA. In the same context, the review revealed that the advantages of taking on e-procurement include reducing costs, reducing value-based costs, creating a transparent market where items and terms are readily available.

More thus, the review revealed that the hierarchical challenges faced in the adoption of e-procurement which included absence of abilities and knowledge, absence of finances, unfortunate methods of detecting misrepresentation in data technology systems and resistance to change from employees." "The concentrate additionally publicized government strategy regulation; political influence and unfortunate information management were the environmental challenges that affected the adoption of e-procurement. The concentrate likewise revealed that management's reluctance to take on e-procurement, management fear to lose control, absence of adequate budget portion, long procedures and bureaucracy were other extra challenges that affected the adoption of e-procurement.

With regards to strategies, the discoveries revealed that help from top management, operating free from political interference and deliberate assignment of enough budget is fundamental in the implementation of e-procurement in Zimbabwe's parastatals.

## 5.3 CONCLUSION

Development and growth in business-to-business e-commerce remains solid as data and correspondences technologies (ICTs) continue to change associations' interactions with their suppliers and customers." "E-Procurement is a technology-based system with comprehensive processes; has its own inherent adoption, implementation and application challenges. Nonetheless, it is qualified to state that there are benefits in the adoption and implementation of e-procurement". "Based on the barriers in the implementation of e-procurement at ZIMRA, the review concludes that absence of management support, absence of internet access, resistance to change from employees, absence of procurement human resources and high implementation costs were the main considerations affecting the adoption of e-procurement at ZIMRA. Likewise, the corruptive nature of procurement in open organizations has resulted in employees resisting changes that might improve the procurement capability". "The concentrate likewise concludes that the genuine benefits of taking on e-procurement include reducing costs, reducing value-based costs, creating a transparent market where items and terms are readily available. The concentrate further noted the hierarchical challenges faced in the adoption of e-procurement at ZIMRA such abilities and knowledge, absence of finances, unfortunate methods of detecting misrepresentation in data technology systems, resistance to change from employees, government strategy regulation, political influence and poor information management were the environmental challenges that affected the adoption of e-procurement. Due to low adoption of e-procurement, the study therefore concludes that procurement is marred by unethical practices, and it is likewise under political patronage and influence. This affected the adoption of e-procurement as it improves transparency and accountability. The study concludes that management's reluctance to take on e-procurement, management fear to lose control, absence of adequate budget designation, long procedures and bureaucracy were other extra challenges that affected the adoption of e-procurement.

## 5.4 RECOMMENDATIONS

The following recommendations were made:

* Government ought to endeavor to review the legal and regulatory frame of the Procurement Act to include elements of e-procurement in the procurement process to begin consolidating aspects of technology aided procurement information collection and treatments. This will reduce the level of information/technology, process and procedure circumvention and compliance related problems besetting the paper-based procurement system currently practiced.
* It is additionally suggested that procurement entities ought to be independent in releasing their duties with no type of political influence that could impede the entities performance. In many instances, procurement process delays when there is change of government or strategy directive of the government. This results in waste of public resources in terms of money, materials, and time of which in the event that the projects were to be completed timely, could yield the expected result and effect. It is therefore and envisaged that the creation of independent corporate procurement unit to be continued underpinned by technology would facilitate value for money in open procurement.
* On the extent to which employee competency was a challenge in E-Procurement adoption, this study recommends that due to constant turnover of the employees', nonstop preparation for the approaching staff is required
* On the extent to which inadequate technological infrastructure was a challenge to e-procurement adoption, the review recommended that Integration of the Organizations system and those of the suppliers, demonstration of the positive effect of the system, and establishment of linkages between all Governments agencies ought to be encouraged for faster Implementation of the e-procurement system in the public sector.

## 5.5 CHAPTER SUMMARY

The chapter gave the overall portrait of thesis in brief but succinct way by focusing on giving the summary, conclusion, recommendations, and the area of future study. This was done to give the consumer of this thesis with issues involved in the whole study such as the summary of topic, aim and objectives, key methodological issue, major themes that emerged in the findings and researcher’s conclusion on the topic which precipitated the formulation of major recommendations.

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Appendix 1: Research questionnaire



Instructions to the respondent: Please tick (√) the most appropriate answer to each of the questions. Please tick one or more if necessary. Please state your answer in the blank spaces provided for the questions without multiple choice.

SECTION A: DEMOGRAPHIC INFORMATION ABOUT RESPONDENTS

A1: Your gender

|  |  |
| --- | --- |
| Male |  |
| Female |  |

A2: Your age group (in years)

|  |  |  |  |
| --- | --- | --- | --- |
| 18-25 years | 26-35 years | 36-50 years | >50 years |
|  |  |  |  |

A3: Your highest academic qualification

|  |  |  |  |
| --- | --- | --- | --- |
| Secondary | Diploma | Degree (undergraduate) | Postgraduate |
|  |  |  |  |

A4: Your working experience at ZIMRA

|  |  |  |  |
| --- | --- | --- | --- |
| 0-5 yrs. | 6-10 yrs. | 11-15yrs | Above 15 yrs. |
|  |  |  |  |

SECTION B: LEVEL OF ADOPTION E-PROCUREMENT

B1: To what extent do you think ZIMRA has incorporated E-procurement in its activities?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| To an extreme extent | To a large extent | To a certain extent | To a less extent | Not at all |
|  |  |  |  |  |

SECTION C: FACTORS AFFECTING THE ADOPTION OF E-PROCUREMENT AT ZIMRA

Please indicate the factors that affected the adoption of e-procurement technologies ZIMRA

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Factors | | More significant | Very significant | Significant | Less significant | Not significant |
| Organisational factors | Skills and knowledge |  |  |  |  |  |
| Top Management support |  |  |  |  |  |
| Firm size |  |  |  |  |  |
| Organisational policy |  |  |  |  |  |
| Environmental Factors | Government policy regulation |  |  |  |  |  |
| External information systems support |  |  |  |  |  |
| Technological factors | ICT infrastructure |  |  |  |  |  |
| Technological changes |  |  |  |  |  |

In your opinion what benefits were accrued from the adoption of e-procurement ZIMRA

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Benefits | More significant | Very significant | Significant | Less significant | Not significant |
| Reducing overall organisational costs |  |  |  |  |  |
| Reduce transactional costs |  |  |  |  |  |
| Creation of transparency in procurement process |  |  |  |  |  |
| Improved control systems |  |  |  |  |  |

SECTION D: CHALLENGES IN IMPLEMENTATION OF E-PROCUREMENT

In your view which organizational challenges associated were faced in adoption of e-procurement at ZIMRA

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Benefits | More significant | Very significant | Significant | Less significant | Not significant |
| Lack of skills and knowledge |  |  |  |  |  |
| Lack of finances |  |  |  |  |  |
| Lack of top management support |  |  |  |  |  |
| Poor methods of detecting fraud in IT systems |  |  |  |  |  |
| Resistance to change |  |  |  |  |  |
| Firm’s size |  |  |  |  |  |
| Organisational capacity |  |  |  |  |  |

In your view which environmental challenges associated were faced in adoption of e-procurement at ZIMRA

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Benefits | More significant | Very significant | Significant | Less significant | Not significant |
| Government policy regulation |  |  |  |  |  |
| Poor data management system |  |  |  |  |  |
| Political influence in procurement |  |  |  |  |  |
| External information systems support |  |  |  |  |  |

In your view which management challenges associated were faced in adoption of e-procurement at ZIMRA

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Benefits | More significant | Very significant | Significant | Less significant | Not significant |
| Long procedures and bureaucracy |  |  |  |  |  |
| Fear of negative exposure in case of procurement scandal |  |  |  |  |  |
| Fear of losing control of organization |  |  |  |  |  |
| Lack of budget allocation |  |  |  |  |  |
| Lack of trust and poor technical design |  |  |  |  |  |
| Reluctance to adopt e-procurement |  |  |  |  |  |

In your view which technical challenges associated were faced in adoption of e-procurement at ZIMRA

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Benefits | More significant | Very significant | Significant | Less significant | Not significant |
| Inadequate ICT infrastructure and networking infrastructure |  |  |  |  |  |
| Lack of skilled personnel |  |  |  |  |  |
| Lack of compatibility |  |  |  |  |  |
| Unreliable internet connection |  |  |  |  |  |
| Language variability |  |  |  |  |  |
| Lack of tamper-proof software to use |  |  |  |  |  |

SECTION E: STRATEGIES TO EXPEDITE THE ADOPTION OF E-PROCUREMENT

In your opinion what recommendations resulting from the research study can be given to enhance the adoption of e-procurement in Zimbabwe’s parastatals?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Benefits | More significant | Very significant | Significant | Less significant | Not significant |
| Allocate sufficient budgets |  |  |  |  |  |
| Operate freely from political influence |  |  |  |  |  |
| Clear legal framework |  |  |  |  |  |
| Training and development of staff |  |  |  |  |  |
| Stakeholder involvement |  |  |  |  |  |
| Top management support |  |  |  |  |  |

THE END: THANK YOU!!!

Appendix 2: In-depth interview guide



Instructions to the respondent: please feel free to give your opinion and all information provided will be treated highest confidentiality.

1. What is your general comments on the progress being made in the implementation of e-procurement at ZIMRA?
2. Comment on the following factors which affect the adoption of e-procurement

(a). management factors

(b). Technical factors

©. Organisational factors

(d) Environmental factors

3. What do you think are major barriers in implementing e-procurement at ZIMRA?

4. Give your opinion on the benefits associated with implementation of e-procurement at ZIMRA

5. What do you think can be done to speed up the implementation of e-procurement at ZIMRA?

6. Any other comments on the implementation e-procurement at ZIMRA

THE END: THANK YOU