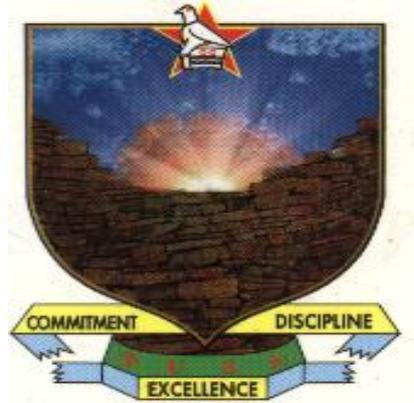


**BINDURA UNIVERSITY OF SCIENCE EDUCATION  
FACULTY OF COMMERCE  
DEPARTMENT OF INTELLIGENCE AND SECURITY STUDIES**



**IMPACTS OF INFORMATION SYSTEMS TECHNOLOGY ON AUDITING.  
A CASE STUDY DEAF ZIMBABWE TRUST (2015 – 2016)**

**BY  
TINASHE MUSHOHWE  
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**A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE  
REQUIREMENTS FOR THE BACHELOR OF COMMERCE HONOURS DEGREE  
IN FINANCIAL INTELLIGENCE OF BINDURA UNIVERSITY OF SCIENCE  
EDUCATION**

**RELEASE FORM**

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Dissertation Title **Impacts of information systems technology on auditing process in non-governmental organisations: A case study of Deaf Zimbabwe Trust**

Degree Title Bachelor of Commerce (Honours) in Financial Intelligence

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## APPROVAL FORM

The undersigned certify that they have supervised the student B1232793's dissertation entitled: **An evaluation of information systems technology security on auditing process in non-governmental organisations : A case study of Deaf Zimbabwe Trust** submitted in partial fulfilment of the requirements of the Bachelor of Commerce (Honours) Degree in Financial Intelligence of Bindura University of Science Education.

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## **DEDICATION**

This research project is dedicated to my late father Nevson Mushohwe and sister Sally Mushohwe.

## **ABSTRACT**

The main aim of this study was to assess the impacts of information systems technology on auditing process in non-governmental organisations (NGOs). Specifically the objectives were to examine the contributions of computerized accounting system to the effectiveness and efficiency of the auditing process, to examine the factors affecting effectiveness and efficiency of auditing process in computerized accounting system, to identify problems organisation faces in and to identify the problems encountered with auditing in computerized accounting system. The study was carried out at Deaf Zimbabwe Trust (DZT) with a sample size of 20 respondents who were purposely selected. Data was collected through questionnaires, observations and interviews. The findings of this study revealed that the contributions of computerized accounting system to the effectiveness and efficiency of the auditing process is moderate. The researcher recommended that the management should put much effort on training staffs to empower their skills and ability to work under computerized environment and the management should also emphasize on segregation of duties in order to make internal controls more effective.

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## DECLARATION FORM

I,..... solemnly declare that the information of this dissertation, prepared in partial fulfilment of the Bachelor of Commerce (Honours) Degree in Financial Intelligence and submitted to the Department of Intelligence and Security Studies, Faculty of Commerce at Bindura University of Science Education has not been presented, submitted or published in this nature or part. Previous works have been duly accredited and acknowledged properly.

.....  
...../...../.....

(Signature of Student)

(Date)

# CHAPTER I

## INTRODUCTION

### 1.0 Introduction

The research is an attempt to evaluate the impacts of information systems technology on auditing in Non-Governmental organization (NGOs) focusing on Deaf Zimbabwe Trust (DZT). This research project is set to define information systems technology and how the introduction of information systems technology has given rise to accounting fraud in non-governmental organizations. The chapter highlights the background to the study, statement of problem, research questions, research objectives, assumptions, delimitation and justification of the study, aim of the study and definition of terms.

### 1.1 Background of the study

DZT has over the past few years undergone a number of changes in which the company has seen itself being involved in adopting the use of information technology through the use of computerized techniques in their accounting and auditing procedures as they are considered to be cost effective and efficient (DZT Newsletter 2014).

The impact of information technology in business has grown in recent years and it has changed the audit process which has resulted in opportunities and challenges for auditors (Solomon and Trotman 2003). The audit profession is rapidly advancing in response to changes in the environment. It is also argued that auditors are struggling to maintain their identity and purpose as the organizations they audit undergo radical changes (Solomon et al (2003). As information technology changes occur more quickly auditors must keep pace with emerging technological changes and their impact on their organization's data processing

system as well as their own audit procedures Rezaee and Enstein (1998). The use of information technology in the organizations is increasingly becoming more complex such that auditors must embrace technology, understand it, and be able to audit effectively the process and use it as an audit tool. While the complexity of information technology makes auditing more challenging, it also provides an opportunity to streamline internal audit activities by designing and utilizing continuous computerized accounting systems controls. Training of computer skills for the internal audit staff would ensure information technology knowledge as an alternative to traditional manual audit techniques Hass et al (2006). Information technology and the internet, in particular, have opened new possibilities for non-governmental organizations just as it has for any other business and its customers (Hazman and Manian: Moon 2002).

Although the overall objective and scope of an audit does not change in a computerized environment, the use of information technology has extremely changed the mode and speed of processing and storage media of financial data and records Yang and Guan (2004). These changes have significantly inflated the organization and the procedures of the clients' accounting and internal control systems. Consequently, the reliability of computerized data and of the systems that process, maintain, and report these data are a major concern to auditors. Auditors evaluate the reliability of computer-generated data supporting financial statements and analyze specific programs and their outcomes. In addition, auditors examine the adequacy of controls in information systems and related operations to ensure system effectiveness Veerankutty (1996). Information technology auditing is the process of collecting and evaluating evidence to determine whether a computer system has been designed to maintain data integrity, safeguard assets, allow organizational goals to be achieved effectively, and use resources efficiently.

During the past years, numerous amounts of corporate accounting scandals have been in the headlines. Probably the most known ones have been the Enron case (2001 and 2008) and the Lehman Brothers case. Enron and their accounting firm Arthur Andersen systematically produced fraudulent financial reports and engaged in unethical accounting by misrepresenting earnings and hiding liabilities and debts Roger (2010). When the depth of the deception came out to the public, investors and creditors retreated, forcing the company into bankruptcy. It had filed the largest ever made in US history. The company regularly used accounting gimmicks at the end of each quarter to make its finances appear less shaky than they really

were. After the fall of Lehman Brothers and other banks followed and this is believed to be the beginning of the 2008 starting global financial crisis (Bloomberg Business Week 2009). One interesting fact is that most of these big companies gotten caught of fraud in financial reports have been audited by the big four auditing firms Price Water House Coopers, KPMG, Ernst and Young and Deloitte. This raises question on how it has been possible to scam the ones who should be there to reassure the reliability of the records.

Governments of both developed and developing countries have embraced information technology to improve the quality of public services increase public access to information and to energize more participation in public affairs (Becker 1998: Moon 2002). As computer technology has become sophisticated businesses have become progressively more reliant on computerized information systems to perform their operations and to process, maintain and report essential information. Besides the size of tasks and the command for timely and accurate information necessitate the use of information technology in non-governmental organization is essential.

According to DZT newsletter (2014) the introduction of formation technology at DZT in the year 2013 was important to the success of the organization but there was a risk that was being imposed on the auditing profession as the internal control system that is based on computerized business organizations are failing to give auditors sufficient reliance on the internal control system so that they can express their audit opinion. Gordon et al (2010) states that today's economic world it is vital for every business to introduce information systems technology to provide information and to keep pace with the market changes and also the growing dependence by most organizations on the use of information technology as it has proved to be cost effective and efficient.

## **1.2 Statement of the problem**

The movement of e-business tools and practices into non-governmental organization in recent years is changing the way the auditing procedures are done. The computerized accounting systems and information technology have become the backbone of almost every organization. As a result computerized accounting system audit is needed to provide assurance that systems adequately controlled, secured and functioning as intended (Petterson 2005). Computerized accounting systems ease auditing and have better access to required information such as

cheque numbers, payments and other transactions which help to reduce the time needed to provide this type of information and documentation during auditing. In recent years many organisations have started to adopt the computerized accounting systems due to its significance and to cope with technological changes. Therefore the aim of this study is to address the impacts of computerized accounting on auditing process in Zimbabwean non-governmental organizations particularly **DZT**.

### **1.3 Objectives of the study**

- To examine the contributions of computerized accounting systems to the effectiveness of the auditing process.
- To examine the factors affecting the effectiveness and efficiency of auditing process in computerized accounting system.
- To identify significant problems which an organization faces in a computerized system.
- To identify the problems encountered with auditing in computerized accounting system.

### **1.4 Research questions**

In order to examine the above problem, the study sought to answer the following questions:

- To what extent does computerized accounting system contribute to the effectiveness and efficiency of auditing process?
- What are the factors affecting effectiveness and efficiency of auditing process in computerized accounting system?
- What problems does an organization face in computerized accounting system?
- What are the problems encountered with auditing in computerized accounting system?

### **1.5 Significance of the study**

#### **1.5.1 To DZT**

The findings help come with recommendations on various ways in which the organization can improve the current information technology systems on auditing procedures due to the

increasing dependence on information technology to enhance the auditor express a true and fair view of the financial statements. The research also explored the weakness of the organization thereby providing a chance for the loop holes to be sealed and ensure the organization runs effectively.

### **1.5.2 To The University**

The research will assist other students at Bindura University of Science Education to make further researches on the topic as well as improve the present strategies of reducing the challenges. More so the research will provide literature to the university. The research will provide a platform for further research and it can be used as secondary data to be applied in other researches.

### **1.5.3 To The Researcher**

This paper will bring a sense of academic development and achievement to the researcher. Academically the study will benefit the researcher as a learning curve in partial fulfillment of the requirements of the Bachelor of Commerce Honours in Financial Intelligence. Furthermore at the end the researcher will have gained knowledge on how non-governmental organizations minimize the risks associated with the introduction of information technology.

## **1.6 Assumptions**

- The researcher assumes that DZT provided true information about information systems technology and its security problems in relation to auditing procedures.
- The information that was used for this research was reliable, accurate and unbiased and was obtained from relevant authors, persons and publications.
- Issues investigation remained constant throughout the period of this research.

## **1.7 Delimitation**

The research study was confined to **DZT**. The study was carried out at DZT as a representative of Zimbabwean NGOs. The research was carried out in the year 2015 and 2015 while gathering of information dates back to 2012 to allow comparisons and better judgment of the problem under study. The participants in the research comprised of 20

respondents drawn within the departments of the organization namely auditing department, administration and finance, programs department and monitoring and evaluation department.

### **1.8 Limitations**

- The access of information was denied to some extent due to the confidentiality policy. As result accessing information that is considered confidential was rather difficult to solicit. To mitigate the challenge a letter confirming that the findings held are confidential and are used for academic purpose only was used.
- Some facts about information technology are better obtained from experts of the field. One particular problem in obtaining data from these experts is that they are mostly inaccessible. Most of the time they are out of their offices and when they are in, they are said to be busy with very important assignments. To mitigate this challenge experts were conducted a week before the meeting in order for them to confirm their availability.

### **1.9 Definition of key terms**

- Information Technology- is responsible for designing, implementing and maintaining many of controls over an organization's business process. IT has a critical role in collecting, processing and storing data that is summarized and reported in financial statements (Cannon and Crowe 2004).
- Information Systems- the technology infrastructure and applications together with the data and information that maybe recorded, stored, processed shared, retrieved or transmitted. (Chartered Institute of Management Accountants study pack, 2002)
- Auditing Procedure- this relates to the manner in which an organization manages process its transactions.
- Computer Aided Auditing Techniques (CAATs) - refers to the processes that are used to aid in auditing or general management of a business organization that cannot operate solely without computers or information systems. For the proper functioning of these they have to be completed by information technology. ( ACCA Module 1996).

## **1.10 Summary**

The research foundation is laid by the introductory chapter which will look at the introduction, background, statement of the problem, objectives, research question, limitations, delimitations and assumptions. In addition the definition of key terms was also covered in this chapter. The next chapter looks at literature review to the study.

## **CHAPTER II**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

This chapter will explore theoretical framework, empirical evidence, gap analysis and end up with the summary of the study. Literature review is a process that involves locating, reading and evaluating reports of research as well as reports of casual observations and opinions that are related to the research project.

#### **2.1 Purpose of Literature Review**

According to Leedy (1992:71) the more you know about the peripheral investigation suitable to your own study the more knowledgeable you approach your own research problem. In any field of study the views of other writers surrounding the subject matter are very important as it helps the researcher to develop an argument making analysis and drawing conclusions on the topic under review. This chapter will deal with the reviewing of appropriate books, journals and reports so as to find the true facts and points on the background information of the research project.

A computerized accounting system involves the computerization of accounting information systems which is established in order to facilitate decision making. These are associated with a numbers of benefits like speed of carrying out routine transactions, timeliness, quick analysis, accuracy and reporting. Effective and efficient information flow enhances managerial decision-making thereby increasing the firm's ability to achieve corporate and business strategy objectives (Manson, McCartney, and Sherer, 2001)

#### **2.2 Conceptual Framework**

According to Munasinghe (1989) clearly states the implication of introducing Information systems technology based accounting procedures to third world countries like Zimbabwe has

resulted in negative effects on the auditing profession. Munasinghe (1989) states that computers and information technology provide a unique opportunity for third world business organizations to accelerate their developments efforts.

Taylor (1994) opined that information technology is the acquisition, processing, storage and dissemination of vocal, pictorial, textual and numeric information by a microelectronics based combination of computing and telecommunications. Planning for Information Technology needs will enable organizations to achieve their organizational goals and objectives. The past decade has seen most organizations adapt to the use of Information Technologies in their operations this has greatly affected auditing as a profession as they have to change the way they plan and execute their audits to suit the information technology changes in most organizations. Information Technology has impacted auditing in a two way process that is organizations have to prepare their records in such a way that they incorporate the changes brought by information technology and it has impacted auditors as a giver of assurance services.

## **2.3 Theoretical Framework**

### **2.3.1 Open system theory**

The open systems theory was opined by Katz and Kahn (1978). The underlying assumption of the theory is that business success is highly attributed to the business's ability to manage internal and external environments. Businesses are usually structured and organized according to their environment, problems and opportunities they are encountering. Katz and Kahn (1978) go on to express the idea that organizations are mainly against two classes of environmental influences. It is the specific and the general influences that have to do with the on-going operation of each and every organization. Katz and Kahn (1978) further highlighted that companies have little or no control over the general environment unlike the specific environment. The economic environment usually facilitates business economic performance. This theory is therefore applicable to this study because auditing procedures followed in NGOs to include DZT are affected by the internal and external environment. Thus auditors at DZT are not empowered to carry out a full range of assessment due to significant restrictions on the scope of their work.

### **2.3.2 Positive Accounting Theory**

Positive accounting theory was developed by Watts and Zimmerman in 1978 and 1986 which seek to predict and explain why managers elect to adopt particular accounting methods in preference to others. Positive theory is concerned with explanation and prediction (what does or will happen) and is grounded in empirical data (Ryan et al, 2002). Since they are grounded in empirical data they appear to offer accounting researchers the prospects they offer valid criticisms of management accounting practice. This theory draws on a wide range of theoretical frameworks to address financial management accounting issues. Different research methods and methodologies are not viewed as competing but are rather used together to provide a variety of insights into a wide range of management accounting research questions (Ryan et al 2002). This theory is therefore relevant to this particular study as managers select accounting methods to be used at DZT which results in problem of inconsistency with the auditing framework and differs with other NGOs.

The ACCA Module 1996 illustrates the audit implications of the computerization of client's records. The auditor when auditing should consider the concentration of controls in the computer department, lack of primary records, encoded data loss of audit trail and data needed for audit purposes may be overwritten. This information points out clearly that they is need for organizations such as DZT to point towards the rising need for specialist skill to be developed by the auditors so that they can identify the weaknesses in the control system of the organization they are auditing. Most computerized organizations are characterized with a loss of audit trail thus the auditor may not be able to trace a transaction from the source documents to the financial statements, the auditor should therefore during the planning stage introduce Computer Aided Auditing Techniques (CAATs) that will assist in obtaining appropriate evidence of the occurrence of certain activities.

Lee (1993) the management information system audit is designed to check all the controls that have been implemented by those charged with the governance of the entity. A good way to audit the Information System is to trace a typical transaction through the entire system. This information shows that like any other organization there is need for DZT to have policies and procedures to check that internal controls have been implemented. The auditor might enter erroneous data in the system and test the safeguards used to alert the staff about the error. They are certain characteristics that exist in business entities that necessitate the use

of CAATS in order to assist in gathering information that will enable the auditor to express an opinion. Marx et al (2004) lists the characteristics that would require CAATS these are given below:

- No input documents (no audit trail)
- Multiple functions are performed by single programs
- Dependence on Computerized Controls
- Complexity

### **2.3.3 Effect of Computerized Accounting Systems on the Quality of Financial Reports**

Theoretically it is expected that a computerized accounting system would result to a quality financial reports. Through studies done by Carol (2002) it is easy to do accounting functions using computerized accounting systems. Posting transactions to the ledger the principle of double entry can largely be automated when done through the use of computerized accounting system. In 2010 Gordon and colleagues outlined best practice recommendations for annual reports in the non-profit sector completeness, accessibility and transparency in financial reporting, full disclosure and relevance. McBride (2000) stated that managers cannot easily satisfy statutory and donor reporting requirements such as profit and loss account, balance sheet and customized reporting without using computerized accounting systems. With the system in place this can be done quickly and with less effort. Computerized accounting systems ease auditing and have better access to required information such as cheque numbers, payments, and other transactions which help to reduce the time needed to provide this type of information and documentation during auditing.

According to European Union audit in 2003, it was noted that organizations are not enjoying the benefit of computerization of accounting system as they have continued to be inaccurate due to increased number of interruptions due to system failure or breakdown and untimeliness with its reliability left in question. In other studies, Computerization saves time on transaction hence leading to quality of financial reporting for instance timely, accurate and reliable information can be generated Lewis (1999).

## 2.4 Empirical Evidence

With the introduction of information technology and with the increase in the number of transactions that are being processed by organizations. Organizations are now using computers to process data especially accounting systems. Brien (2000) suggests that Information Technology has resulted in the introduction of Accounting Information Systems for transaction processing and financial reporting. Accounting procedures have changed through the introduction of six main accounting systems which cover the whole accounting which include computer based order, processing, computer based inventory control, computer based counts receivable systems, computer based accounts payable systems, payroll systems and general ledger.

Wessel et al (2003) clearly states that they are threats in the business organization that exist because of the implementation of information technology in an organization. When auditors are carrying out an audit they have to assess the risks that the organization faces and develop their audit plan with an understanding of the risks as the risks may affect the quality of decisions that they are relying on for determining their audit opinion. As highlighted by a research done by Philip Pyburn (2010) when organizations introduce Information technology within their business organizations it has implications on the company in three ways which is basically how the Information technology is applied within the business organization The research therefore identified the implications on the business organization such as data processing systems this is the application of information technology for operational and control activities .An example of Data Processing Systems application for operational purposes is the processing of accounting information using Pastel or Accpac. Office Support systems these are mainly used for processing information examples include spread sheets, word processing, databases and telecoms. Decision Support Systems these are systems designed to support complex decision making in the organization.

According to Lay and Still (1997) the best approach that auditors can use when auditing in computer environments is to audit “through the computer”. Auditing through the computer involves a detailed examination of all the procedures involved when a company is processing its transactions using its computer systems. Lay and Still (1997) also suggests that by thoroughly understanding the computer environment the auditor can determine whether any reliance can be placed on the control environment of the entity. When performing audits, they

should be executed in accordance with the professional framework for an auditor which is basically in accordance with the International Auditing Standards. The International auditing standards are prepared by the Audit Professional Board the standards provide a guideline as to how each audit should be carried out be it in a computerized environment or in an environment that is not computerized.

In a study by Amveko (2011) in which she aimed to identify the impact of computerized accounting information systems on financial reporting in Kampala, the financial reports generated 16 countries conform to some of the quality attributes of good financial information. This was emphasized by a positive correlation of response on quality attributes of timeliness and accuracy though it was on a low scale her findings were that that computerized accounting system actually have an influence on the quality of financial reports for publication purposes. Computerized accounting systems appear to have significant influence on the quality of financial reports from the implementation of computerized accounting systems on organizations and this has significant effects on the quality of financial reports of NGOs.

Otieno and Oima (2013) studied “The Effect of Computerized Accounting Systems on Audit Risk Management in Public Enterprises” the study reflected that only 36% of the institutions reported that they had a regular program or equivalent in place while another 24% were in the process of implementation of the computerized system. More than 40% of the participating institutions lacked computerized audit implementation plan. The findings evidenced Information technology affects the generation of transactions, the processing of these transactions, the storage and communication of information and the accounting and internal control system. The computerization will affect the nature, scope and timing of audit procedures.

## **2.5 Gap Analysis**

The research will mainly be focused on the impacts and security of information systems technology on auditing principles and procedures in the context of Zimbabwe and the researcher used DZT as a case study which was a major drawback on previous researches previously conducted. In recent years there has been a lot of focus on the introduction of information technology while ignoring the impacts of the technology. The current study

accommodated this area where the researcher regarded it as of importance in giving the recommendation to the organization.

## **2.6 Summary**

This chapter brings into picture some authors that once researched information technology and computer assisted auditing techniques. It therefore serves as a guide to the researcher on the areas to concentrate on as well as giving room for other areas to venture into which might not have been considered.

## CHAPTER III

### RESEARCH METHODOLOGY

#### 3.0 Introduction

This chapter will cover the research design, the population to be analyzed, the sample design and justification. A precise description and explanation of the methods to be employed will be done in this chapter. It involves an explanation of how the interviews and questionnaires are to be administered.

#### 3.1 Research Design

The research adopted the case study approach. Robson (2002) defines a case study as a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence. Both primary and secondary data was collected and analyzed in the research.

It also refers to the planning of the approaches to solve a research problem by having a master plan specifying the methods and procedures for collecting and analyzing information Zikmund (2003). To solve the research problem the researcher used a descriptive research design. Berry (2004) suggested that a descriptive research design is used to obtain information concerning the current status of the phenomena to describe what exist with respect to conditions in the situation.

Cooper et al (2005) defined a research design as the plan and structure of investigation of information so as to obtain answers to research questions. The researcher therefore employed a descriptive research design in this study. The qualitative approach was used to gather DZT's views and opinions on the impacts of information technology on auditing.

### **3.1.1 Descriptive Research Design**

This is the research design allows the researcher to collect data that is descriptive in nature comprising of systematic collection of data across a sample of cases and statistical analysis of findings. This means human judgment can be used by the researcher to reach conclusions on the research findings.

#### **Advantages**

- The researcher adopted a descriptive research design because it gives an opportunity for questions such as who, why and how to be answered. This means that detailed information was gathered for the research.
- The researcher adopted descriptive research design because the data collected was descriptive in nature.

#### **Disadvantage**

- Descriptive research design requires the researcher to present high level of knowledge and skills of analyzing so as to make a detailed analysis on the collected data hence requires a long period of time to complete the research.

To overcome this problem the researcher showed high level of understanding and acquired better skills required through reading so as to make detailed analysis.

### **3.2 Target Population**

The population is the aggregate of all elements under examination. Wegner (2001) defines population as the collection of all observations of a random variable under study that one is trying to draw conclusions in practice. Harper (1991) suggests that the population refers to a group of people or items about which the researcher wants to obtain information. It is the group that the researcher is interested in studying and to which the findings of the research will be generalized. The populations selected in this study are employees and managers at DZT comprising of 20 respondents.

### **3.3 Sampling Techniques**

According to Fowler (2000) it is not always practical to get data on every observation in the population and as a result a subset all observations (sample) is gathered on the random variable. A sample is a sub set of the population on which observations are made or measurements taken. It is a group of people or items taken from the population for

examination. A sample must be drawn in such a way that it is representative of the population.

The value of information obtained through research depends on how well a sample represents the total population. Van der Walt et al (1996) states that a sample that is not representative of the population may not give a true picture of the population and may have problems of validity and reliability. There are two types of sampling techniques which are probability sampling that gives each element of the population an equal chance of being selected for the study and non-probability sampling which does not give each element an equal chance of being selected to the sample (Wegner 2001).

### **3.3.1 Simple random sampling**

Each member was allocated a number and simple random sampling without replacement was used until the required number of participants per stratum was achieved. Questionnaires were distributed by hand and follow ups made to individuals. This was done in order to gather information from various levels of responsibilities (stratum). Participants were encouraged to return the questionnaires within a period of 7 days. The researcher adopted the simple random sampling technique because it gives all participants an equal chance to be selected as part of the respondents.

### **3.3.2 Stratified random sampling**

Stratified sampling technique can be employed where the population embraces distinct characteristics or features. In this case DZT employees are classified by departments. This method involves organizing the units in the population into strata using the common characteristics of activities performed. Stratified random sampling minimizing sample selection bias and ensuring certain segments of the population are not overrepresented or underrepresented.

### 3.4 Sample Size

| <b>RESPONDENTS</b>                    | <b>NUMBER OF RESPONDENTS</b> |
|---------------------------------------|------------------------------|
| Monitoring and Evaluation Department  | 2                            |
| Programs Department                   | 4                            |
| Administration and Finance Department | 4                            |
| Auditing Department                   | 10                           |
| Total                                 | <b>20</b>                    |

**Source: Primary Data (2015)**

A sample size of 20 respondents filled the questionnaires. The researcher selected respondents according to their willingness to provide information and filling in the questionnaires as well as their knowhow on information technology. This number was considered large enough to avoid small sample bias which was the risk that the researcher may base his findings on small samples that may not be representative of the entire population. Stratified sampling is effective where variability within strata are minimized that is in the case of DZT in examining the impacts of information systems technology on auditing.

### 3.4 Data Collection Instruments

Kotler (2000) identifies four major technique tools for collecting primary data that is: Observation, focus groups, surveys through questionnaires and personal interviews. The researcher used questionnaires and personal interviews as the technique tools.

#### 3.4.1 Questionnaires

Leedy (1980) states that a questionnaire is a common place instrument for observing data beyond the physical reach of the observer. Questionnaires was designed using dichotomous (yes/no) type of answers and open ended questions. The researcher distributed questionnaire to all respondents reachable so as to maximize level of reliability and gathering of much information on the particular aspects under study.

### **Justification**

The researcher discovered that questionnaires are cheap and easier to administer in limited time. They also offer respondents the opportunity to respond to questions during their own time outside the daily pressure of work. It was also discovered that they offer anonymity and privacy which encourages honest answers. Data provided by questionnaires is easy to analyze and interpret.

### **3.5 Data Collection Procedure**

The researcher collected data from the auditing department through the use of the interview technique. Brink (1996) defines an interview as a method of data collection in which an interviewer obtains responses from the subject in a face-to-face encounter. The researcher used this method because it ascertains values, attitude, beliefs and experiences from management. It helps interviewer to observe non-verbal behaviour, thereby assessing the respondents' motives.

### **Justification**

- Clarity ensures that respondents fully understand.
- Interviews have great flexibility in terms of sampling and special observations.
- Interviews can expose areas that the respondent is unwilling to discuss and inconsistencies in responses
- They provide the opportunity to persuade for answers.

### **3.6 Testing Validity and Reliability**

Weiner (2007) defined validity as the degree to which an instrument, measurement approach succeeds in quantifying and describing what it was designed to measure. Long (2000) agreed that reliability is the extent to which measures are objective and therefore yields consistent results. The researcher is going to test validity by a way of analyzing the demands of the questionnaires relation to answers from respondents. When the answers are in line with the questionnaire data will be considered valid. Saunders et al (2003) highlighted four types of reliability tests. The internal reliability test, inter-rate, parallel form and test re-test reliability which the researcher preferred to use. To ensure reliability assessment has to be repeated that

is the first and the second test. When all tests make no variance the researcher's information will be considered reliable.

### **3.7 Pilot study**

Birn (2000) states that a pilot study is a small scale dress rehearsal that proceeds as if it were the actual study except for the fact that the subjects who will participate in the actual study are not used. Before the actual implementation of the research and data collection, the researcher conducted a pilot test of the questionnaire at **DZT**. Respondents were given questionnaires to fill and asked to return within a week. Following suggestions made by respondents and a thorough analysis of the five copies of the questionnaire, improvements were made on the questionnaire by having questions redesigned to come up with the final questionnaire that was distributed to the entire sample.

### **3.8 Data Presentation and Analysis**

This section presented and interpreted the findings of the research aiming to establish whether the data to be collected answered all questions the researcher had at the beginning of the research. According to Aakker (1998) data analysis consists of applying statistical techniques to a database in order to make inferences about variables. Data presentation will entail the presentation of the data that would be obtained from the research. Data presentation was in the form of answering research questions through literature and tables. Data analysis entail the evaluation of the data presented ascertain the effectiveness of the research question and its impact. The researcher used graphs, charts and tables to present data collection for the purpose of the study.

### **3.9 Ethical issues**

In respect of ethical research standards and to observe the ethical requirements when conducting the study the researcher told the participants that participation was voluntary and if they did not prefer taking part they were freely exempted.

The interviews also provided an ethical dilemma as the researcher noted that some participants proved to be uncomfortable with the information exchange because they feared for the information provided. However the researcher calmed this situation by reassuring the

respondents that the information would be used for academic purposes only and in some cases referred participants to his academic supervisor from Bindura University of Science Education.

### **3.10 Summary**

This chapter outlines the methods that are to be used to collect and present data and the various reasons for their use. A descriptive design will be chosen to gather information relating to information technology impacts on auditing while a quantitative approach will be used to analyze the relationship between the variables in question. Primary and secondary data will be used in data collection while tables, graphs and charts are to be used for data presentation.

## CHAPTER IV

### DATA PRESENTATION, ANALYSIS AND DISCUSSION

#### 4.0 Introduction

This chapter deals with the presentation, interpretation and analysis of the research findings found from the data collected from **DZT** on the impacts of information system technology on the auditing of non-governmental organisation. The findings of this research are highlighted as given by the respondents who were under study pertaining to the research questionnaires and interviews which were carried out by the researcher. The research questions are analysed and presented separately.

#### 4.1 Data Responses

##### 4.1.1 Questionnaire response rate

The researcher designed a questionnaire which was sent out to **DZT** and the response rate is illustrated below.

**Table 1: Response rate to the questionnaires N=20**

| <b>Item<br/>(questionnaire)</b> | <b>Frequency<br/>(Possible)</b> | <b>Frequency<br/>(Actual)</b> | <b>Percentage (%)</b> |
|---------------------------------|---------------------------------|-------------------------------|-----------------------|
| Response                        | 20                              | 18                            | 90                    |
| Non-response                    | 0                               | 2                             | 10                    |
| <b>Total</b>                    | <b>20</b>                       | <b>20</b>                     | <b>100</b>            |

**Source: Primary data (2015)**

From the data shown in Table 1, it can be drawn that the response rate was quite impressive with 90% of the respondents being able to return the questionnaires to the researcher although 10% of them did not return the questionnaires sent to them due to unforeseen reasons. This

shows that respondents were positively cooperating to the research and enough information was indeed collected to support the research. However in compensating for the 10% the researcher used interviews as his main and counter research instrument.

**Table 2: Response rate for interviews N=10**

| <b>Respondents</b>         | <b>Number of targeted for interviews</b> | <b>Number of interviews Conducted</b> | <b>% rate of respondents</b> |
|----------------------------|--|---------------------------------------|------------------------------|
| Auditing Department        | 5  | 4                                     | 80                           |
| Administration and finance | 2  | 1                                     | 50                           |
| Programs Department        | 1  | 1                                     | 100                          |
| Monitoring and Evaluation  | 2  | 2                                     | 100                          |
| <b>Total</b>               | <b>10</b>                                | <b>8</b>                              | <b>80</b>                    |

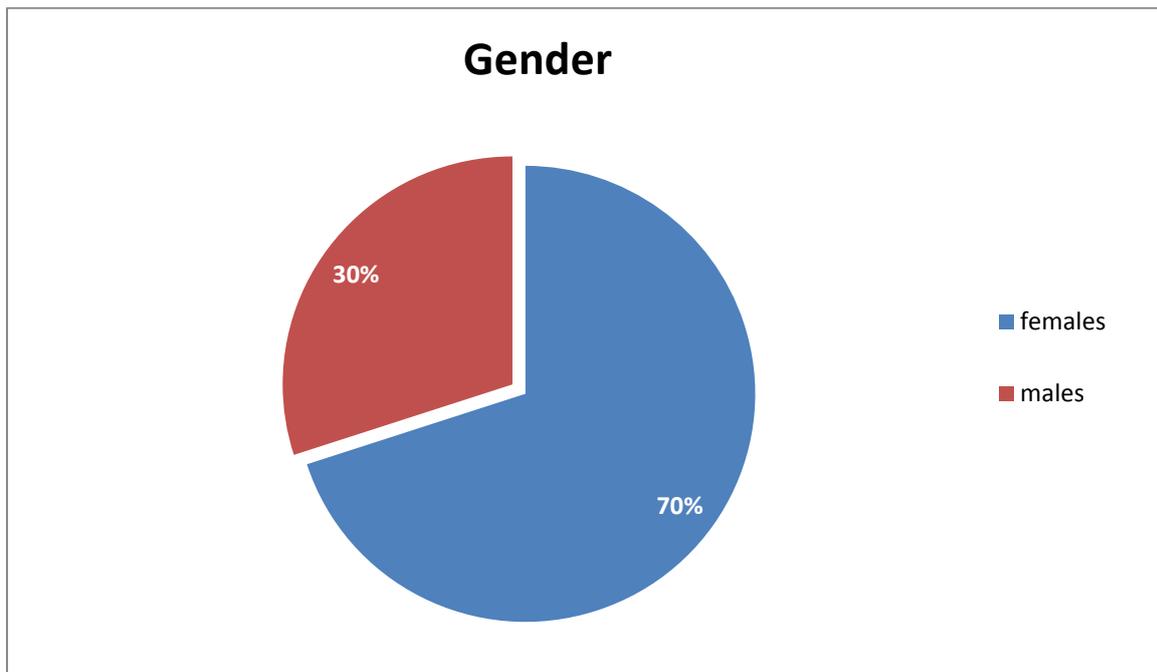
**Source: Primary data (2015)**

From the data shown in Table 2 above the initial plan was to interview a total of ten respondents but only eight were interviewed from the targeted sample. Technically this means 80% success rate of the scheduled interviews and a failure of 20%. Therefore the majority of the participants were interviewed. Information gathered through interviews was used in relation to data found by administering questionnaires to aid in data recommendation and conclusions.

#### **4.2 Demographic information of the respondents**

Demographic data entails personal attributes of the respondents with respect to age, gender, length of service and educational qualifications drawn from the questionnaires.

#### 4.2.1 Gender



Source: primary data (2015)

**Figure 1: The distribution of sample according to gender**

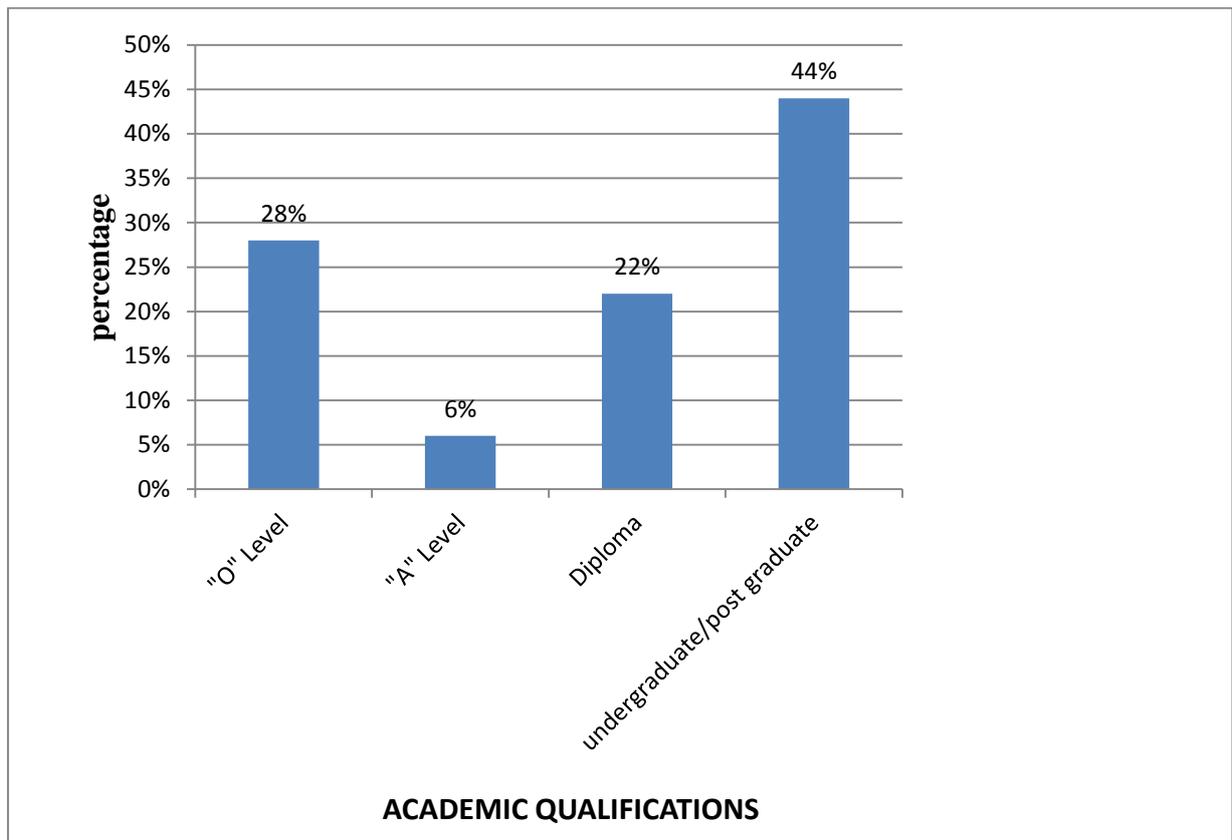
According to figure 1, the results revealed that 70% of the respondents were females whilst 30% were males. This is because **DZT** is mainly dominated by women due to its concern on disability issues. The gender of the respondents in this study was crucial as men and women generally tend to view differently the aspects information systems technology on auditing. Hence the gendered nature of respondents has implications on the results of the researcher.

**Table 3: Academic qualifications**

| Level of Education | Frequency | Percentage (%) |
|--------------------|-----------|----------------|
| “O” Level          | 5         | 28             |
| “A” Level          | 1         | 6              |
| Diploma            | 4         | 22             |
| Degree             | 8         | 44             |
| Total              | 18        | 100%           |

Source: Primary data (2015)

#### 4.2.2 Respondents academic qualifications

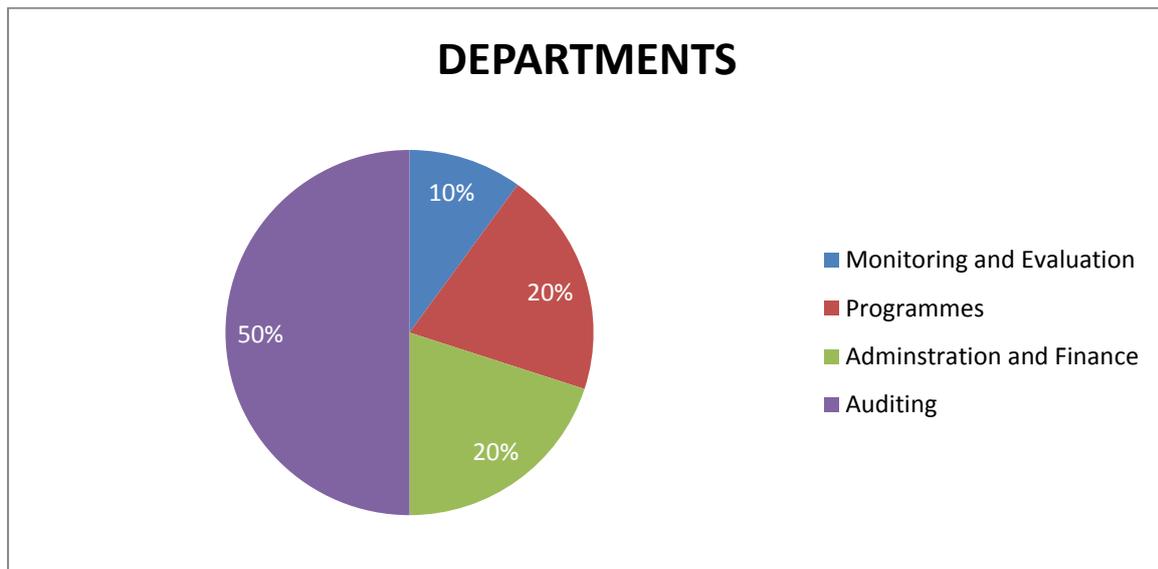


Source: Primary Data (2015)

**Figure 2: distribution of sample according to academic qualifications**

Figure 2 above shows that slightly half 44% of the respondents were undergraduate holders, followed by 'O' level constituting 28%. The holders of diplomas had 22%. Lastly 'A' level with one participant contributing to 6% of the total response. The organisation has an educated labour force as illustrated above.

### 4.2.3 Department of specialization



Source: Primary data (2015)

**Figure 3: Showing the departments of specialization**

From figure 3 above it can be seen that 50% respondents operated from the auditing department. This shows that these respondents had access to financial information in which most of the internal data collected was indeed in support of the research thereby gave informed decisions. The other 10% was from the monitoring and evaluation department. Whilst the remaining 40% from programmes department and administration and finance which comprised of 20% respectively.

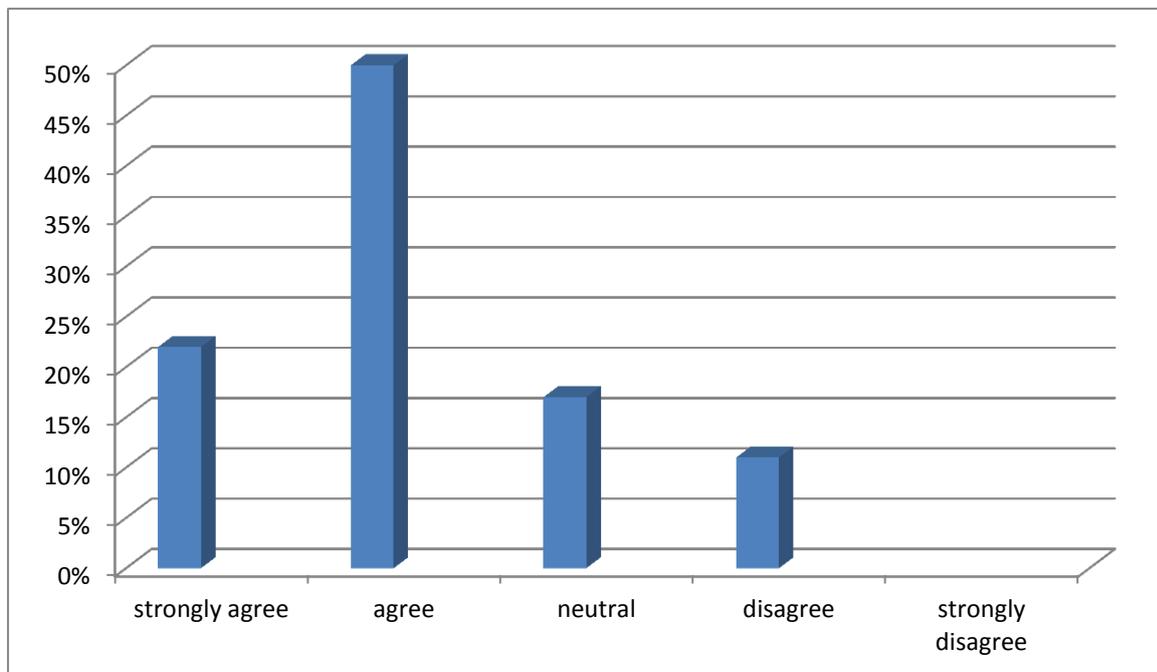
**Table 4: Have auditing procedures changed due the introduction of information systems**

| Responses    | Frequency | Percentage |
|--------------|-----------|------------|
| SA           | 7         | 36         |
| A            | 4         | 23         |
| N            | 4         | 23         |
| D            | 2         | 12         |
| SD           | 1         | 6          |
| <b>Total</b> | <b>18</b> | <b>100</b> |

Source: Primary Data (2015)

From the study 59% of the respondents opined that auditing procedures has changed at DZT this was supported by the observations Brien (2003) who postulated that accounting procedures have changed through six main accounting system processing, computer based inventory control, computer based accounts received, computer based account payable systems and general ledger. However 18% of the respondents were indifferent this was also arrived at by Amveko (2011) in which she aimed to identify the impact of computerized accounting information systems on financial reporting in Kampala, the financial reports generated 16 countries conform to some of the quality attributes of good financial information. The neutral group was shown by 23% of the respondents who were not aware of the auditing procedures of the organisation.

#### 4.2.4 Computerization of the organisation has affected the computer security systems?



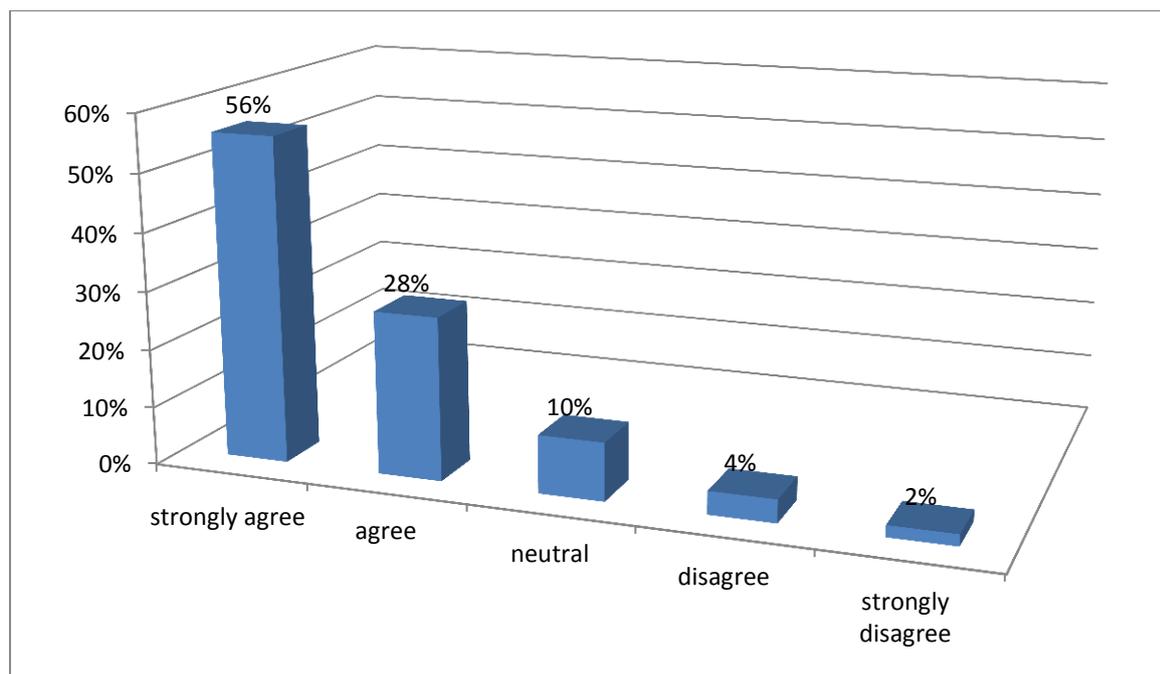
**Source: Primary data (2015)**

**Figure 4**

Figure 4 above shows that 22% strongly agree and 50% agreeing to the fact that computerization of the organisation has affected the computer security system. 17% are not sure as they highlight neutral and 11% disagree with the idea of computerization affecting the computerised system as evidenced with no respondent strongly disagreeing to the fact that computerization of the organisation affecting the computer security system. Results show that information systems technology is not operating up to the expected standard. This is in

agreement with Otieno and Oima (2013) studied ‘The Effect of Computerized Accounting Systems on Audit Risk Management in Public Enterprises’ the study reflected that only 36% of the institutions reported that they had a regular program or equivalent in place while another 24% were in the process of implementation of the computerized system. More than 40% of the participating institutions lacked computerized audit implementation plan

#### 4.2.5 Do Auditors need skills and expertise when they are auditing in computerised environments



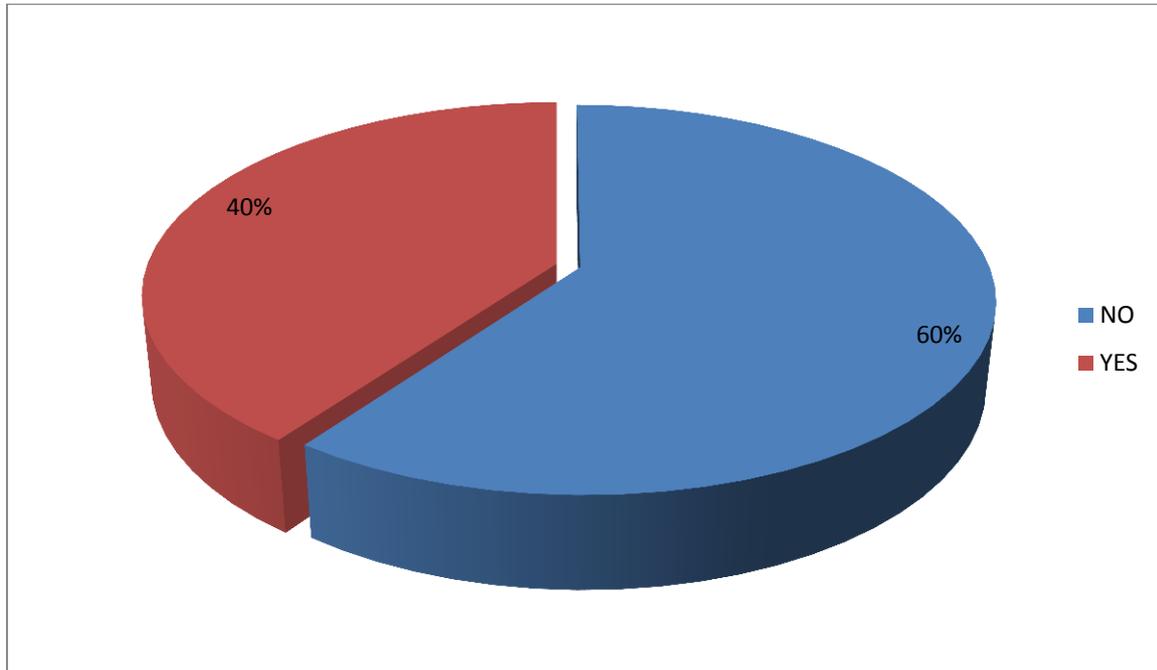
Source: primary data (2015)

Figure 5

Figure 5 above shows that 56% of the respondents strongly agreed that auditors need skill and expertise whilst 28% agreed but without much conviction. While 10% of the respondents remained neutral 4% of the respondents had to disagree whilst 2% strongly disagree to the notion that auditors need skills and expertise. The accumulation of those who strongly agreed to 56% and those who simply agreed to 28% was enough for the researcher to validate the finding and affirm that auditors need skills and expertise when auditing computerised environments. This was in agreement with the findings by Amveko (2011) in which she aimed to identify the impact of computerized accounting information systems on financial reporting the financial reports generated 16 countries conform to some of the quality attributes of good financial information. This was emphasized by a positive correlation of

response on quality attributes of timeliness and accuracy though it was on a low scale her findings were that that computerized accounting system actually have an influence on the quality of financial reports for publication purposes

#### 4.3 Have you at one point involved in auditing procedures of the organisation.

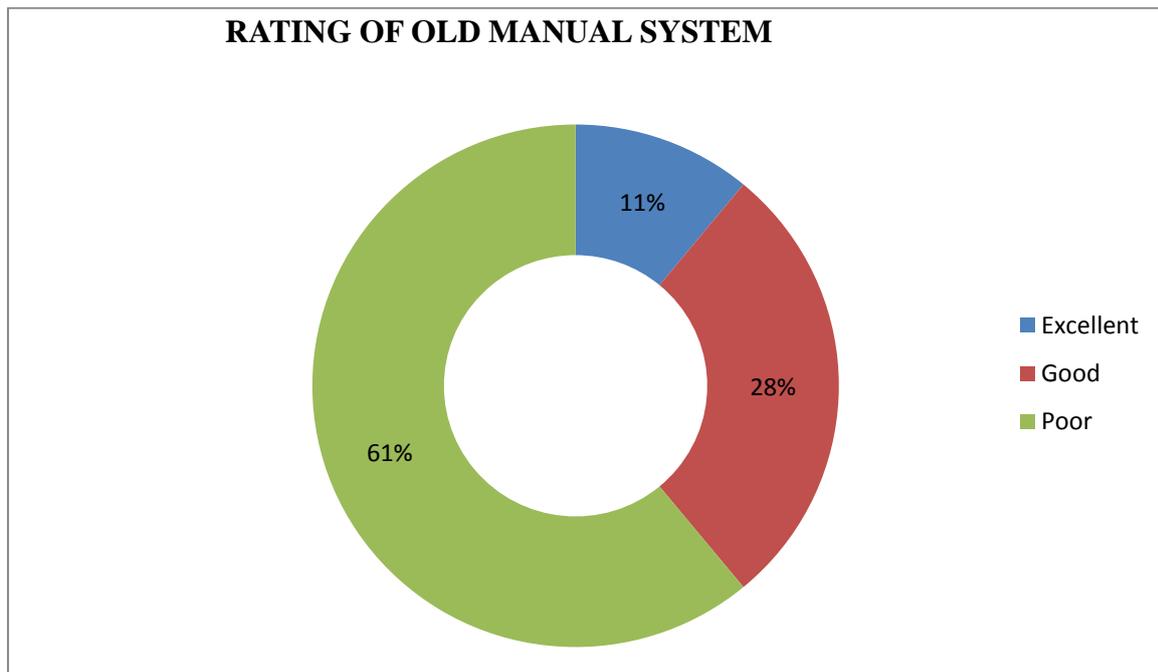


Source: primary data (2015)

**Figure 6**

Figure 6 above depicts that the majority constituting 60% has at one point been involved in the internal audit of the organisation since the majority of the respondents were form the auditing department. While 40% have not been involved in the auditing procedures at **DZT** which was a resulted of the other departments which includes the monitoring and evaluation department, administration and finance department and programs department.

#### 4.3.1 How do you rate your old manual system?

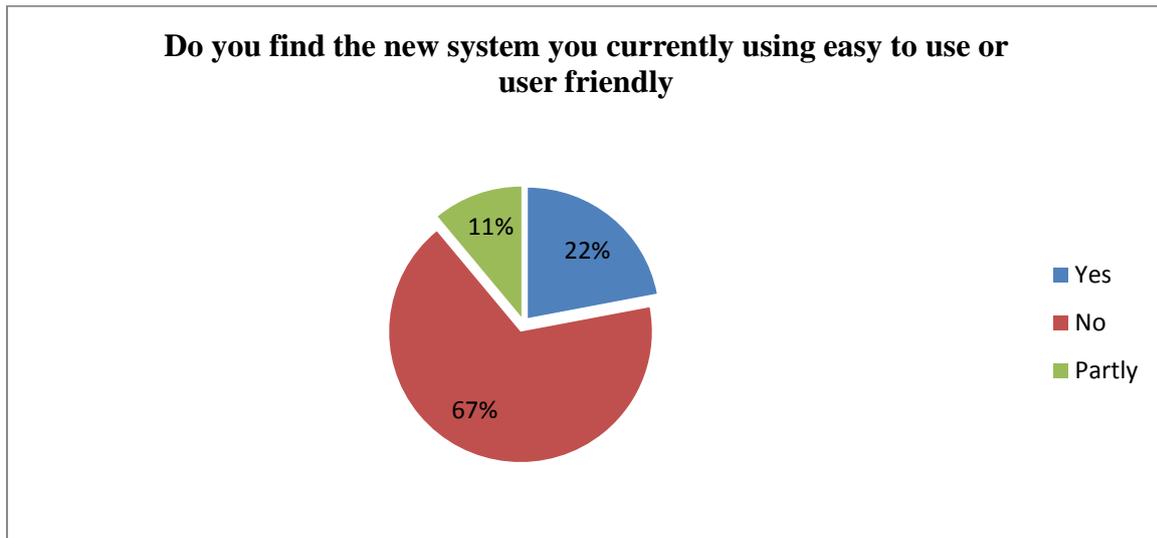


Source: primary data (2015)

**Figure 7**

Figure 7 above shows that 61% of the respondents postulated that the old manual system was ineffective resulting in the auditing process taking long to complete this was poor due to the global changes within the auditing procedures. Only 11% of the respondents highlighted that the manual system was excellent due to fear that they might lose their jobs because of lack of the necessary skills required to audit in a computerized environment. 28% viewed the old system to be good. The findings of this research slightly differs with Lay and Still (1997) who opined that by thoroughly understanding the computer environment the auditor can determine whether any reliance can be placed on the control environment of the entity. When performing audits they should be executed in accordance with the professional framework for an auditor which is basically in accordance with the International Auditing Standards

#### 4.3.2 Do you find the new system you currently using easy to use or user friendly

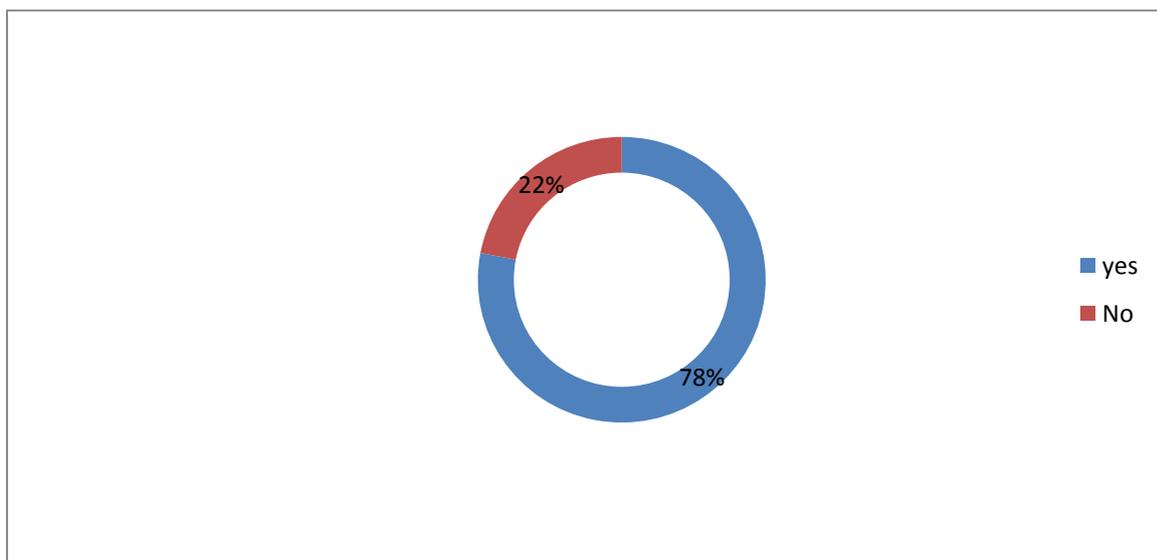


**Fig 8**

**Source: primary data (2015)**

Prior to figure 4.3 the above findings it was discovered that the majority of 67% viewed the information systems technology is not user friendly whilst 22% perceived the system not to be friendly due to its complexity in nature. 11% of the respondents in this study assert that the system is partly user friendly and must be fully adopted by **DZT**.

#### 4.3.3 Are you satisfied with current auditing procedures?



**Source: primary data (2015)**

**Figure 9**

The information in figure 9 above can be illustrated on a chart showing the percentage of respondents who are satisfied and dissatisfied with the current auditing procedures. The diagram shows that majority constituting 78% are satisfied with the current auditing procedures at **DZT** while 22% expressed that they were not satisfied with auditing procedures. This implies that computer aided audit technique is a step worth taking from the old manual and traditional way of auditing.

#### **4.4 Summary**

This chapter dealt with the presentation and analysis of data gathered during the research. Analysis was made and conclusions reached from the findings. Pie charts, graphs and tables were used for the presentation of data. The conclusions discussed in the next chapter are entirely dependent on the findings that have been presented in this chapter.

## CHAPTER V

### RECOMMENDATIONS AND CONCLUSION

#### 5.0 Introduction

This chapter gives the summary recommendations and conclusions based on the research objectives understudy, the research problem and the assumptions of the research. The chapter provides the conclusions through the information gathered and findings made during the research.

#### 5.1 Summary of the findings

The objective of this research was to identify the impacts that Information Technology has on the auditing procedures at **DZT**. The underlying motive was to identify how auditors are pacing with the constant changes in Information Technology in the global market. The following were the research objectives of the study:

- To examine the contributions of computerized accounting systems to the effectiveness of the auditing process.
- To examine the factors affecting the effectiveness and efficiency of auditing process in computerized accounting system.
- To identify significant problems which an organization faces in a computerized system.
- To identify the problems encountered with auditing in computerized accounting system.

The literature review sought to explain how Information systems technology has affected the auditing procedures of other non-governmental organizations. Previous studies on the subject matter were also reviewed in the empirical evidence of the literature review. Questionnaires

and interviews were used to collect data. Simple random sampling and stratified random sampling were used to come up with a sample of 18 employees as respondents under study.

The findings of this study revealed that the contribution of information technology has to the effectiveness and efficiency of the auditing process is moderate at **DZT**. Furthermore the findings indicated that **DZT** encountered the following problems in the adoption of CAATs which include high training costs, competent personnel needs, the introduction of viruses, the loss of audit trail, lack of segregation of duties and the potential for observing errors is less.

The research established that the auditors required skills to be acquired for information technology systems usage and systems database requirements in order to counter some of the problems found to be associated with the introduction and application of CAATs to **DZT**. This means that it can be reasonably concluded that CAATs can help in the transparency of financial reports within non-governmental organizations because it is platform where fraudulent and misappropriated practices are easily detected.

The findings revealed that main drawback brought about by computers on the auditing profession is the lack of audit trail and in order to combat this documentation of the system must be fully maintained and updated whenever any changes occur from the literature that the researcher reviewed it is highly recommended that the system documentation covers the following:

- Operations Documentation should be documented in full detail giving clear explanations of how the operations are being executed.
- User documentation should include operating instructions and manuals that are clear and have sufficient detail to assist users on how to operate the system.

Finally, the results showed that the challenge of paperless audit trail, changing technology, control and security concerns, process oriented-not results oriented, complexity of the practice, professional integration, sources of errors and inconsistency and personal computer environment are the problems encountered with auditing in computerized accounting systems.

## **5.2 Conclusion**

The auditing profession has been greatly affected by the changes that are occurring due to the introduction of Information Technology. However the trends brought about by Information

Technology were mainly advantageous to auditors as computers came along with many advantages that assisted the auditor in performing his work efficiently. Due to the rapid changes occurring auditors were however failing to keep pace with these changes as they required more skills and the organizations are failing to train their employees frequently in line with the changes occurring. The auditing profession was therefore drastically affected by Information Technology. Therefore this study concludes that the auditing process in computerized accounting system is not effective and efficient particularly **DZT**.

### **5.3 Recommendations**

From the point of view of the researcher the following were recommended:

- Management at **DZT** needs to put some more effort on training of the staffs so as to make the system user friendly and to cope with the technology's development. This will help to increase efficiency and also improve the entire system. Since technology changes every day hence volatile there is a need for auditors to have a continuous learning.
- Files and any important information must be protected against damages by creating backups in case of software and hardware disaster. Removable discs and cartridge can also be used to store other documents which may assist as the audit trail.
- Antivirus programs must be updated more often and all computers should be scanned daily so that the management can be sure of safety of all files and other important information.
- If **DZT** sees that the audit staff does not have the necessary skills to cope with the auditing process they should seek specialist services from external organizations that will assist the auditors in performing an audit.
- Furthermore auditors and IT specialists have to keep in touch with ever changing IT environments so as to keep pace with the organization system changes. Therefore management should find ways to cope up with the ever changing environment.

#### **5.4 Suggestion for future studies**

It is imagined that a similar research focusing on the auditing profession be employed on a broader base including auditors operating in First World Countries where the Information Technology changes originate from. Also due to the rapid changes in Information Technology further studies should be carried out as current findings will be quickly outdated. Future researchers could also look mainly into the implications of Information Technology on the auditing profession. Furthermore the conclusion was drawn based on very small number of sample size then the researcher recommends that future studies should increase the sample size.

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## **APPENDIX 1: QUESTIONNAIRE**

**Bindura University of Science Education**

**Faculty of Commerce**

**P Bag. 2010**

**Bindura**

**Zimbabwe**

**Tel: +263 271 6372-2, +263 271 7531-2, +263 271 7621-4**

**To Whom It May Concern**

**REF: RESEARCH ASSISTANCE**

My name is Tinashe Mushohwe (B1232793) a student at Bindura University of Science Education, majoring in Financial Intelligence in the Faculty of Commerce. I am carrying out a research project on “Impacts of information systems technology security system on auditing of non-governmental organizations.” I therefore sincerely ask you to provide me with information that will assist me in my research. Information collected during this research is for academic use only and it will be treated as confidential. All information will be valued and recognized, no view or opinion will be regarded as wrong. You will not be probed to write your name anywhere on this questionnaire as it is anonymous.

Your assistance and time taken to fill in this questionnaire is greatly appreciated. If there are any queries, kindly contact the undersigned at email address [Mushohwe4@gmail.com](mailto:Mushohwe4@gmail.com) or cell **0775 426 167 / 0773 524 162**

Yours Sincerely

**Mushohwe Tinashe. B**

# QUESTIONNAIRE

## INSTRUCTIONS

- 1) Please tick where applicable in the spaces provided.
- 2) Read each questions carefully and answer each question truthfully and honestly.

1. Sex : Male [ ] Female [ ]
2. Age group : below 25 [ ] 26-35 [ ] 36-45 [ ] 46-55 [ ] 56+ [ ]
3. Level of education : "O" Level [ ] "A" Level [ ] Diploma [ ] Degree [ ] Masters [ ]
4. For how long have you been working at Deaf Zimbabwe Trust?  
0-5yrs [ ] 6-10yrs [ ] above 10yrs [ ]

5. Which department do you operate in? Tick appropriate ✓

- Auditing [ ]
- Programs [ ]
- Monitoring and Evaluation [ ]
- Administration and Finance [ ]

### Auditing aspects

6. What do you know about information systems technology in auditing?

.....  
.....  
.....  
.....

7. Have auditing procedures changed due to the introduction of information systems?

Tick your answer.

|                |     |                   |     |
|----------------|-----|-------------------|-----|
| Strongly agree | [ ] | Disagree          | [ ] |
| Agree          | [ ] | Strongly disagree | [ ] |
| Neutral        | [ ] |                   |     |

8. Computerization of the organization has affected the computer security systems?

|                |     |                   |     |
|----------------|-----|-------------------|-----|
| Strongly agree | [ ] | Disagree          | [ ] |
| Agree          | [ ] | Strongly disagree | [ ] |
| Neutral        | [ ] |                   |     |

9. Do auditors need skills and expertise when they are auditing in computerized environments

|                |     |                   |     |
|----------------|-----|-------------------|-----|
| Strongly agree | [ ] | Disagree          | [ ] |
| Agree          | [ ] | Strongly disagree | [ ] |
| Neutral        | [ ] |                   |     |

10. Have you at one point been involved in the auditing procedure of the organisation?

Yes [ ]                  No [ ]

11. How do you rate the old/manual system?

Excellent [ ]                  Good [ ]                  Poor [ ]

Explain your answer

.....

.....

.....

.....

12. Do you find the new system you are currently using easy to use or user friendly?

Yes [ ]                      No [ ]                      Partly [ ]

Explain your answer

.....  
.....  
.....  
.....

13. Does the new system improves in the discharge of your duties

Yes [ ]                      No [ ]                      Partly [ ]

14. In your opinion, what do you think is making you resist to change (in using the new accounting system?)

Lack of commitment [ ]              Lack of proper training [ ]              Other [ ]

If    other    specify

.....  
.....  
.....  
.....  
.....

15. Are you satisfied with the current auditing procedures? Yes [ ] No [ ]

Comments and suggestions

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.....  
.....  
.....  
.....  
.....

\*\*\*\*\*Thank you for your co-operation in this research\*\*\*\*\*

## **APPENDIX 2: INTERVIEW GUIDE**

### **Interview Guide**

- 1) What is information systems technology?
- 2) What skills and knowledge are necessary to the auditor when auditing in a computerized environment?
- 3) How does the computerization of the organization affect the auditing procedures?
- 4) What are the internal and external factors affecting the security of information technology systems at Deaf Zimbabwe Trust?
- 5) To what extent is the organisation able to adjust its information systems control to the changing environment?
- 6) What improvements can be made to the current security measures on information systems technology
- 7) How has Deaf Zimbabwe Trust ensured that information system technology has made the auditor's opinion reflect a true and fair view of the organization?

**\*\*\*\*\* Thank you \*\*\*\*\***

### **APPENDIX 3: APPROVAL LETTER**

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Yours Sincerely

**Mushohwe Tinashe. B**