A COMPARATIVE ANALYSIS ON THE BENEFITS OF USING COMPUTER ASSISTED AUDIT TOOLS AND TECHNIQUES OVER MANUAL SYSTEMS IN THE AUDIT PROFESSION. (A CASE OF HARARE CITY COUNCIL AND CHAMINUKA RURAL DISTRICT COUNCIL)

By

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DEDICATION

This project is dedicated to my parents Mr and Mrs Mandinyenya. This project is a result of your support, your love and guidance.
ABSTRACT

The study was conducted on a comparative analysis on the benefits of using Computer Assisted Audit Tools and Techniques over manual systems in the audit profession. It had a population of 26 and the researcher used convenience sampling. The study was guided by the following objectives, to define CAATTs, to determine the role of CAATTs in the audit profession, to assess the benefits which were brought as a result of CAATTs in auditing, to identify the challenges which local authorities face on the implementation of CAATTs and to make recommendations on the adoption of CAATTs. Data was collected using questionnaires and interviews. From the study it can be concluded that, Computer Assisted Audit Tools and Techniques are very effective tools to the audit profession. The research indicated that the introduction of Computer Assisted Audit Tools and Techniques have helped in improving audit quality. The research revealed that the use of Computer Assisted Audit Tools and Techniques have many benefits to the audit profession than the use of manual systems. The benefits of Computer Assisted Audit Tools and Techniques include that, it saves more time, they improve the audit quality and they reduce audit cost. The research concluded that the use of Computer Assisted Audit Tools and Techniques have many roles which include, identifying exceptions, performing calculations, analyse and sort data and perform checks and balances. The reason of non-adoption by other local authorities includes lack of management support, technical complexity, non-corporation from other departments and inability to present the benefits of CAATTs to the management and other departments. Whilst the audit department have faced these challenges, it was observed that they have never presented the issues to the management. From these conclusions it is recommended that auditors in local authorities should be trained on CAATTs’ adoption, the issue of CAATTs should be presented to the management and the internal auditors at Chaminuka Rural District Council should embrace the new era and adapt to change.
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CHAPTER I

INTRODUCTION

1.0 Introduction.

This chapter covers the background to the study, the statement of the problem demonstrating the problems which drove the need for research. Other crucial aspects such as research objective and research questions were also covered in the opening episode. The section has also covered the limitations, delimitations, definition of terms and a summary.

1.1 Background of the study.

Byrnes, AL-Awadhi, Gullvist B, Liburd, Teeter, Waren and Vasarhelyi (2012), states that formal auditing practice has existed for a short period of time, although audit procedures have been used for many years. They also claim that emphasis has historically been placed on periodic, backward-looking approach by which key events and activities were often identified long after their occurrence or simply undetected. However due to the developments and technologies there is a swing from the historical paradigm to a more upbeat approach.

The Industrial Revolution and the resulting growth in business activity resulted in the widespread adoption of auditing methods (Byrnes et al 2012). According to Byrnes et al, (2012), companies began to notice the need for the mechanisms and methods that could be used to detect fraud and financial reporting as corporations began to take part in the stock market. They also state that these issues have encouraged increased use of accounting and audit mechanisms. On the other hand, it was after the 1929 stock market crash that auditing became an obligatory process in the United States.
In line with the above, automated accounting systems began to appear during the 1950s, but this does not dissuade manual audit procedures from being used. In 1954 UNIVAC was unveiled as one of the first operational electronic accounting systems in the United States (Byrnes et al, 2012). However, auditors only began to consider auditing seriously in the early 1960s and this was facilitated by the two specific events. The first event was that of Felix's book that reads Electronic Data Processing and Auditing and the second event is that of the International Business Machines whereby the IBM 360 was released in 1963, a device that made computing more affordable than ever (Byrnes et al, 2012). These two developments stimulated a major shift in terms of how accounting activities were able to be conducted in the future. They also facilitated the movement from traditional manual auditing to the use of computers in auditing.

According to Byrnes et al, (2012), Sarbanes Oxley Act caused the accounting discipline to pay more attention during the course of the audit to address fraud. An example is the Statement of Auditing Standards No 99, Consideration of Fraud in a Financial Statement Audit requiring auditors to design audit procedures that provide reasonable assurance that fraud can be detected.

Chaminuka Rural District Council’s Accounting department shifted from the use of manual accounting systems to the use of PASTEL Accounting Package in 2016. However this did not dissuade the Internal Audit Department to continue resorting to manual audit procedures. They only use computers for data storing, typing and sending mails.
1.2 Statement of the problem

The researcher employed manual audit procedures during the attachment period from 2017-2018 at Chaminuka Rural District Council and could not help but noticed that these procedures are very tedious and that it took a long time to find information and to verify the correctness of balances. While other auditors in local authorities have recognized Computer Assisted Audit Tools and Techniques’ knack to improve efficiency and effectiveness some auditors believe that they do not. Despite the benefits which are brought by Computer Assisted Audit Tools and Techniques, Chaminuka Rural district Council have not yet implemented the use of Computer Assisted Audit Tools and Techniques. This research seeks to compare the two types of auditing, which are traditional manual audit and Computer Assisted Audit Tools and Techniques highlighting the benefits of computerized audit.

1.3 Research objectives

The research was guided by the following objectives:

- To determine the role of CAATTs in the audit profession
- To assess the benefits which were brought to the internal audit department by the shift from manual systems to the adoption of CAATTs at Harare City Council.
- To identify the challenges which are being faced by local authorities in the implementation of CAATTs.
- To make recommendations on the adoption of CAATTs.

1.4 Research Questions

- Which roles does CAATTs have in the audit profession?
- What are the benefits which were brought to the internal audit department by the shift from manual systems to the adoption of CAATTs at Harare City Council?
What are the challenges to the implementation of CAATTs by auditors in local authorities?

What can be recommended on the adoption of CAATTs?

1.5 Assumptions

- Respondents will be willing to cooperate.
- Harare city council and Chaminuka Rural District Council will grant the researcher the permission to carry out the research.
- The research method used was able to address the issues.
- Resources were readily available during the time of the study.
- The research was carried out and finished during the stipulated time frame.
- The study can be generalised.

1.6 Significance of the study

To CRDC

The research will enable Chaminuka rural district to know the benefits of using Computer Assisted Audit Tools and Techniques in auditing. The researcher hopes that the results of this research can be able to precisely show the significant of Computer Assisted Audit Tools and Techniques in this technological era. It will be able to outline the benefits which will make difference to the audit profession. The results of this study will extend on to benefiting other local authorities who have not yet implemented the use of Computer Assisted Audit Tools and Techniques.

To the University

The research is going to be a provision of literature for future researches. It will also add knowledge to both the researcher and other students who may want to further studies in the area of auditing and computerisation in the audit profession.
To the researcher

The researcher will benefit experience on carrying out a detailed research hence it will also serve a good foundation for future work. The researcher will also benefit from the increased knowledge.

1.7 Delimitations

This research only focused on the benefits of using Computer Assisted Audit Tools and Techniques over the use of manual systems in the audit profession. The study is confined to Chaminuka Rural District Council and was addressed to the audit department. The respondents were from Harare City Council and the question goes to the audit department. Many rural district councils have not yet adopted the use of Computer Assisted Audit Tools and Techniques and Harare is one of the city Councils that have adopted the use of Computer Assisted Audit Tools and Techniques. The research covers the period from 2018-2019. The researcher used convenience sampling.

1.8 Limitations

Financial Constraints

Financial resources were a major problem to the researcher. The researcher faced a huge challenge in finding money for stationery and internet sources to gather information. Shortages of money for stationery have caused the researcher to scale down the sample.

However, the student was able to get financial assistance from the family and friends and was able to sail through. The student was also able to continue with her studies with the aid from the University’s wifi.
**Geographical Constraints**

The researcher resides in Shamva and has to make enough trips to gather information in Harare. Financial constraints made it difficult for the researcher to make enough trips.

The researcher intends to minimise the trips between Shamva and Harare by communicating with them through the phone.

**1.9 Definition of terms**

**CAATTs**

Lovata (2000) states that the term CAATTs can be applied to a variety of tools that facilitate Sarbanes-Oxley testing, analysis of financial statements, ongoing monitoring and production of audit work.

**Internal Auditing**

Davies and Aston (2011) define Internal Auditing as an independent appraisal function established by management of an organisation for the review of the internal control system as a service to the organisation.

**Audit Software**

According to ACCA (2011), Audit software is a computer program designed to carry out tests of control and or substantive procedures. Such program may be classified as packaged programs which consist of pre-prepared generalized programs used by auditor and are not client specific.
1.10 Organisation of the study

The study has five chapters. Chapter one outlines the background of the research, statement of the problem, objectives of the study, research questions to be used, assumptions guiding the study, delimitations, limitations and the definition of terms.

Chapter two will focus on literature review. It will focus on both theoretical and empirical literature review. Theories relating to Computer Assisted Audit Tools and Techniques will be presented and previous studies on Computer Assisted Audit Tools and Techniques will be presented and the justification of the present research.

Chapter three will focus on research methodology. It will show how the research was conducted, the research design, research instruments, data collection procedures and data analysis and presentation.

Chapter four will present the findings of the study and their presentation. The findings and analysis will be directed towards addressing the objectives and answering the research questions.

Chapter five will focus on conclusions and recommendations. Major findings of the research will be presented.

1.11 Summary

The above chapter had been looking at the background of the study, statement of the problem, objectives of the study, research questions to be used, assumptions guiding the study, delimitation, limitations and definition of terms.
CHAPTER II

LITERATURE REVIEW

2.0 Introduction

This chapter reviews relevant literature to enhance the study. In this chapter Computer Assisted Audit Tools and Techniques literature is present to review the current state of knowledge and relevant literature on theoretical and practical aspects of Computer Assisted Audit Tools and Techniques (CAATTs). This study will emphasise more on the roles of Computer Assisted Audit Tools and Techniques, their benefits and factors which influence their adoption. The Chapter’s outline is guided by the research questions.

2.1 Conceptual Framework

2.1.1 Roles of Computer Assisted Tools and Techniques

Computer Assisted Audit Tools and Techniques can be defined as any use of technology to assist with audit completion (Pedrosa and Costa 2012). These are good software examples that aim to help auditors analyze data, explore and study separate data sets in the process of auditing. Pedrosa and Costa (2012) further claim that Computer Assisted Audit Tools and Techniques is an innovative approach to data analysis, primarily because it allows the manipulation of very large data records without significant costs.

To make auditing in this technological world more efficient and effective, Audit Standards suggest these tools should be adopted. SAS No 106 suggests that computer-assisted audit tools and techniques can be used to enhance audit effectiveness by recalculating audit client information (AICPA 2006) as cited in Janvrin (2008). Neele
(2016) has shown that Computer Assisted Audit Tools and Techniques can be classified into three categories namely, audit software, test data and other techniques which are embedded audit module, parallel stimulation and generalized audit software.

Debrecency et al, (2003) suggests that GAS is the most frequently used software by auditors. VanBaren (2017) supports this saying that generalized audit software is used for routine audit procedures in many companies. He further asserts that, based on the information used, Generalized Audit Software performs file routine, uses different calculations and prints reporting. Standard audits are performed by analysing sample information from a company’s records (Van Baren 2017). Random information is chosen and analysed since investigating all information is too time consuming.

GAS may also conduct missing sequence tests, statistical analyzes and calculations (Debrecency et al, 2003). Generalized Audit Software can help auditors detect mistakes in financial statements and achieve the overall audit goals of validity, completeness, ownership, valuation, accuracy, classification and disclosure of system outputs (Ahmi and Kent, 2012). According to Braun and Davis (2003) the examples of Generalised Audit Software include Audit Command Language (ACL) and Interactive Data Extraction and Analysis (IDEA).

2.1.1.1 Interactive Data Extraction and Analysis

According to Newman (2002) IDEA stands for Interactive Data Extraction and Analysis. It is a PC-based file interrogation tool for auditors, accountants, researchers and IT personnel to use. He also claims that IDEA analyzes data in many ways and allows data to be extracted, sampled and manipulated in fields to identify errors, problems, specific problems and trends. Below are IDEA's detailed roles according to Newman (2000):
Identifying exceptions

It is possible to use exception testing to identify unusual or strange items (Newman, 2000). These may simply be large items or where there is no correlation between two pieces of information on an item, e.g. pay rate and pay grade. Many information fields can also be checked for permissible values such as standard fees (Newman, 2000).

Checking calculations

IDEA is excellent in proving calculations according to Newman's (2000). Using the Field Manipulation option, calculations can be checked or new calculations created by adding a calculated field to the database. Extraction option can be used to copy the miscalculations to a new database according to (Newman 2000).

Cross matching data between systems

One of the common ways to test an item's validity is to check it against some other information according to Newman (2000). An example would be to check employees' addresses or bank details against those account payable files to see if any employees are also suppliers. These tests are performed by importing files and then using the function of joining databases.

Testing for gaps and duplicates

Newman (2000) states that IDEA can be used to test for completeness. These tests can include the testing of gaps or missing items in a numeric sequence using the Gap Detection Function. He further on asserts that it is a fast way in identifying breaks in series of check numbers or inventory tag numbers. Newman (2002) goes on to say that, IDEA can search for duplicate records in a database based on one or up to eight fields using the duplicate function. This can be effective in certain circumstances such as testing for duplicate payments to suppliers.
2.1.1.2 Audit Command Language

**Fraud detection**

Bourke and Peursem (2004) suggested that Audit Command Language is useful in the detection of fraud. They further asserts that Audit Command Language maintain statistical analysis is also a powerful and effective method of detecting fraud in an Organisation. Some specific statistical data analysis techniques that have proven their effectiveness in detecting fraud are mentioned below.

- Calculation of statistical parameters such as averages, standard deviations, highest and lowest values which are used to identify statistical anomalies.
- Classifications to find patterns and associations to find patterns and associations among group data.
- Stratifications of numeric values to identify unusual and outlying values. With the use of Computer Assisted Audit Tools and Techniques auditors can easily check every transaction, a capability identified by the oxymoron 100% sampling. When considering the presence of fraud the capability of verifying 00% of certain transactions, instead of a sample selection only automatically increases the likelihood of detecting fraudulent financial statements.

2.1.2 The traditional method of auditing/manual auditing

Manual auditing entails an agreement between the auditor and the auditee that typically conducts an audit engagement with a risk assessment and the formulation of an audit plan that outlines the audit's scope and objectives (Byrnes *et al* 2012). Auditors collect and analyze audit evidence and form opinions on internal controls and the reliability of management information. At the engagement conclusion auditors present a formal report expressing their opinion.

Then, when manually auditing auditors rely on physical inputs and outputs from automated devices, and do not concern themselves with how processing actually takes place with the transactions according to Byrnes *et al*, (2012). This can be called a computer audit that treats a computer as a black box.
2.1.3 Benefits of Computer Assisted Audit Tools and Techniques over the traditional manner of auditing.

Computer Assisted Audit Tools and Techniques have many benefits to the audit profession compared to manual systems. Speed and accuracy is one of the advantages of Computer Assisted Audit Tools and Techniques, according to Lacoma (2019). He says that if an auditor can use a computer program to run through financial statements and compile data and figures then the work can be done very quickly compared to relying only slightly on computers. Audit programs also have valuable checks and balances that not only detect calculation of errors in business books but also mismatched item entries and potential regulatory issues. Contrary, manual auditing is prone to many errors. According to Thomason (2019), errors can be quite frequent in manual accounting systems.

Lanza (1998) cited in (Byrnes et al, 2012) argues that the use of computer-assisted audit tools and techniques is associated with low costs rather than with manual audit systems. He also claims that the introduction of computer-assisted audit tools and techniques facilitates procedures for data extraction, sorting and analysis. These programs require little training; have no limit on file size. These programs require little training, have no file size limitations, provide detailed audit logs for use as paperwork documentation, and enable audit-specified reports to be created that can be applied to current and future data sets. There are high costs associated with manual auditing and significant delays in time, according to (Byrnes et al, 2012). They argue that Computer Assisted Audit Tools and Techniques should be used to replace manual audit activities because of their many benefits to the audit profession.

According to Will and Brodie (2006) saving time for thinking is probably the greatest benefit of Computer Assisted Audit Tools and Techniques. Coderre (2004) supports this saying that the use of Computer Assisted Audit Tools and Techniques saves more time. Unlike manual auditing the use of Computer Assisted Audit Tools and Techniques eliminates the need to understand the details of the system being audited.
before proceeding with the actual audit. This result in saving time for auditors and they will be able to start the process without any time lost.

Computers can do many tasks better, faster and easier than a person can perform manually. Byrnes et al, (2012) suggests that sorting, searching, performing repetitive calculations, aging and many others are ideally suited to automated tools. Some of the audit work which took weeks with manual auditing can be finished within minutes with a computer. On the other hand, Breitmeyer (2015) argues that manual systems are putting pressure on people in all details to be correct. It takes more effort and physical space to keep track of paper documents, to find information and to keep details secure.

2.1.4 Weaknesses of Computer Assisted Audit Tools and Techniques

- **Distortion of data**

Computer Assisted Audit Tools and Techniques have their own weaknesses. Puttick (2011) states that Computer Assisted Audit Tools and Techniques might distort data under audit hence the auditors should make sure that the data is sufficiently backed up in case data is lost and corrupted during the audit.

- **Adaptability and Training Issues**

Lacoma (2019) states that adaptability and training issues is another weakness of Computer Assisted Audit Tools and Techniques. There are high costs in choosing a new program and in the instance that the software is out of date or is not designed to perform a particular purpose.

- **Very costly to make alterations**

Computer Assisted Audit Tools and Techniques are costly to set up; hence Internal Auditors will need to be trained on how to operate these tools effectively. If there are any changes in an organisation’s systems, it is very costly to make the necessary alterations to the CAATTs as stipulated by Cobler (2011).
2.1.5 What are the challenges to the implementation of Computer Assisted Audit Tools and Techniques?

**Technical Complexity**

Technical complexity is one of the challenges that auditors may face when attempting to implement computer-assisted audit tools and techniques. Mahzan and Lymer (ND) argue that the biggest challenge in implementing computer-assisted auditing tools and techniques is to solve technical problems such as preparation of data for interrogation and analysis. They further claim that it may not be possible for a typical accounting auditor to download data from the host system. This requires someone with knowledge and skills in Information Technology.

**Cost of hardware and software**

The cost of hardware and software is another challenge that auditors may face when implementing Computer Assisted Audit Tools and Techniques. Due to the availability of cheaper versions of Computer Assisted Audit Tools and Techniques cost consideration may no longer pose the same challenges according to Mahzan and Lymer (ND).

**Attitude by potential users**

Potential users’ attitude can be a barrier to the implementation of Computer Assisted Audit Tools and Techniques. Management can be positive about Computer Assisted Audit Tools and Techniques adoption whilst auditors may be the ones not willing to change the way audit is performed (Mahzan and Lymer ND).
2.2 Theoretical framework

2.2.1 The Agency theory

The agency theory as one of the internal auditing theories is also mostly used in researches relation to auditing. This research used the Agency Theory to depict that CAATTs are the only tools which enables independent reporting as well as the independent of the auditor in this technological era. The agency theory outlines the relationship or the dependency between an agent and a principal according to Gaturu and Ngahu (2015). It can also be postulated as the practice whereby productive resources owned by one person or group are managed by another person or group of people as stated by Millichamp and Taylor (2008) cited in Gaturu and Ngahu (2015). The agency theory suggests that managers and directors are supposed to act in the best interests of the owners. Contrary the agents have been alleged to act in their own interest rather than on behalf of the shareholders hence causing the foundation of the audit profession according to Millichamp and Taylor (2008) cited in (Gaturu and Ngahu 2015).

Auditors as independent agents are supposed to safeguard the interests of the owners through reporting on the correspondence between the information given and established criteria. In certain scenarios the independence of the auditor may be compromised e.g. they may be bribed hence there is need for proper systems so that the independence of the auditor is not compromised. With the use of CAATTs the agents are said to be more independent and this will improve their quality of reporting (Widuri and Sari 2017). The use of Computer Assisted Audit Tools and Techniques enables the auditor to act in the best interest of the Organisation rather than the best of one’s self in the sense that the auditor may have access to information without reliance on the client (Hylas and Ashton 2006)

2.3 Empirical Evidence

One of the related researches is that of Widuri and Sari (2017). They carried out a research on, “Exploring the use of Computer Assisted Audit Tools and Techniques
and its impact to the transparency and accountability of financial statements”. They mainly focused on the use of Generalized Audit Software (GAS) in improving transparency and accountability of financial report. The research’s findings were in Indonesia and interviews were conducted with auditors in listed companies. The research used Agency Theory and Technology Acceptance Model (TAM) as underpinning theories. The research’s results indicated that Generalized Audit Software is not helping all the participants in producing a transparent and accountable financial report. Also the researcher found that the company’s internal condition and individual characteristics of internal auditor are the factors inhibiting the use of GAS.

Another research is that of Mansour (2016). He carried out a study on, “Factors affecting the adoption of Computer Assisted Audit Tools and Techniques in Auditing Process: findings from Jordan”. He clearly shows that despite the efforts of auditing professional bodies to help stimulating the application of contemporary audit technologies among audit firms to cope with the rapid growth in information technology usage among business organisations, the extent to which Jordanian external auditors and alongside the world’s trend have accepted Computer Assisted Audit Tools and Techniques remains fairly low. This study employed UTAUT model to explore this lack of CAATs’ usage in Jordan and try to answer to what factors may affect their adoption. The results showed that both auditor`s performance expectancy and firm’s facilitating conditions were the factors that influence adoption of these tools. Social influences and Effort expectancy at the other spectrum may not play such roles.

Neele (2016) carried a similar research on, “The effects of Computer Assisted Audit Techniques on the performance of audit firms in Port Harcourt”. The main objective of this study was to examine the relationship between significant relationship between usage of computer assisted audit techniques and performance expectation in Nigeria. Hypothesis was set forth and tested using multiple regress output. The data collected from the questionnaire were analysed using relevant descriptive statistics diagnostic tests, augmented dickey-fuller and multiple regressions. The result revealed that performance expectancy, effort expectancy, facilitating conditions and social
influence were positively associated at (0.05) to the usage of computer assisted audit techniques by accounting firms. The syllabus of accounting programmers for professional and tertiary institutions should be reviewed to include courses in computer accounting information system audit; relevant professional accountancy bodies in Nigeria should include course in computer inform at/on systems and audit as part of their training programmes and professional accountants should be made to appreciate the relevance of computer in the 21st century business environment in the provision of relevant accounting services for the sole aim of satisfying their clients and also audit firms need to increase their organizational and technical support to encourage the use of CAATs.

Another similar research was carried by Zainol et al (2015). This research was on, “Determinants of Computer Assisted Audit Techniques adoption: A study in small and medium practices in Malaysia”. The research’s aim was to examine the factors affecting SMP’s behavioural intention of Computer Assisted Audit Techniques’ adoption by using UTAUT model. The researcher uses questionnaires which were distributed and collected from a sample of 120 SMPs. The research’s findings shows that performance expectancy, social influence and facilitating condition have significant influence on behavioral intention towards Computer Assisted Audit Techniques’ adoption. However, effort expectancy has insignificant relationship on behavioral intention towards CAATs adoption.

Gaturu and Ngahu (2015) carried another related research on, “The effect of computerized audit system on financial management at water resources management authority in Nairobi County Kenya”. The primary objective of the study was to establish the effect of computerised audit systems on financial management at Water Resources Management Authority. The study targeted 67 employees attached to the ICT, auditing and accounting departments as well as management staff. The researcher used questionnaires. The study concluded that computer-assisted audit techniques and internal controls influenced financial management in WRMA. The study recommended that WRMA should have sound CAATs put in place to identify errors and mitigate financial misappropriation.
Olasanmi (2013) carried another similar research on “Computer Aided Audit Techniques and Fraud detection”. The study sought to identify the various types of fraud encountered during financial transactions, evaluate the adoption of Computer Aided Audit Tools in fraud detection in an organisation, appraise the impact of Computer Aided Audit Tools on performance of organisation, and ascertain the problems of Computer Aided Audit Tools’ application within an organisation. Data was collected using a well-structured questionnaire which was distributed to a large firm in Nigeria. The result of the study showed that 72.8% of the respondents agreed that Computer Assisted Audit Tools and Techniques have played a role in fraud detection and hence can be used to curb fraud to a minimal level in Organisations. 58.1% of the respondents ascertained that Computer Assisted Audit Tools and Techniques helped to improve the auditors’ performance.

Rosli et al (2012) carried another similar research on, “The factors influencing audit technology acceptance by audit firms: a new I-TOE adoption framework. He used the UTAUT and I-TOE framework. His study aimed at developing a new I-TOE paradigm that contributes a comprehensive context of individual, technological organisational and environmental to examine CAATTs’ adoption in public accounting firms. It is argues that acceptance of Computer Assisted Audit Tools and Techniques does not merely depends on individual acceptance but also contingent on organisation’s management, technological characteristics and other environmental factors, Client’s AIS complexity, audit firm’s readiness, top management commitment, technology cost benefit, risk and task-fit were discussed to address the issue of Computer Assisted Audit Tools and Techniques from organisation view point. The research concludes that I-TOE framework will benefit the public audit firms with the antecedents that they need to deliberate in adoption of Computer Assisted Audit Tools and Techniques.
2.4 Gap analysis/ Justification of the study

In this global world, Computer Assisted Audit Techniques should be initially used to replace manual audit activities according to Byrnes et al, (2012). Rosli et al, (2012) supports this saying that Computer Assisted Audit Tools and Techniques brings the more benefits to the audit sector. These programs could be configured to address tasks such as footing ledgers, selecting statistical samples, generating confirmations, and detecting suspicious transactions, according to Byrnes et al, (2012). They added that these tools can test 100% of the records included in a file; this is a marked improvement over the traditional sampling techniques.

In line with the above, Mansour (2016) suggested that auditors are required to computerize so as to meet the rapid growth in information technology. This is also supported by Janvrin (2008) who states that Audit standards suggests that auditors adopt the use of Computer Assisted Audit Techniques, so as to meet the challenges of rapid advances in client information technology usage. However, prior researches have shown that the adoption of Computer Assisted Audit Tools and Techniques is still a question to the auditors. Chaminuka Rural District Council is not an exception. This research seeks to unveil the benefits which are brought by the use of computer Assisted Audit Tools and Techniques to the audit profession.

Whilst most researchers dwell much on the adoption of Computer Assisted Audit Tools and Techniques this research dwells much on the benefits of these tools in this technological world. Researches on the benefits of Computer Assisted audit Tools and Techniques and the challenges which they face in the implementation of those tools in local authorities is very little. Many rural district councils and even town councils have not yet adopt Computer Assisted Audit Tools and Techniques hence the need for this research.

2.5 Summary

This Chapter covered the relevant literature review related to the study. The following chapter will look at the research methodology.
3.0 Introduction

This Chapter looks at how the research was conducted. It is going to show how the researcher gathered data from the original source which is the research design. It also focuses on the research design, research instruments used and the data collection procedures and data analysis and presentation plans.

3.1 Research design

The researcher used descriptive research design to carry out the study. It is also known as statistical research, this describe phenomenon as they exist. Descriptive research aims at portraying accurately the characteristics of a particular group or situation (Islamia 2016). Descriptive research design comprises of interviews, questionnaires and observations which gives information directed towards determining the nature of the situation as it existed at the time of research.

3.1.1 Justification

The choice of this research design was for the researcher to be able to get in contact with the respondents so as to collect relevant data. This type of research design also enabled the researcher to collect large amounts of data through questionnaires. Descriptive research can yield rich data that lead to important recommendations in practice. It also provides assistance by introducing more detail to the research questions and it gives a detailed, highly precise picture of the problem at hand.
3.2 Research method.

The researcher used quantitative and qualitative methods were in the collection of data. The qualitative method involved the use of a questionnaire to obtain the relevant information. Interviews were also conducted and the interviewees were given the chance to express their opinions.

3.3 Target Population

The target population of this research is the Internal Audit Function at Harare City Council. The research targeted 26 people from the internal audit department 21 from Harare City Council and 5 from Chaminuka Rural District Council. The population included auditors, audit clerks and audit committee members.

3.4 Sample size and sample techniques

The researcher used convenience sampling in selecting the research sample. According to Crawshaw and Chambers (2001) convenient sampling is a technique which allows the study of readily available and accessible respondents. The researcher used convenient sampling because it is less expensive, simple and not time consuming. However, convenient sampling might have the disadvantage that the readily available and accessible respondents may not fully represent or have the characteristics required.

3.5 Research Instruments

Data collection allows us to collect information that we want to collect about our study objects. Depending on research type, methods of data collection include, documents review, observation, questioning, measuring or a combination of different methods Abawi (2013). In this study the following methods were used:
3.5.1 Questionnaires

A questionnaire is a data collection instrument consistent of a series of questions and other prompts for the purpose of gathering information from respondents according to Abawi (2013). A questionnaire can both have open ended questions and close ended questions. An open ended question is one without a predetermined set of responses and a close ended question is one that takes form of a multiple-choice question. Questionnaires were distributes to the targeted respondents with both structured and unstructured. The questions were clear and they had the same meaning for all respondents.

Justification

The use of questionnaires allowed the researcher to get objective and subjective data from the sample. Responses which were given from close ended questions were easy to analyse. Open format questionnaires gave the respondents full time to think about their responses without being influenced. The costs which were encountered by the researcher per questionnaire were very low. Many issues were also addressed through the use of questionnaires and there was high response rate.

However, more information was lost due to the use of close-ended questions. There were no explanations, gestures or other visual cues. Reasons for non-response from other people were not known.

3.5.2 Interview

Interviews consist of collecting data by asking questions. Data can be collected by listening to individuals, recordings, filming their responses or a combination of methods. There are four types of interviews according to Abawi (2013). These include structured interviews, semi-structured interviews, in-depth interview and focused group discussion. For the purpose of this research, the researcher conducted an in-depth interview. To be able to run the in-depth interview without any disturbances, the researcher analysed the problem and went on to prepare the interview questions.
Justification

The researcher was able to obtain information with full explanations. The researcher had the opportunity to ask questions. The feedback was immediate as there was two way communications between the researcher and the respondents. Verbal responses were noted and this let to accurate conclusions.

However, interviews were more costly and time consuming. It was also difficulty for the researcher to schedule for interviews where there were other busy schedules.

3.6 Sources of data

In order to obtain information on the benefits of Computer Assisted Audit Tools and Techniques, two sources of data were used and these are primary and secondary sources.

3.6.1 Primary sources

Primary data refers to the first hand data gathered by the researcher himself (Ajayi 2017). He further on asserts that, sources of Primary data are surveys, observations, questionnaires and interviews. Primary data is factual and original. It is also collected with the aim of solving a problem at hand. Primary data may also refer to the data originated by the researcher for the first time

Advantages

It gives first-hand information which is clear and straight forward. It was more reliable since it was information form original sources.

Disadvantages

It took a long time for the researcher to come up with conclusions and the researcher incurred some little costs.
3.6.2 Secondary data

Secondary data is the data already collected or produced by others (Ajayi 2017). He further on asserts that, secondary data is just the analysis and interpretation of the primary data. Whilst primary data is collected for getting the solution to a problem, secondary data is collected for other purposes. Secondary data is the already existing data collected by the investigate agencies and organisations earlier.

Advantages

It was an inexpensive method of collecting data because data was readily available and it does not take long time for the researcher to gather information.

Disadvantages

Much information was out of date and other information was restricted.

3.7 Data Collection procedures

As a mechanism for obtaining information and opinion on the research topic, questionnaires were much more dependable as well as interviews. The original questionnaire was pilot tested on the target population to detect weaknesses in the questionnaire design and to provide proxy data for the selection of the sample size. The researcher used convenience sampling through sending the questionnaire to friends and a few actual respondents in the target population. The pilot test assisted in refining the questionnaire design in that some questions were formulated clearer and complex questions were subdivided into easier questions.

3.8 Validity and Reliability

Reliability is defined as the extent to which a questionnaire, test, observation or any measurement procedure produces the same results on repetitive trials Miller (ND). He states that data validity can be defined as the extent to which the instrument measures what it purports to measure. In order to incorporate validity in this study, the researcher ensured that questions were relating to the objectives of the study and this certified the explanation of uncommon terms and words used in the interview.
Respondents were selected from the Auditing Department at Harare City Council. Straight forward questions were asked and related questions followed each other in sequence aiming at ensuring a coordinated sequence. The audit department at Chaminuka Rural District Council were also chosen to be respondents to the questions.

3.9 Ethical Considerations

Ethics are norms and values within an organisation which guide all the employees. The researcher will take into consideration those ethical values in order not to offend anyone within the organisation. The issue of Confidentiality and anonymity was highlighted and all the researchers were made aware that this research was for academic purposes only.

3.10 Data Presentation and Analysis

The data collected was subject to both quantitative and qualitative analysis. Quantitative analysis is for numbers and other data was transformed into numbers. While qualitative data is for words and other data which come in non-numerical form. Presentation of data took the form of graphs, charts and tables.

3.11 Summary

The above chapter has dealt with the research design, target population, sample size and sampling techniques, research instruments, validity of instruments, data analysis and presentation in this chapter.
CHAPTER IV

DATA PRESENTATION AND ANALYSIS DISCUSSION

4.0 Introduction

This chapter in particular deals with the presentation and analysis and interpretation of data collected for this study in order to see how data collected have responded or deviated from the study. The findings and analysis were directed towards addressing the objectives and answering research questions.

4.1 Response rate

A total of 21 questionnaires were sent out to the audit department at Harare City Council. The table below shows the rates of responses and success.

Table 4.1 Response rate

<table>
<thead>
<tr>
<th>Respondent</th>
<th>Questionnaire sent</th>
<th>Returned</th>
<th>Response rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Auditors</td>
<td>10</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>Chief Internal Auditor</td>
<td>1</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Audit Committee Member</td>
<td>5</td>
<td>4</td>
<td>80</td>
</tr>
<tr>
<td>Audit clerk</td>
<td>5</td>
<td>4</td>
<td>80</td>
</tr>
<tr>
<td>Overall</td>
<td>21</td>
<td>19</td>
<td>90</td>
</tr>
</tbody>
</table>

Source: Primary Source

The response rate is 90% as shown by the table above. This response rate is significantly high enough to render the results not only reliable as well as valid but it is able to give requisite weight to the conclusions and recommendations.
4.2 Position of respondents

The data of the respondents from the audit department was collected, analysed and the results are presented below.

**Table 4.2 Position of respondents**

<table>
<thead>
<tr>
<th>Respondent</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Auditors</td>
<td>10</td>
<td>53</td>
</tr>
<tr>
<td>Chief Internal Auditor</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Audit Committee members</td>
<td>4</td>
<td>21</td>
</tr>
<tr>
<td>Audit clerks</td>
<td>4</td>
<td>21</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>19</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

**Source: Primary data**

The results on the table indicate that the highest proportion were Auditors who constitutes a percentage of 58%, and 21% audit clerks and the audit committee.

4.3 Duration with the organisation

The respondents were asked to state the number of years in which they were employed within the organisation. The responses are represented by the pie chart below.
Fig 4.1 Duration with the organisation

Source: Primary data

Fig 4.1 above shows that all the respondents to the questionnaires have worked for the organisation. 84% of the respondents have worked for the organisation for more than 5 years and 16% have worked for less than 5 years. All respondents were experienced and they have pertinent information about the systems of the organisation.

4.4 Which roles does Computer Assisted Audit Tools and Techniques (CAATTs) have in auditing?

The respondents were asked the roles which Computer Assisted Audit Tools and Techniques and among the roles which were asked the following roles were identified.

- **Identify exceptions**

The respondents agreed to the fact that Computer Assisted Audit Tools and Techniques are able to identify exceptions. This agrees with Newman (2000) who states that Computer Assisted Audit Tools and Techniques can be used to identify strange items which are simply large items or where the relationship between two pieces of information on an item does not correlate.
Checking calculations

The respondents have also agreed that these tools can also check calculations and this agrees with Newman (2000) who argues that Computer Assisted Audit Tools and Techniques are able to check calculations.

Cross matching data between systems

Interrogations were found to be used to compare data on two or more files. These programs are able to review the correctness of an item by crosschecking it with other information available. Two master files from the same system at different dates were found to provide good audit evidence for testing of transactions. This agrees with Newman (2000) who states that Cross matching of data between systems is another role of Computer Assisted Audit Tools and Techniques.

Testing for gaps and duplicates

The research revealed that missing information can be also detected through the use of these tools. The research revealed that CAATTs can be used to identify where an expected complete sequence of data has missing items. Duplicate data such as purchase invoice paid twice could be checked for.

Fraud detection

The research revealed that the use of CAATTs help in fraud detection. This agrees with Bourke and Peursem (2004) who states that Audit Command Language is powerful and effective in detecting fraud in an Organisation. Data can be compared, sorted and analysed and these are the keys in detecting fraud.
4.5 What are benefits which were brought to the audit department from the use of manual systems to the use of CAATTs?

Harare City Council has shifted from the use of the traditional manner of auditing to the use of BIQ software which is audit software that helps in the effectiveness of audit work. The respondents were asked the benefits use of Computer Assisted Audit Tools and Techniques over manual systems and the following benefits were revealed.

**Increase in Speed and Accuracy**

The respondents were asked if their shift from the use of manual systems to the use of CAATTs have greatly led to the change of the time spent and the accuracy of the audit results and the responses were as shown by the table below.

![Fig 4.2 Speed and Accuracy](image)

**Source: Primary Data**

The research findings have revealed that (n=15) 79% of the respondents have strongly agreed and (n=4) 21% agreed to the fact that the use of Computer Assisted Audit Tools and Techniques have greatly led to the increase in speed and accuracy in the audit profession.
**Reduction in Audit cost**

The respondents were asked whether the shift from manual systems to the use of Computer Assisted Tools and Techniques have resulted in the reduction of audit cost. The following responses were given.

**Fig 4.3 Reduction in Audit Cost**

**Source: Primary Data**

The research findings have shown that (n=5) 26% have strongly agreed, (n=8) 42% agreed that audit cost have been reduced as a result of Computer Assisted Audit Tools and Techniques in the organisation whilst (n=4) 21% were not sure and (n=2) 11% disagreed as they felt that the use of these tools did not reduce the audit cost. The findings have greatly showed that the introduction of Computer Assisted Audit Tools and Techniques have resulted in the reduction of audit cost as this was supported by a greater percentage.
**Increased time for critical thinking**

The respondents were asked as to whether the use of Computer Assisted Audit Tools and Techniques has led to the saving of time for thinking. The responses were given as follows:

![Pie chart showing the distribution of responses](chart.png)

**Source: Primary Data**

The research findings have shown that (n=3) 16% have strongly agreed and (n=10) 53% have agreed to the fact that the introduction of Computer Assisted Audit Tools and Techniques have greatly resulted in saving time for critical thinking. (n=6) 31% were not sure as to whether the introduction of Computer Assisted Audit Tools and Techniques has resulted in saving time for critical thinking.

**Increased performance**

The respondents were asked as to whether the introduction of information technology to the audit department has led to increased performance. The results are tabulated below
Fig 4.5 Increased Performance

Source: Primary Data

The research findings have shown that 16% of the respondents have strongly agreed and 63% have agreed that there is increased performance associated with the use of Computer Assisted Audit Tools and Techniques. 31% were not sure hence purporting that there is a positive result that the use of Computer Assisted Audit Tools and Techniques has resulted in good performance in the audit work.
4.6 Analysis of Interview responses

The interviews were conducted with five respondents from the audit department at Harare City Council; the response rate was 100%. The interviews were conducted with three internal auditors and two members from the audit committee.

4.6.1 Do you use of Computer Assisted Audit Tools and Techniques in the completion of audit work?

The objective of the question was to know if the internal auditors at Harare City Council perform their audits using Computer Assisted Audit Tools and Techniques. All the respondents have agreed that they use Computer Assisted Audit Tools and Techniques in their audits. Harare City Council has adopted the use of BIQ software. This software was found to be used by the Internal Auditors at Harare City Council. This accounting package performs quick audit of accounts and quick link of customers, supplies, items sold through a zoom screen and online help to ease breakdown in case of a system failure. It facilitates high standard quality control and documentation. The respondents have revealed that with the use of BIQ they are able to perform calculations, analyse and sort data. They have pointed out that the use of this software saves more time and tedious work than the use of manual systems. According to the respondents, the auditor can only concentrate on the important things and the programme will look after the rest.

4.6.2 What are the benefits which accrued to the Audit department as a result of Computer Assisted Audit Tools and Techniques?

The objective of the question was to determine the benefits which were brought by Computer Assisted Audit Tools and Techniques in the audit department at Harare City Council. Computer Assisted Audit Tools and Techniques have greatly impacted the audit department as shown by the interviewees. The great benefit of these tools is that audits are now being performed within a short period of time. Quality performance is also another benefit of Computer Assisted Audit Tools and Techniques. Quality reporting is also another benefit of these tools; reports are being done perfectly and
within the intended time. With the use of Computer Assisted Audit Tools and Techniques more calculations are made within a short period of time. More time is saved hence more targets are met within the stipulated time period. In a computerised system, there are both manual and programmed controls. Another benefit is that audit efficient is increased by recalculating information provided by audit client.

4.6.3 Does the company offer training in relation to the adoption of Computer Assisted Audit Tools and Techniques

The objective of the question was to determine whether the company offer training in relation to the Adoption of Computer Assisted Audit Tools and Techniques. The responses were that yes the audit department have been trained on how to use Computer Assisted Audit Tools and Techniques.

4.6.4 What are the barriers to the implementation of Computer Assisted Audit Tools and Techniques?

To find the barriers on the implementation of CAATTs an interview was conducted with five people from Chaminuka Rural District Council. Two internal audit staff and three audit committee members. One of the barriers of implementing Computer Assisted Audit Tools and Techniques is Technical complexity. Many research findings have revealed that this can be the biggest barrier to the implementation of Computer Assisted Audit Tools and Techniques. This study’s findings have agreed to the fact that technical complexity is the biggest barrier to the implementation of Computer Assisted Audit Tools and Techniques since some employees in the audit department at Chaminuka Rural District Council does not possess computer skills. They all have accounting backgrounds and may not be able to download data from the host system. This requires someone with Information Technology knowledge and skills hence there is need for training.

Cost of hardware as it has been said by Mahzan and Lymer (ND), is no longer a barrier to the implementation of Computer Assisted Audit Tools and Techniques
according to the research findings. There are more available cheaper versions of Computer Assisted Audit Tools and Techniques hence the company can afford to buy these softwares.

Attitude by potential users is not a barrier to the implementation of Computer Assisted Audit Tools and Techniques at Chaminuka Rural District Council. The Internal Auditor at Chaminuka Rural District Council has stressed that he wishes to use these tools. He has once used these tools in his past profession and this reveals that the internal audit at Chaminuka Rural District Council cannot be the barrier to the implementation of Computer Assisted Audit Tools and Techniques.

There were other challenges which were found from the research which are inhibiting the adoption of Computer Assisted Audit Tools and Techniques at Chaminuka Rural District Council which include the following:

**Lack of management support**

One of the factors which were found to be affecting the adoption of Computer Assisted Audit Tools and Techniques is lack of management support. Most decisions are made by the management and the research findings have shown that the internal audit department lacks support. Management should support the whole adoption process.

**Non-cooperation from other departments**

Another challenge which the internal audit function at Chaminuka Rural District Council is facing is lack of support from other departments. Many employees are only concerned with their departments and the audit department is lacking support.
Inability to demonstrate the benefits of the adoption to the management and other departments.

Although the internal audit department at Chaminuka Rural District Council lacks support, the research findings have also shown that the Internal Audit department at Chaminuka lacks the ability to demonstrate the benefits of adopting Computer Assisted Audit Tools and Techniques to stakeholders. Some of the stakeholders in local authorities include the management, the councillors and other departments. The Internal audit department have not yet presented the benefits of these tools to the management.

4.6.5 In your own opinion what do you think should be done to overcome those challenges?

The respondents have decided that the issue should be presented to the management since most of the decisions are approved by the management. The issue should also be presented to the internal audit committee. The internal audit is supposed to present in full the benefits of these tool’s adoption.

Another solution which was suggested was that the internal audit department should also present the issue of employee training on forensic auditing. This is very crucial in this technological world since one cannot perform audits with computer tools without being taught.

4.10 Summary Chapter

In this chapter the researcher evaluated and analysed the responses to the interviews and questionnaires. The results arising from data collection techniques adopted were analysed and presented in text form and some of the explanations to the results were aided by the use of tables, graphs and pie charts. The next chapter will summarise the research findings and outline the recommendations suggested by the researcher.
CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This is the final chapter and its main aim is to sum up all work done under literature review and the findings of Chapter four. The conclusions and recommendations will also be highlighted in this chapter and they will be based on research objectives. Suggestion for further researches is also covered.

5.1 Summary of major findings

The study was conducted on a comparative analysis on the benefits of using Computer Assisted Audit Tools and Techniques over the use of manual systems in the audit profession. The audit fraternity is under paradigm change from manual techniques to the use of Computer Assisted Audit Tools and Techniques and those who are still employing manual systems are at a great disadvantage. The research was meant to reveal the real benefits of employing Computer Assisted Audit Tools and Techniques in this technological world. This research compared the two types of auditing and analysed factors hindering their adoption in local authorities. This was done through data collection from the Internal Audit Function at Harare City Council and Chaminuka Rural District Council from the internal audit staff and analysing the data to verify if these tools are real beneficial in local authorities.

Findings on the role of Computer Assisted Audit Tools and Techniques

The first objective of the study was to determine the role of Computer Assisted Audit Tools and Techniques in the audit profession. The research findings have shown that the internal auditors use the type of CAATTs within the definition of general audit software. The internal audit department at Harare City Council have adopted the use of BIQ software which is accounting software used in the completion of audit work.
Among all the roles which were presented, the research findings have shown that Computer Assisted Audit Tools and Techniques at Harare City Council are able to perform all those major roles. These roles include identifying exceptions, analytical reviews, performing calculations, fraud detection, matching data between systems and testing for gaps and duplicates.

**Findings on the benefits of using Computer Assisted Audit Tools and Techniques**

The second objective was to assess the benefits which were brought by the use of Computer Assisted Audit tools and Techniques. The research findings have shown that the use of Computer Assisted Audit Tools and Techniques have brought more benefits to the internal audit function. The respondents have revealed that the use of Computer Assisted Audit Tools and Techniques have more benefits than the use of manual systems. Audit quality, speed and accuracy, efficiency and increased performance are some of the benefits which were brought by the use of Computer Assisted Audit Tools and Techniques.

**Findings on the barriers to the implementation of Computer Assisted Audit Tools and Techniques**

The third objective was to identify the barriers to the implementation of Computer Assisted Audit Tools and Techniques at CRDC. The major findings were that, attitude by potential users and the cost of hardware and software were not barriers to the implementation of Computer Assisted Audit Tools and Techniques. The barriers which were found include technical complexity, lack of support from management, lack of support from other departments and lack of ability to demonstrate the importance of Computer Assisted Audit Tools and Techniques’ adoption.
5.2 Conclusions

The main objective of the study was to analyse the benefits of using Computer Assisted Audit Tools and Techniques over the use of manual systems. The study found out that Computer Assisted Audit Tools and Techniques are very effective tools that aid efficiency to the audit profession. The research revealed that the use of Computer Assisted Audit Tools and Techniques have many benefits to the audit profession than the use of manual systems. The benefits of Computer Assisted Audit Tools and Techniques include that, it saves more time, they improve the audit quality and they reduce audit cost. The research concluded that the use of Computer Assisted Audit Tools and Techniques have many roles which include, identifying exceptions, performing calculations, analyse and sort data and perform checks and balances. The reason of non-adoption by other local authorities includes lack of management support, technical complexity, non-corporation from other departments and inability to present the benefits of CAATTs to the management. Whilst the audit department have faced these challenges, it was observed that they have never presented the issues to the management. The objective of the study was successful since it was able to address the research objectives.

5.3 Recommendations

After a detailed study on the benefits of using Computer Assisted Audit Tools and Techniques over the use of manual systems, the researcher identifies the few issues that need to be done by the internal audit at Chaminuka Rural District Council. These issues are detailed below:

- The internal audit function at Chaminuka Rural District Council should embrace the new era and adopt the use of Computer Assisted Audit Tools and Techniques since they are effective and efficient to the audit profession.

- The internal audit department should be trained in forensic auditing on the basics about Computer Assisted Audit Tools and Techniques. Auditors need to be trained since they have accounting background they cannot muster some technical skills.
The audit department should present the benefits of CAATTs adoption to the management highlighting their use, types and their roles. In that manner, the management will be able to approve the adoption of these tools. Since many decisions are made by the management if they are satisfied that the tools will bring a change to the organisations in that sense they will approve their adoption.

The Internal auditor should take part in influencing other fellow auditors on the adoption of these tools.

5.4 Area for further research

The research study can be explored further by reviewing other areas that the researcher did not cover which can be of greater importance to the organisation such as carrying out on the impact of information technology in detecting white collar crimes in an organisation.

5.5 Chapter Summary

In conclusion, despite the limitations which were faced by the researcher, the research has become a success as it contributes knowledge about Computer Assisted Audit Tools and Techniques. This research does not provides academic contribution to the auditing area only but also in Information Technology.
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APPENDIX A

COVER LETTER

Bindura University of Science Education
Department of Financial Intelligence
P. Bag 2010
Bindura
March 2019

Dear Sir/Madam

My name is Rumbidzai Pearl Mandinyenya a student of Bindura University of Science Education conducting an academic research study on a comparative analysis on the benefits of Computer Assisted Audit Tools and Techniques and manual auditing in the audit profession. This research is aimed at partial fulfilment of the award of a Degree of Bachelor of Commerce Honors degree in Financial Intelligence. You have been considered to be one of the respondents.

Please kindly spare a few minutes to answer the following questions in a manner you deem appropriate and these responses will be treated with utmost confidentiality.

Your cooperation is highly appreciated.
APPENDIX B

QUESTIONNAIRE

Demographic characteristics

Please tick in the box provided

**Indicate your position in the organisation**

Chief Internal Auditor  
Internal Auditor  
Audit clerk  
Audit Committee Member  

**How long have you worked with the organisation?**

1-5 years  
5-10 years  
10-15 years  
15 and above  

1. Which level of knowledge do you have concerning Computer Assisted Audit Tools and Techniques?

Sound  
Extensive  
Minimal  

2. Does Computer Assisted Audit Tools and Techniques play the following roles in your Organisation?

<table>
<thead>
<tr>
<th>Role</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify exceptions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Checking calculations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross matching data between systems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Testing for gaps and duplicates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fraud detection</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. Does the use of Computer Assisted Audit Tools and Techniques resulted in the following benefits?

The shift from the use of manual systems to the use of Computer Assisted Audit Tools and Techniques have resulted in the following benefits. Indicate your strength of feeling.

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Not sure</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed and accuracy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduction in audit cost</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saves time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX C

INTERVIEW QUESTIONS:

1. Do you use Computer Assisted Audit Tools and Techniques in the completion of audit work?

2. What are the benefits which accrued to the Audit Department as a result of Computer Assisted Audit Tools and Techniques?

3. Does the company offer training in relation to the adoption of Computer Assisted Audit Tools and Techniques?

4. What are the barriers to the implementation of Computer Assisted Audit Tools and Techniques in your Organisation?

5. In your own opinion what do you think should be done to overcome those challenges?