

**IMPACT OF COMPUTERISED ACCOUNTING SYSTEM ON PERFORMANCE  
OF PAYROLL ACCOUNTING: A CASE OF URBAN WATER SUPPLY AND  
SEWERAGE AUTHORITIES**

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**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT FOR THE  
REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS  
ADMINISTRATION OF THE OPEN UNIVERSITY OF TANZANIA**

**CERTIFICATION**

I, the undersigned, certify that I have read and hereby recommend for acceptance by Open University of Tanzania, a research dissertation titled “**Impact of Computerized Accounting on Performance of Payroll Accounting: Case Study of Urban Water and Sewerage of Authorities**” in partial fulfillment of the requirements for the award of a Master degree in Business Administration (Finance).

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Date

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**DECLARATION**

I, **Bahati Alfred** do hereby declare that, this dissertation is my original work and that; it has not been presented and will not be presented to any other university for a similar or any other degree award.

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Signature

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Date

**DEDICATION**

I would also like to dedicate it to my lovely wife Madame **Joyce Kibate** who has tirelessly tried to see that I realize my dreams in spite of all the challenges she always went through

.

**ABSTRACT**

The study examined the impact of computerized accounting system on performance of payroll accounting in Urban Water and Sewerage Authorities. The study aims to assess the performance of payroll accounting after adoption of Computerized Accounting system and to identify the positive and negative impact of adoption of Computerized Accounting system in performance of payroll accounting in UWASAs. The study made use of the primary data collection which includes questionnaires and personal interviews, also the secondary data collected from official documents of UWASAs, various research works on computerized accounting systems, accounting journals, textbooks and Open University of Tanzania Library. The main findings indicate that adoption of CAS in accounting practice has both positive and negative impacts. Based on these findings, it is recommended that the UWASAs should continue to adopt the use of CAS, providing training to the staff of Finance and Human Resources on how to use computerized accounting software packages, and to put security mechanisms in place to prevent losses of financial data or risk of fraud.

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**LIST OF ABBREVIATIONS**

CAG	Controller and Auditor General
CAS	Computerized Accounting System
DoI	Diffusion of Innovation
GAAP	Generally Accepted Accounting Principles
ICT	Information and Communication Technology
IDT	Innovation Diffusion Theory
IT	Information Technology
MBA	Masters in Business Administration
MYOB	Mind Your Own Business
OUT	Open University of Tanzania
SMEs	Small and Medium Enterprises
SPSS	Software Package for Social Scientists
TAM	Technology Acceptance Model
UTAUT	Unified Technology Acceptance and User Theory
UWASA	Urban Water and Sewerage Authority

## **CHAPTER ONE**

### **1.0 INTRODUCTION**

#### **1.1 Background of the Research**

This study aims to assess the impact of Computerized Accounting Systems (CAS) on performance of payroll accounting in selected Urban Water and Sewerage Authorities (UWASAs). Specifically, the study aims to assess the extent of adoption of CAS in payroll accounting, performance of payroll accounting, identify impact of adoption of CAS in payroll accounting and challenges facing adopting CAS in payroll accounting.

#### **1.2 Computerized Accounting**

Accounting is a manual process using paper books and documents for financial information. Advances in ICT have created significant changes in the area of financial management and accounting software. It has been proved that a computerized accounting system has several advantages such as speed, accuracy and reliability of financial information compared to a manual accounting system (Osmond, 2011).

Before the advent of ICT in accounting practice, these accounting protocols were being performed manually. However, today many accountants and non-accountants prefer to use computer software to record, report and analyze their company's financial information. This information is collected from transactions and is compiled into financial reports (Weber, 2011).

The impact of CAS on accounting practice in public institutions can be measured by the extent to which the institutions have adopted the use of computerized accounting systems. Alan and Frank Wood (2005) define a computerized accounting system as a



total suit of components that together comprises all inputs, storage, transactions, processing, collecting and reporting of financial transaction data.

A Computerized accounting system involves the use of computers in processing accounting data into information to facilitate quick decision making through timely preparation of financial reports and financial reporting in this case refers to the way in which financial information is recorded, processed and conveyed to the end users of this information in particular (Weber, 2011).

A number of Software packages have been developed to assist in the accounting field and some of such packages are QuickBooks, Mind Your Own Business (MYOB), EPICOR (formerly Platinum), Tally ERP, PASTEL and SUN. Even though some of these software mentioned here are developed for small businesses, they are also designed specifically for accounting purposes in the banks.

### **1.2.1 Functions of Computerized Accounting Software**

Accounting software's are used to implement computerized accounting system. The computerized accounting is based on the concept of database; it is basic software which allows access to the data contained in the database. The following are the functions of computerized accounting software.

#### a) Preparation of accounting documents;

Computers help in preparing accounting documents like cash memo, bills, invoices and accounting vouchers. Here computerized accounting systems have user defined templates which will provide faster, accurate entry of transaction and therefore all documentation and reports can be generated automatically.

#### b) Recording of transactions

Everyday business transactions are recorded with the help of computer software. Every account and transactions is assigned a unique code where the grouping of account is

done at the first stage. This process simplifies the work of recording the transaction. Marivic (2009) argued that computerized packages will minimize human errors in transactions recording.

c) Preparation of trial balance and financial statements

After recording of transactions, the data is transferred into ledger accounts automatically by the computer. Trial balance is prepared by the computer to check accuracy of records, with the help of trial balance; the computer can be programmed to prepare the statement of comprehensive income and the statement of financial position.

### **1.2.2 Manual Accounting Versus Computerized Accounting**

Manual accounting implies that the whole accounting cycle is performed manually on a periodic basis where by trial balances are calculated, journal transactions are entered and financial reports are prepared. Computerized accounting implies that the only thing that accountants do is recording transactions into the computer which processes the other steps of accounting cycle automatically or by a request (Weber, 2011).

### **1.2.3 Background to Computerized Accounting Systems in Tanzania**

The introduction of Computerized Accounting Systems (CAS) in Tanzanian public institutions dates back to 1992 when the government took measures to computerize various aspects of its financial management functions and moving from a manual accounting system toward a computerized system. Ever since, performance in the financial sector has improved significantly (World Bank, 2002).

Some aspects of accounting practices which have been computerized include; accounts payable, accounts receivable, general ledger, cash management, purchase order and payroll. The main computerized accounting system used by public institutions in

Tanzania is EPICOR (formerly PLATINUM). After the implementation of the system, all accounting staff received training on how to use the system (World Bank, 2002).

### **1.3 Statement of the Problem**

In the past decade, the government has taken various measures to improve efficiency in accounting practices. Among the measures taken by the government to improve efficiency in accounting practice in public institutions was the introduction of computerized accounting systems such as; Tally, Pastel and Epicor. The introduction of computerized accounting systems aimed to improve speed, accuracy and reliability.

However, despite of the many benefits of using computerized accounting systems, in many public institutions, incidences of accounting malpractice, delays in preparation of financial reports, financial misreporting and fraud have been reported (CAG, 2012). This casts a shadow of doubt on whether the introduction of computerized accounting systems have helped to improve efficiency in accounting practices.

Although many studies have been conducted on the impact of CAS in accounting practices in public institutions, little studies have been conducted on the impact of computerized accounting systems on payroll accounting in urban water and sewerage authorities. As a result, there is a knowledge gap that needs to be addressed. It is the objective of this study to fill that gap.

### **1.4 Objectives of the Study**

#### **1.4.1 Main Objectives**

The study aimed to assess the impact of computerized accounting systems (CAS) on performance of payroll accounting by focusing on selected urban water and sewerage authorities as a case study.

### **1.3.2 Specific Objectives**

- a) To assess extent of adoption of CAS in payroll accounting in UWASAs
- b) To assess performance of payroll accounting after adoption of CAS
- c) To identify the effect of adoption of CAS in payroll accounting
- d) To identify challenges facing adoption of CAS in payroll accounting

### **1.5 Research Questions**

The study was guided by the following research questions

- a) To what extent have UWASAs adopted CAS on payroll accounting?
- b) What is the level of performance of payroll accounting after adoption of CAS?
- c) What are the positive impacts of adoption of CAS on performance of payroll accounting?
- d) What are the challenges facing adoption of CAS on performance of payroll accounting?

### **1.6 Significance of the Study**

The findings of this study will contribute to the existing body of knowledge on the impact of CAS on performance of payroll accounting in UWASAs in Tanzania and help stakeholders in the accounting professional to become aware of the extent of adoption of CAS on performance of payroll accounting as well as the positive and negative impacts of adoption of CAS on performance of payroll accounting in Urban Water Supply and Sewerage Authorities

Also, findings of this study serve as a stimulant and stepping stone for future researchers and academicians by suggesting areas where further studies need to be conducted on the same or similar topics. Also, successful completion of the study will enable the researcher to partially fulfill the requirements for the award of a Masters

degree in Business Administration (MBA Finance) offered by the Open University of Tanzania.

### **1.7 Limitations of the Study**

Due to shortage of time to conduct a fully and intensive study, the researcher had to limit the scope of the study so as to finish the study within time specified by academic calendar of the university, also the issue of limited funding emerged as one of limitation during the study.

### **1.7 Definition of Terms**

#### **Accounting**

As many professional accountants and auditors state - accounting is a language of business which is accepted in all developed and developing countries, but what exactly is accounting? Well, accounting has been defined by many authors in various ways. According to Weber (2011), accounting is the way business owners manage their company's financial information.

Sacco (2008) defines accounting as a process through which financial information is recorded, organized, summarized, analyzed, interpreted, and communicated. This implies that accounting is concerned with the design of an organization's record keeping system, the preparation of financial documents, analysis and interpretation of financial documents.

#### **Computerized Accounting**

Computerized accounting is defined by Wilson (2010) as a total suit of components that together comprises all inputs, storage, transactions, processing, collecting and reporting of financial transaction data. Before the introduction of information

technology into accounting, accounting protocols were performed manually. Today accountants use computer software to perform these duties.

Computerized accounting system refers to the method or scheme by which financial information on business transactions are recorded, organized, summarized, analyzed, interpreted and communicated to stake holders through the use of the computer and computer-based systems such as the internet and accounting software. This facilitates the automation of accounting tasks (Brecht and Martin, 2006).

Meigs and Kay (1998) defined a Computerized Accounting System (CAS) as a system that uses computers to input, process, store and output accounting information the inform of financial reports. The author also adds that accounting system records all transactions that routinely deal with events that affect the financial position and performance of an entity.

Marivic (2009) described a computerized accounting system as a method or scheme by which financial information on business transactions are recorded, organized, summarized, analysed, interpreted and communicated to stakeholders through the use of computers and computer based systems such as accounting packages. He emphasized that it's a mechanized process of facilitating financial information inflows.

### **Payroll Accounting**

Payroll Accounting refers to that aspect of accounting needed to determine the accurate records of salaries and wages paid to workers. Naturally, business organizations are required by law to keep accurate payroll records. Apart from being needed to compute the accurate amount of employee's salaries and wages, payroll accounting is needed to establish the various expenses related to salaries and wages (Okoye, 2010)

## **CHAPTER TWO**

### **2.0 LITERATURE REVIEW**

#### **2.1 Overview**

This chapter presents the theories that guide the study, the theoretical model, the concept of accounting and computerized accounting, benefits of computerized accounting software, disadvantages of computerized accounting software, factors that determine adoption of computerized accounting software, the impact of computerized accounting and the challenges of computerized accounting.

#### **2.2 Theoretical Literature Review**

Many theories have been developed to study the issue of adoption of Computerized Accounting Systems (CAS) as an Information Technology (IT) which include, (Davis, 1989) the technology acceptance model (TAM) Roger's (1995) Diffusion of Innovation (DoI) or Innovation Diffusion Theory (IDT) and the unified technology acceptance user theory (UTAUT) (Venkatesh, et al 2003).

##### **2.2.1 Technology Acceptance Model**

The Technology Acceptance Model (TAM) is an information systems theory that models how users come to accept and use a technology. The model suggests that when users are presented with a new technology, two specific factors influence their decision about how and when they will use it. The two factors are; perceived usefulness (PU), and perceived ease-of-use (PEOU) (Davis, 1989).

TAM has proven to be a useful theoretical model in helping to understand and explain use behavior in the information system implementation. It has been tested in many empirical researches and the tools used with the model have proven to be of quality and

to yield statistically reliable results. However, parsimony has been one of TAM's strengths but also major weakness as it is has limited use in explaining users' behavior.

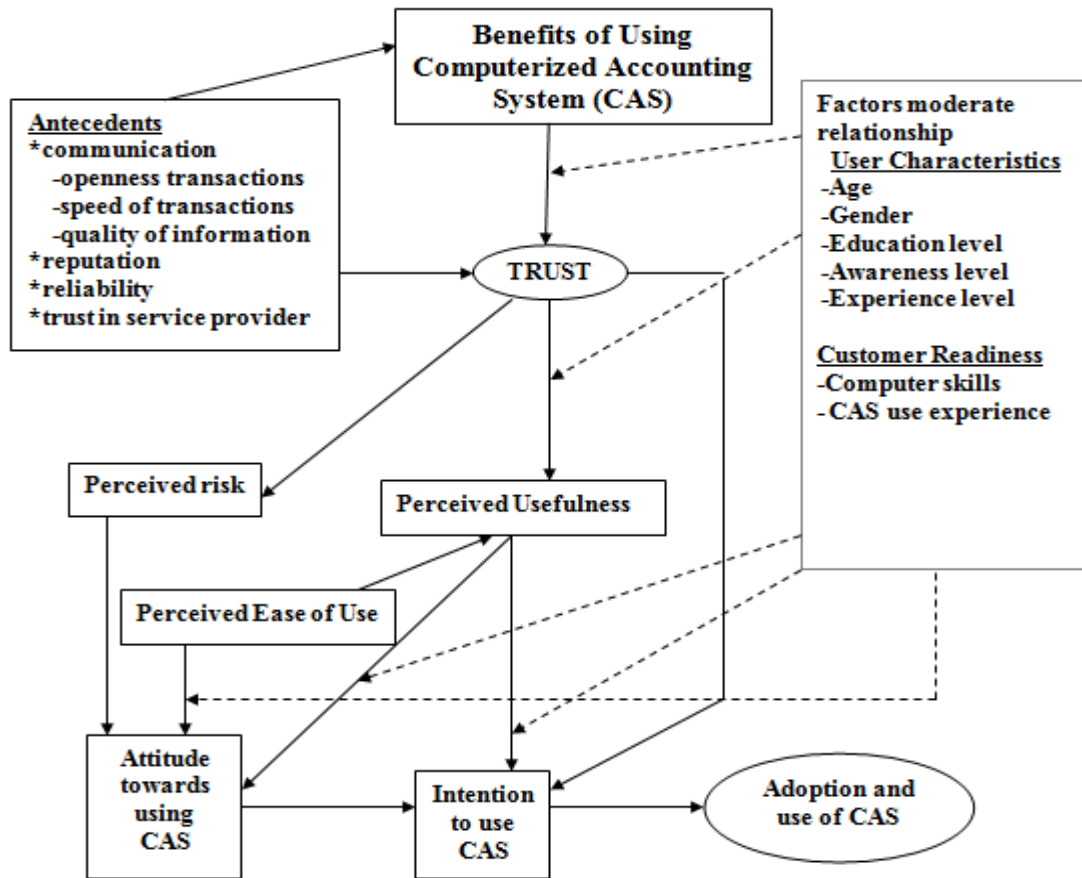
As a result of the shortcomings, many authors have extended TAM with additional constructs. Mbogo (2010) for instance, employed TAM and extended it to include other factors such as perceived ease of accessibility, perceived low cost, perceived security, perceived convenience, perceived satisfaction and perceived support to investigate the success factors attributable to use of CAS.

Tobbin (2011) modeled adaptation of CAS expanding TAM and DoI to investigate the consumer behavior towards CAS adaptation in Ghana. Similarly, Bosire (2012) adapted DoI alongside TAM to explain factors which contributed to success of adaptation of new technologies. Similarly, Odia (2012) applied TAM with additional factors such as perceived trust, security, and perceived convenience.

### **2.2.2 Diffusion of Innovation Theory**

Another theory that has been used to describe acceptance of information systems is Rogers' (1983) Diffusion of Innovation (DoI) or the Innovation Diffusion Theory (IDT). Innovation is defined as an idea, practice or object (Rogers, 1995). DoI includes five significant innovation characteristics: relative advantage, compatibility, complexity, trialability and observability.





**Figure 2.1 : Technology Acceptance Model (Adapted from Davis, 1989).**

Source: Researcher 2014

Relative advantage is defined as the degree to which the innovation is considered as being better than the existing method of performing the same task. It is suggested in the theory that relative advantage has a positive influence on behavior intention. Compatibility is defined as the degree to which adopting the innovation is compatible with what people do, existing values, experiences, and needs.

Complexity is defined as the degree to which an innovation is perceived as relatively difficult to understand and use. Trial ability is defined as the degree to which an innovation may be experimented with on a limited basis before making an adoption (or

rejection) decision and Observability is defined as the degree to which the results of an innovation are visible to others (Rogers, 1995).

### **2.2.3 Unified Technology Acceptance user Theory**

The Unified Technology Acceptance user theory (UTAUT) proposed by (Venkatesh et al., 2003) was developed through a review and consolidation of eight IT adaptation theories: TAM, the motivational model, theory of reasoned action, theory of planned behavior/technology acceptance model, model of PC utilization, innovation diffusion theory, and social cognitive theory (Venkatesh et al, 2003).

The UTAUT aims to explain user intentions to use an IS and subsequent usage behavior.

The theory suggests that four key constructs (performance expectancy ; refers to the extent to which an individual believes that using a system will help him or her achieve better results on the task; effort expectancy: refers to the extent of the ease associated with the use of the system (Vankatesh et al, 2003).

Gender, age, experience, and voluntariness of use are posited to mediate the impact of the four key constructs usage intention and behavior (Vankatesh et al, 2003). However, UTAUT is not perfect.

## **2.3 The Concept of Accounting**

### **2.3.1 Basics of Accounting**

The basic objective of accounting is to assess financial performance, that is, how well or how poorly an entity performed with money entrusted to it, (Sacco, 2008).

Accounting involves raising and spending money as well as making promises that have

financial consequences. Accounting is considered a part of accountability for accounting decisions.

Effectiveness of accounting practice depends upon how the financial data handled right from the point of data collection to the processing stage that leads to the production of meaningful financial information in terms of reports. As noted by Sacco, (2008) two major accounting models are considered in this context, manual or computerized accounting.

### **2.3.2 Characteristics of a quality accounting practice**

#### ***Understandable***

One characteristic of a quality accounting practice is that it must produce financial information that is understandable. A guideline is to provide information that people, who are willing to understand it, can understand it: professionals or nonprofessionals. One of the premises of a computerized accounting system is to help accountants to produce financial information that is easily understandable (DeLone, 2010).

#### ***Relevant***

Another characteristic of a sound accounting practice is that it produces relevant information that can be used to make decision. Accounting information must also deal with things that are significant enough to impact decisions that are made by those who use the financial reports. Since financial statements are for users to make economic decisions, the information must be relevant (Marquez, 2011).

#### ***Reliable***

A sound accounting system must be reliable. People must be able to depend on the figures and the facts printed on your financial statements and to make sure that they are true. It must be verifiable. Free from error. E.g. you can always look at a receipt to

verify the amount of an expense. As you already know, when you get audited, you must verify all transactions that occurred in your business (Marquez, 2011).

### ***Comparable and Consistent***

Another characteristic of an accounting system is that it must be comparable and consistent. Comparability relates to the ability of information to be compared with those of other similar companies, without comparability the accounts would be of little use. General Accepted Accounting Principles (GAAP) requires that accountants be consistent in preparation of accounting information (Frank and Alan, 2009).

Another characteristic of a sound accounting system is that it produces reports statements that it produces accounting information that can be compared with accounting reports produced by other businesses. Comparability and consistence in preparation of accounting reports adds a degree of transparency to financial statements by allowing comparisons over time and among entities (Frank and Alan, 2009).

Comparability is affected by consistency of presentation and disclosure of accounting policies—particularly when comparing items among entities that might use different (but equally valid) methods like straight-line/ reducing balance depreciation or FIFO/ average cost method. This indicates that comparable financial statements are not necessarily uniform, but merely allow suitable comparisons (DeLone, 2010).

Computerized accounting is not only speedy but also accurate. With a computer being used to collect data and change it into meaningful information that is used by management to make timely and effective decisions, the computer carries out the entire data processing through classifying, sorting, calculating, summarizing the data and production of reports.

A Computerized Accounting System enables businesses to stay organized. When information is entered into the system, it makes finding the information easy. Employees can look up any financial information whenever it is needed. There is less room for errors as only one accounting entry is needed for each transaction rather than two (or three) for a manual system. The accounting records are automatically updated.

### **2.3.4 Disadvantages of Computerized Accounting System**

Computerization account requires some amount of financial commitment with a great deal of managerial and technological expertise needed at the very beginning of the installation process in order to launch a successful venture. There is the need to assess the cost benefit effects that will help in carefully weighing the two so as to know the benefits to be derived from it since in the end, the main focus will be on the benefits.

## **2.4 Empirical Literature Review**

### **2.4.1 Adoption of Computerized Accounting System**

Powell and Xiao (2006) surveyed major UK companies to determine the extent of ICT use in accounting. Among the indicators used include the extent of computerization, types of CAS in use, types of CAS applied, workstation to staff ratio, and years of CAS use. Results showed that 94% of the companies have fully or largely computerized their accounting system.

Powell and Xiao's (2006) results showed that the extent of computerization is greater in larger companies than small and medium companies. The results also confirmed earlier findings in other studies that argued firm's size as the determinants of the sophistication of CAS (Thong, 2009) and the ones found by Hunton and Flowers (2007) that company size was significantly negatively correlated with the extent of CAS use in accounting.

They suggested that the differences might be attributed to lower capital and risk barriers due to dramatic decrease of CAS cost at which firms of all sizes can benefit from the latest CAS development. Another possible explanation is that medium companies may have expanded from small companies but their managers may have limited abilities, i.e. time and education to appreciate the benefits of using integrated accounting systems.

Powell and Xiao (2006) further found that nearly eighty percent of companies are almost or fully satisfied with their CAS based accounting systems. Nearly 90% claim that their objectives of CAS applications have been fully or almost satisfied. The results revealed that most of the firms had computerized their accounting systems.

CAS adoption depends on the type of business and the management awareness on CAS and its benefits. In addition, due to the nature of business being less complex, public institutions show a greater tendency to purchase commercialized accounting packages that are much cheaper than internally or externally custom-tailored packages (Gray, 2011).

A study by Chan and Kelvin (2010) found that 52% of public institutions in Malaysia used ready-made accounting packages; 19% internally developed their packages; and only nine percent modified the externally acquired packages. Another finding is the tendency to seek external experts to assist them in choosing the appropriate accounting packages. This may be due to their inadequate knowledge in information systems.

The authors suggest that successful computer information systems implementation in public institutions requires the combination of both computer system expertise and knowledge about the business. Generally, public institutions are well versed in running

their business but lack knowledge in information system. Hence, most of public institutions always turn to external experts for assistance.

#### **2.4.2 Factors that Determine Adoption of Computerized Accounting System**

The advent of powerful, low cost micro computers, together with user-friendly accounting software, has allowed a greater number of organizations to implement CAS in recent years (Weber, 2011). The need to facilitate financial management is another motivating factor for adopting accounting software.

The major benefits of implementing a computerized accounting system are; to increase business efficiency and to facilitate timely information (DeLone). The impediment to implementing a computerized accounting systems are; lack of time (Chenhall and Morris), the view that the computerized accounting systems are costly (Henry, 2007) and lack of CAS expertise (Bretch and Martin, 2006).

Chenhall and Morris (2006) identified four main factors that determine adoption of computerized accounting systems in an organization namely; characteristics of the organization's decision makers; characteristics of the technological innovation within the organization, availability of resources within the organization; and characteristics of the environment in which the organization operates.

##### ***Characteristics of the Organizational Decision Makers***

In large business teams are typically involved in the CAS decision-making process. Characteristics of the owner-manager are critical in determining the organization's attitude to CAS. Characteristics important to CAS adoption are: innovativeness, computer self-efficacy, level of CAS knowledge, education, and CAS training experience (Chenhall and Morris, 2006).

Gray (2011) defined computer self-efficacy as a —judgment of one’s capability to use a computer. Businesses that have CEOs (typically the owner) that have undertaken computer training and possess computer self-efficacy are more likely to implement CAS. Conversely, owner-managers can inhibit any worthwhile CAS achievements through hostility or detachment towards CAS.

While CAS adoption is more likely in small enterprises where the owner-manager has CAS exuberance and competency, the question is what specific CAS skills are required? Chan and Kelvin (2010) provided further insight into this question by outlining the core skills required to exploit CAS. These skills are: ability to provide technical fixes in as complex networked environment and integrate the effort with business purpose.

### ***Characteristics of Technological Innovation***

The characteristics of technological innovation itself are also an important determinant in the decision to adopt CAS. Honig (2009) outlined the desirable characteristics of an innovation in terms of its relative advantage, compatibility, complexity, observability and trainability. These terms are defined as:

- Relative advantage: how better an innovation is perceived
- Compatibility: how consistent an innovation is perceived to be
- Complexity: how difficult an innovation is perceived to be to learn and use,
- Observability: how visible the results of innovation are to others, and
- Trainability: how much an innovation may be experimented prior to adoption



According to Honig (2009) the adoption of accounting software as the innovation, the software must be perceived better than the predecessor system (most likely a manual accounting system); must be consistent with the needs of the adopter, such as capable of handling; must be easy to learn and use; the results must be apparent; and the accounting software should be available on a trial basis.

### ***Characteristics of the Organization***

The characteristics of the organizations are other variables that influences the decision whether to adopt CAS. Organizational characteristics such as: business size, employee's level of CAS knowledge, industry sector and information-intensity. Generally, the larger the number of employees, the more information-intensive the industry – the more likely a business will adopt CAS innovation (Chan and Kelvin, 2010).

Moreover, businesses tend to suffer resource poverty when it comes to adoption of new technologies in terms of financial capacity, available time and CAS skilled staff to facilitate innovation adoption. Consequently, resource poverty raises the barrier to innovation adoption in business and this is one of the factors that affect the adoption of computerized accounting software in some organizations (Chan and Kelvin, 2010).

### ***Characteristics of the Environment***

The characteristics of the environment in which the organization operates relates to variables such as competition and external agents. For example, Gray (2011) established that competition leads to innovative technology adoption. Their study indicated that businesses with high CAS adoption rates had been influenced by external agents such as: trade associations, wholesalers and franchisors.

Herman (2006) found that business customers were a significant reason for implementing CAS, more than the influence of competitors. Public Practice Accountants are in a unique position to provide systems analysis, design, and implementation and support advice to their clients, thereby spreading the cost of acquiring this expertise among multiple customers.

### **2.4.3 Impact of Computerized Accounting Systems**

According to McBride (2000), computerized packages can quickly generate all types of reports needed by management for instance budget analysis and variance analysis. Data processing and analysis are faster and more accurate which meets the managers need for accurate and timely information for decision making. Frank wood (1999) consented to the speed with which accounting is done.

Indira (2008) pronounced the improvement in business performance as a result computerization of the accounting systems as it is a highly integrated application that transforms the business processes with the performance enhancing features which encompass accounting, inventory control, reporting and statutory processes. He then says, this helps the company access information faster and takes quicker decisions.

The influence of computerized accounting systems on financial reporting has been linked to the benefits of applying computer systems while generating financial reports. The presentation of scheduled reports can be triggered and simplified and prepared at regular interval with ease (McRae, 1998). With the application of computerization, generation of financial reports will be easy as information can be easily generated.

With the substantial increase in the number of transactions and increase in the need for real time information, maintenance of accounting data on a real time basis has become

essential. This is achievable using computerized systems hence promoting the quality of financial reporting. Carol (2002) says that computerizing business general ledger, payroll and other accounting tasks increases office efficiency.

Computerized accounting systems have also been credited for their quick processing speed and large storage capacity. Using computerized accounting systems ensure up to date account balances are available at any time to aid management in decision making. Computerization saves time on transaction hence leading to quality of financial reporting as timely, accurate and reliable information can be generated (Lewis, 1999).

A study conducted by Adesaju (2004) on internal control systems in a computerized accounting environment found that the advent of computerized accounting has helped to improve effectiveness in processing transactions and that the accounting function is made easier while the control function is made more intricate because of the technicalities involved in the application of computerization.

Abu-Musa (2004) conducted a study to investigate the significant perceived security threats of Computerized Accounting Information Systems (CAIS) in Saudi organizations. The survey results revealed that almost half of the responded Saudi organizations have suffered financial losses due to internal and external CAIS security breaches.

The findings of the study also revealed that accidental and intentional entry of bad data; accidental destruction of data by employees; employees' sharing of passwords; introduction of computer viruses to CAIS; suppression and destruction of output; unauthorized document visibility; and directing prints and distributed information to

people who are not entitled to receive are the most significant perceived security threats.

Okoye and Oghoghomeh (2011) conducted a study to investigate the impact of computerized accounting system on external audit functions. The findings of the study revealed that though auditor's knowledge of computer makes significance difference on his effective audit of a computerized accounting system, certain factors serve as limitation to its effectiveness.

Mohamed and Tahir (2012) conducted a study on the adoption of Computerized Accounting Systems (CAS) in Small and Medium Enterprises (SMEs) in Malaysia and found that the adoption of computerized accounting systems among SMEs is high. The study findings also showed that the innovativeness of the CEOs of the SMEs contribute to the usage of CAS.

A study conducted by Daoud and Triki (2013) found that the use of computerized accounting information systems has great potential to influence business performance. The purpose of this study is to examine the influence of the accounting information system in an ERP environment on firm performance. The study also found that the competence of accounting staff has a positive impact on firm performance improvement.

Rajeshwaran and Gunawardana (2008) conducted a study to investigate security controls of computerized accounting information systems in selected listed in Sri Lanka found that availability of user friendly accounting software and the increased competition have forced companies to adapt CAIS in order to remain competitive whereas threats to CAIS are unavoidable in the dynamic environment.

The results of the study spotlight a number of inadequately implemented CAIS security controls and significant differences among listed companies regarding the adequacy of implemented CAIS security controls. Based on the findings, some recommendations are given to strengthen the breaches in the present CAIS security controls in the listed companies.

The study recommends retaining the highest levels of computerized accounting information systems through keeping up human resources, hardware and equipment, software, and developing work procedures with the development of computerized accounting information systems. And also recommends making further studies to know the impact of CAISs on reducing costs in other companies and sectors.

Alshebeil (2010) aimed to identify the role of accounting information systems in achieving competitive advantage for Jordanian commercial banks, and concluded that that there is a statistically significant impact for accounting information systems on achieving the dimensions of competitive advantage (improving the pricing process, reducing costs of banking services and increasing the speed of provided services).

Amveko (2011) conducted a study in which he aimed to identify the impact of computerized accounting information systems on financial reporting, and he concluded that computerized accounting system actually have an influence on the quality of financial reports for publication purposes. The study also found that computerized accounting systems improve efficiency in financial reporting.

Dalabeeh (2012) conducted a study in which they aimed to identify the role of computerized accounting information systems in reducing the costs of medical services at King Abdullah University Hospital, and they concluded that computerized

accounting information systems play an important role in reducing the costs of medical services at King Abdullah University Hospital compared with non-computerized systems.

Polo (2013) conducted a study about effect of computerized accounting systems on audit risk management in public enterprises, and they concluded that there is significant relationship between computerized accounting systems and audit risk management in public enterprises. The findings of the study also revealed that computerized accounting helps to improve the effectiveness of accounting functions.

Okoye and Gbegi (2012) conducted a study to analyse the impact of computerized accounting system on service delivery in the banking sector. The findings of the study showed that computerized accounting system guarantees a reliable banking sector . However, the study recommended that banks should ensure that their staff are efficient and effective in using computerized accounting systems.

Amidu (2013) conducted a study to examine e-accounting practices among Ghanaian SMEs. The study revealed that almost all the SMEs sampled attach a lot of importance to financial information by employing at least degree holders and Chartered Accountants to handle their accounting information. The study also showed that majority of the firms put in place accounting softwares to generate financial information.

This has the tendency to reduce cost, enhance clerical works, provide sufficient space to store data and process information for management decision in a timely manner. In terms of functionality, the results of the study showed that almost all the SMEs use the

software for accounts receivables functions as well as accounts payables, inventory management, payroll, fixed assets management and cash management.

The results of the study also revealed that majority of the SMEs encounter problems in supply of electricity with the frequent breakdown of their accounting system. We found that almost all the SMEs are generally satisfied with the performance of their accounting software. It is recommended that SMEs in Ghana adhere to good and standard accounting principles in their operations.

A study Polo and Oima (2012) conducted a study to investigate the effect of computerized accounting systems on audit risk management in public enterprises within Kisumu County. The findings of the study identified risk factors identified important areas of information system risks to be the risk of breaches in system security and the risk that the information provided by the system is inadequate.

Abdallah (2012) conducted a study on the impact of using accounting information systems on the quality of financial statements. The study found that there is a presence of an impact when using the accounting information systems on the quality of financial statements. The study recommended accountants to focus on the development of the devices used in the department, train and development of the staff on an ongoing basis.

Breen (2003) conducted a study to investigate small business usage of a Computerized Accounting System (CAS) to ascertain if there are obstacles that prevent small businesses from migrating to such a system. Two groups of small businesses are surveyed. The study found that development of an understanding of the obstacles that inhibit the use of a CAS is very useful.

#### **2.4.4 Challenges encountered with the Use of Computerized Accounting Systems**

Despite the numerous benefits of Computerized accounting systems that can be listed they are not without challenges. The impediments to implementing a CAS include: lack of time (Proudlock et al. 1999), owner-manager's view that the CAS is costly (Head 2000), perception that the technology is not suited to the nature of the business (ABS 2000), and lack of IT expertise (ABS 2000; Burgess 1997).

Meigs (1986) stresses that there is a risk of improper human intervention with the computer programs and computer files. Employees in the organization may temper with the computer programs and computer based records for the purpose of deliberately falsifying accounting information. This may result into distortion of information that would essential be for decision making.

#### **2.5 Research Gap**

From the literature reviewed above, many studies have been conducted on the impact of computerized accounting systems on efficiency, effectiveness and performance of accounting functions. However, but there are little research which has been conducted on the impact of computerized accounting system on performance of payroll accounting in UWASAs. As a result, there is a knowledge gap. This study aims to fill that gap.



## **CHAPTER THREE**

### **3.0 RESEARCH METHODOLOGY**

#### **3.1 Overview**

This chapter presents the overall research design, location of the study, sample of the study, sample size, sampling techniques used to select respondents, nature of the study, data collection techniques that were used to collect relevant information and data analysis as well as sources of data collection techniques.

#### **3.2 Research Approach**

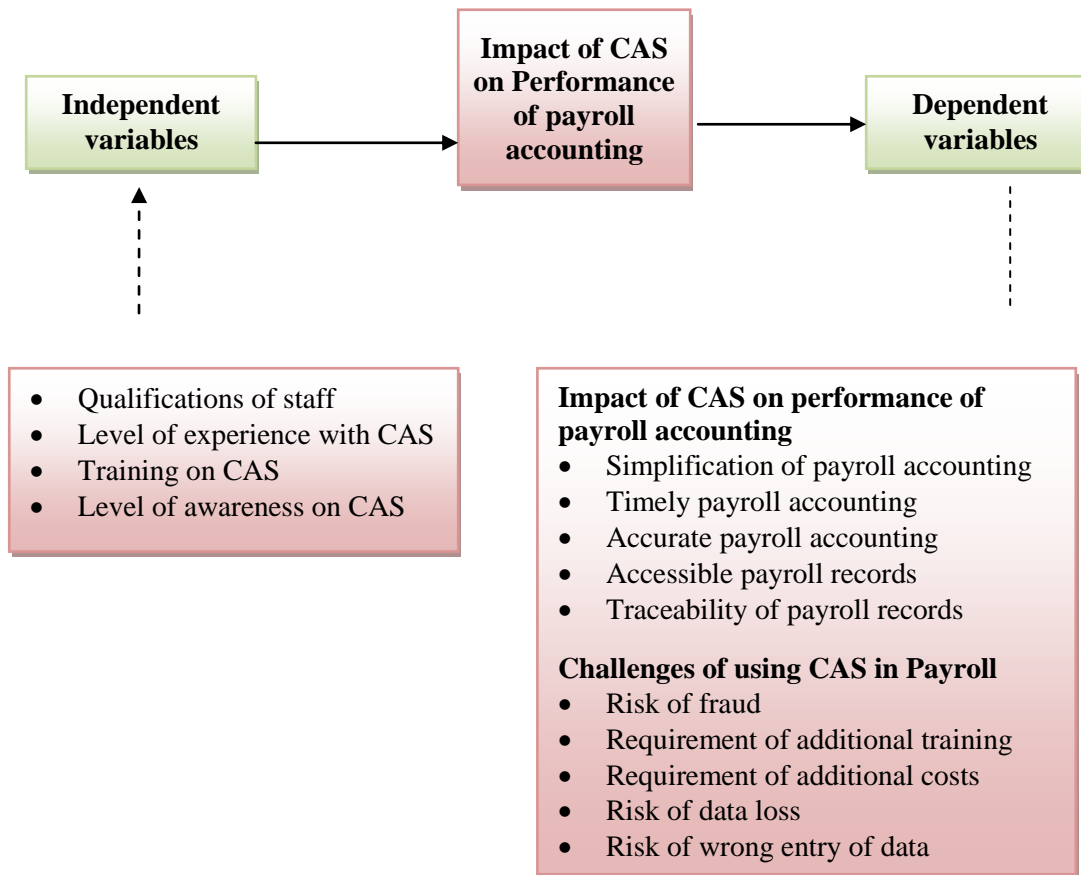
This study was guided by the positivist research approach. The positivist research approach is characterized by off testing of hypothesis developed from existing theory (theory testing) through measurement of variables. The positivist research approach presumes that knowledge is valid only if it is based on observations of the external reality (Flowers, 2008).

The positivist research approach also assumes that theories can explain the relationship between dependent and independent variables and can be used to predict outcomes of the study. Positivism is based on values of reason and validity and it focuses on facts gathered from theories and which can be measured empirically using quantitative methods (Kothari, 2006).

#### **3.3 Conceptual Framework**

According to the conceptual framework explained below, the extent and impact of CAS on effectiveness of accounting practice in public institutions depends on various factors such as; type of organization, size of the organization, qualifications of staff, level of experience with CAS, training on CAS, level of awareness on CAS, availability of CAS resources, availability of CAS policy and conducive working environment.

The positive impact of adoption of CAS on accounting practice includes; simplification of accounting tasks, timely preparation of financial reports, accurate financial reporting, accessible financial information and traceable transactions. The challenges of using CAS in payroll accounting include; risk of fraud, need for additional training, additional costs, risk of data loss and risk of entry of wrong financial data.



**Fig. 3.1: Conceptual Framework**

Source: Researcher (2014).

### 3.4 Research Population/Area of the Study

According to Kothari (2006), the term population connotes an entire group of individuals, events or objects that have a common observable characteristic. It refers to all elements that meet certain criteria for inclusion in a given universe. The population of this study comprised of members of staff of UWASAs in their Accounting Departments (See Appendix I for a complete list of UWASAs).

### 3.5 Sampling Design and Procedure

According to Kothari (2006), sampling is defined as the selection of some parts of aggregate of the totality based on which a judgment or inference about the aggregate or totality is made. Kothari (2006) also defines sample as a collection of some parts of the population to be a true representative of the population. Sample size refers to a number of items to be selected from the population.

**Table 3.1 : Sampling Distribution**

<b>UWASA</b>	<b>HRO</b>	<b>AHRO</b>	<b>PA</b>	<b>APA</b>	<b>CA</b>	<b>TOTAL</b>
Arusha	1	1	1	1	1	5
Bukoba	1	1	1	1	1	5
Dodoma	1	1	1	1	1	5
Kahama	1	1	1	1	1	5
Mbeya	1	1	1	1	1	5
Morogoro	1	1	1	1	1	5
Moshi	1	1	1	1	1	5
Mwanza	1	1	1	1	1	5
Shinyanga	1	1	1	1	1	5
Tanga	1	1	1	1	1	5
<b>TOTAL</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>50</b>

Source: Field Data

**Key;**

**HRO**            **Human Resources Officer**

**AHRO**         **Assistant Human Resources Officer**

**PA**             **Payroll Accountant**

**APA**          **Assistant Payroll Accounting**

**CA**             **Chief Accountant**

### 3.6 Variables and Measurement Procedures

In conducting the study, the researcher used the following variables to assess the impact of CAS on performance of payroll accounting. The variables were measured based on the feedback they give when answering interview and questionnaires

<b>Independent variables</b>	<b>Dependent Variables</b>
Qualifications of staff	Simplification of payroll accounting
Level of experience with CAS	Timely payroll accounting
Training on CAS	Accurate payroll accounting
Level of awareness on CAS	Accessible payroll records
	Traceability of payroll records

Source: Researcher's Analysis (2014)

### 3.7 Methods of Data Collection

The following data collection methods were used during the study.

#### 3.7.1 Questionnaire

A questionnaire is a set of questions which are usually sent to the selected respondents to answer at their own convenient time and return back the filled questionnaire to the researcher. In this study, questionnaires were used to collect information from respondents. The reason for using questionnaires is because they cover large sample at low cost, and gives respondents adequate time to give well thought-out answers.

#### 3.7.2 Interview

According to (Kothari, 2006), an interview is a set of question administered through oral or verbal communication or is a face to face discussion between the researcher and the interviewee respondent. Both group and individual interviews were conducted with respondents. Interviews enabled the researcher to get supplementary information obtained by using questionnaires.

### **3.7.3 Documentation**

Documentation method was used because it enabled the researcher to get ready-made data and information by passing through various documents such as; books, magazine, journals and research reports concerning the topic in question. This method helped the researcher to simplify the task of the researcher by providing ready-made statistical information.

### **3.8 Data Processing and Analysis**

After data has been collected using methods listed above, the data was reduced into summary form. The summary was processed by using Software Package for Social Scientists (SPSS) and MS Excel. The research findings were organized and presented in the form of words, numbers and percentages by using tables, histograms, charts and graphs

## CHAPTER FOUR

### 4.0 DATA ANALYSIS, PRESENTATION AND DISCUSSIONS

This chapter presents and discusses findings from the study.

#### 4.1 Age profile of respondents

The researcher analyzed the age profile of respondents and feedback was documented as shown in the table and figure below;

**Table 4.1 : Age profile of respondents**

	<b>25-30 years</b>	<b>31-35 years</b>	<b>36-40 years</b>	<b>41-50 years</b>
No. of respondents	4	24	18	6
Percentage	8%	48%	32%	12%

Source: Researcher's Analysis (2014)

Findings of the study show that 48% of respondents were aged 31-35 years, 32% of respondents were aged 36-40 years, 12% of respondents are aged 41-50 years and 8% of respondents were aged 25-30 years.

#### 4.2 Gender profile of respondents

The researcher analyzed gender of respondents and feedback was documented as shown in the table and figure below;

**Table 4 2 : Gender profile of respondents**

	<b>Females</b>	<b>Males</b>
No. of respondents	20	30
Percentage	40%	60%

Source: Researcher's Analysis (2014)

Findings above show that 60% of respondents were males and 40% of respondents were females. These findings show that there are more males respondents than females.

#### 4.2.1 Level of education of respondents

The researcher analyzed the level of education of respondents and the feedback was documented as shown in the table and figure below;

**Table 4.3 : Level of education of respondents**

	<b>No. of respondents</b>	<b>Percent (%)</b>
Diploma	8	16
Degree	30	60
Postgraduate Diploma	7	14
Masters	5	10
<b>Total</b>	<b>50</b>	<b>100</b>

Source: Researcher's Analysis (2014)

Findings above show that 60% of respondents have degrees, 16% have diplomas, 14% have Postgraduate diplomas while 10% have Masters degrees.

#### 4.3 Level of awareness of respondents on application of Computerized Accounting Systems in payroll

The researcher analyzed the level of awareness of respondents on applications of CAS in payroll processing, and the feedback is shown in the table and figure below;

**Table 4.4 : Level of awareness of respondents on application of Computerized Accounting Systems in payroll**

	<b>No. of respondents</b>	<b>Percent (%)</b>
Totally aware	29	58
Not aware	16	32
Partially aware	5	10
Total	50	100

Source: Researcher's Analysis (2014)

Findings above show that 72% of respondents were totally aware of applications of CAS in payroll processing, 18% were partially aware while only 10% of respondents were not aware of applications of CAS in payroll processing.

#### **4.4 Level of work experience of respondents**

The researcher analyzed the level of work experience of respondents and the feedback was documented as shown in the table and figure below;

**Table 4.5 : Level of work experience of respondents**

	<b>7 years or more</b>	<b>5-6 years</b>	<b>3-4 years</b>	<b>0-2 years</b>
No. of respondents	39	6	3	2
Percentage	78%	12%	6%	4%

Source: Researcher's Analysis (2014)

The findings above show that 78% of respondents had work experience of 7 years or more, 12% of respondents had work experience of 5-6 years, 6% of respondents.

#### **4.5 Extent of adoption of Computerized Accounting Systems in payroll processing**

##### **4.5.1 Type of Computerized Accounting Systems used**

The researcher analyzed the feedback of respondents on the type of CAS used. The findings from the analysis were documented as shown in the table and figure below;



**Table 4.6 : Type of Computerized Accounting Systems used**

	<b>Frequency</b>	<b>Percent (%)</b>
Tally	37	74
Pastel	7	14
SUN	2	4
Sage	2	4
Quick Books	2	4
<b>Total</b>	<b>50</b>	<b>100</b>

Source: Study Findings, 2014

The findings above show that 74% of use Tally, 14% of respondents use Pastel, 4% of respondents use SUN, 4% of respondents use Sage and 4% of respondents use Quick Books.

#### **4.6 Adoption of Computerized Accounting Systems in payroll processing**

The researcher analyses the feedback of respondents on whether their organization had adopted the application of CAS in payroll processing. The findings from the analysis were documented as shown in the table and figure below;

**Table 4.7 : Adoption of Computerized Accounting Systems in payroll processing**

	<b>Frequency</b>	<b>Percent (%)</b>
Strongly agree	40	80
Agree	8	16
Not sure	-	0
Disagree	2	4
Strongly disagree	-	0
<b>Total</b>	<b>50</b>	<b>100</b>

Source: Research Findings, 2014

The findings above show that 80% of respondents strongly agreed, 16% of respondents agreed and 4% of respondents disagreed that they have adopted CAS in payroll processing. There were no respondents who were not sure or who strongly disagreed.

#### **4.7 Frequency of using Computerized Accounting Systems S in payroll processing**

The researcher analyzed the feedback of respondents on how often they use CAS in payroll processing. The findings from the analysis were documented as shown in the table and figure below;

**Table 4.8 : Frequency of using Computerized Accounting Systems in payroll processing**

	<b>Frequency</b>	<b>Percent (%)</b>
All the time	23	46
Frequently	18	36
Once in a while	5	10
Seldom	2	4
Not at all	2	4
Total	50	100

Source: Research Findings, 2014

The findings above show that 46% of respondents use CAS in payroll processing all the time, 36% of respondents use CAS frequently, 10% of respondents use CAS once in a time, 4% of respondents use CAS seldom and 4% of respondents don't use CAS at all.

#### **4.8 Effectiveness of payroll processing after adoption of Computerized Accounting Systems**

The researcher analyzed the feedback of respondents on whether payroll processing became more effective after the adoption of CAS. The findings from the analysis were documented as shown in the table and figure below;

**Table 4.9 : Effectiveness of payroll processing after adoption of Computerized Accounting Systems**

	<b>Frequency</b>	<b>Percent (%)</b>
Very effective	5	10
Effective	13	26
Not sure	5	10
Less effective	15	30
Not effective	12	24
<b>Total</b>	<b>50</b>	<b>100</b>

Source: Research Findings, 2014

The findings above show that 36% of respondents responded that payroll processing became very effective or effective after adoption of CAS, 54% of respondents said payroll processing became less effective or not effective, while 10% were neutral.

#### **4.9 Impact of Computerized Accounting Systems on performance of payroll accounting**

The researcher analyzed the feedback of respondents on whether the adoption of CAS has helped to improve the performance of payroll accounting in their organization, The findings from the analysis were documented as shown in the table and figure below;

**Table 4.10 : Adoption of Computerized Accounting Systems has improved performance of payroll accounting**

	<b>Frequency</b>	<b>Percent (%)</b>
Strongly agree	30	60
Agree	6	12
Not sure	9	18
Disagree	3	6
Strongly disagree	2	4
<b>Total</b>	<b>50</b>	<b>100</b>

Source: Research Findings, 2014

The findings above show that 60% of respondents strongly agreed that the adoption of CAS has improved performance of payroll accounting, 12% of respondents agreed, 18% of respondents were not sure, 6% disagreed and 4% of respondents strongly disagreed.

#### **4.10 Positive impacts of Computerized Accounting Systems on payroll accountings**

##### **4.10.1 Simplification of payroll processing**

The researcher analyzed the feedback of respondents on whether adoption of CAS in payroll accountings helps to simplify payroll processing. The findings from the analysis were documented as shown in the table and figure below;

**Table 4.11** : Simplification of payroll processing

	<b>Frequency</b>	<b>Percent (%)</b>
Strongly agree	40	80
Agree	8	16
Not sure	2	4
Disagree	-	-
Strongly disagree	-	-
<b>Total</b>	<b>50</b>	<b>100</b>

Source: Study Findings, 2014

The findings above show that 80% of respondents strongly agreed, 16% of respondents agreed while 4% of respondents were not sure. There were no respondents who strongly disagreed or disagreed.

#### 4.11 Timely preparation of payroll

The researcher analyzed the feedback of respondents on whether adoption of CAS in payroll accounting facilitates timely preparation of payroll. The findings from the analysis were documented as shown in the table and figure below;

**Table 4.12 : Timely preparation of payroll**

	<b>Frequency</b>	<b>Percent (%)</b>
Strongly agree	35	70
Agree	8	16
Not sure	5	10
Disagree	2	4
Strongly disagree	-	-
Total	50	100

Source: Study Findings, 2014

70% of respondents strongly agreed that adoption of CAS resulted in timely preparation of payroll, 16% of respondents agreed, 10% of respondents were not sure and 4% of respondents disagreed. No respondents strongly disagreed.

#### 4.12 Accuracy of payroll

The researcher analysed the feedback of respondents on whether adoption of CAS in payroll accountings results in accuracy of payroll. The findings from the analysis were documented as shown in the table and figure below;

**Table 4.13 : Accuracy of payroll**

	<b>Frequency</b>	<b>Percent (%)</b>
Strongly agree	40	80
Agree	8	16
Not sure	-	0
Disagree	2	4
Strongly disagree	-	0
Total	50	100

Source: Study Findings, 2014

The findings above show that 80% of respondents strongly agreed that adoption of CAS resulted in accuracy of payrolls, 16% of respondents agreed and 4% of respondents disagreed. There were no respondents who were not sure or who strongly disagreed.

#### 4.13 Accessibility of payroll information

The researcher analyzed the feedback of respondents on whether adoption of CAS in payroll accountings facilitates accessibility of payroll information. The findings from the analysis were documented as shown in the table and figure below;

**Table 4.14 : Accessibility of payroll information**

	<b>Frequency</b>	<b>Percent (%)</b>
Strongly agree	12	24
Agree	22	44
Not sure	9	18
Disagree	5	10
Strongly disagree	2	4
<b>Total</b>	<b>50</b>	<b>100</b>

Source: Study Findings, 2014

The findings show that 24% of respondents strongly agreed that adoption of CAS results in accessibility of payroll information, 44% of respondents agreed, 18% of respondents were not sure, 10% of respondents strongly disagreed and 4% of respondents disagreed.

#### 4.14 Traceability of payroll deductions

The researcher analyzed the feedback of respondents on whether adoption of CAS in payroll accountings facilitates traceability of payroll deductions. The findings from the analysis were documented as shown in the table and figure below;

**Table 4.15 : Traceability of payroll deductions**

	<b>Frequency</b>	<b>Percent (%)</b>
Strongly agree	18	36
Agree	20	40
Not sure	5	10
Disagree	5	10
Strongly disagree	2	4
<b>Total</b>	<b>50</b>	<b>100</b>

Source: Study Findings, 2014

The findings above show that 36% of respondents strongly agreed that adoption of CAS facilitates traceability of deductions, 40% of respondents agreed, 10% of respondents were not sure, 10% of respondents strongly disagreed and 4% of respondents disagreed.

#### 4.15 Negative impacts of Computerized Accounting Systems on payroll accounting

##### 4.15.1 Risk of fraud

The researcher analysed the feedback of respondents on whether adoption of CAS in payroll accounting exposes users to risk of fraud. The findings from the analysis were documented as shown in the table and figure below;

**Table 4.16 : Risk of fraud**

	<b>Frequency</b>	<b>Percent (%)</b>
Strongly agree	30	60
Agree	15	30
Not sure	3	6
Disagree	2	4
Strongly disagree	-	-
<b>Total</b>	<b>50</b>	<b>100</b>

Source: Study Findings, 2014

The findings above show that 60% of respondents strongly agreed adoption of CAS in payroll accounting exposes users to risk of fraud, 30% of respondents agreed, 6% of respondents were not sure a while 4% of respondents disagreed.

#### **4.16 Requires additional costs**

The researcher analysed the feedback of respondents on whether adoption of CAS in payroll accounting requires additional costs to the user organizations. The findings from the analysis were documented as shown in the table and figure below;

**Table 4.17 : 1 Requires additional costs**

	<b>Frequency</b>	<b>Percent (%)</b>
Strongly agree	35	70
Agree	8	16
Not sure	5	10
Disagree	2	4
Strongly disagree	2	4
<b>Total</b>	<b>50</b>	<b>100</b>

Source: Study Findings, 2014



The findings above show that 70% of respondents strongly agreed, 16% of respondents agreed, 10% of respondents were not sure, 4% of respondents disagreed and 4% of respondents strongly disagreed.

#### **4.17 Requires additional training**

The researcher analyzed the feedback of respondents on whether adoption of CAS in payroll accounting requires additional training for users within the organization. The findings from the analysis were documented as shown in the table and figure below;

**Table 4.18 : Requires additional training**

	<b>Frequency</b>	<b>Percent (%)</b>
Strongly agree	29	58
Agree	15	30
Not sure	2	4
Disagree	2	4
Strongly disagree	2	4
<b>Total</b>	<b>50</b>	<b>100</b>

Source: Study Findings, 2014

The findings above show that 58% of respondents strongly agreed, 30% of respondents agreed, 4% of respondents were not sure, 4% of respondents disagreed and 4% of respondents strongly disagreed.

#### **4.18 Risk of data loss**

The researcher analysed the feedback of respondents on whether adoption of CAS in payroll accounting puts the organization at a risk of data loss due to computer malfunction. The findings from the analysis were documented as shown below;

**Table 4.19 : Risk of data loss**

	<b>Frequency</b>	<b>Percent (%)</b>
Strongly agree	5	10
Agree	5	10
Not sure	15	30
Disagree	30	50
Strongly disagree	-	-
<b>Total</b>	<b>50</b>	<b>100</b>

Source: Study Findings, 2014

The findings above show that 10% of respondents strongly agreed, 10% of respondents agreed, 30% of respondents were not sure and 50% of respondents disagreed. There were no respondents who strongly disagreed.

#### **4.19 Risk of entry of wrong data**

The researcher analyzed the feedback of respondents on whether adoption of CAS in payroll accounting may result in risk of entry of wrong data. The findings from the analysis were documented as shown in the table and figure below;

**Table 4.20 : Risk of entry of wrong data**

	<b>Frequency</b>	<b>Percent (%)</b>
Strongly agree	5	10
Agree	15	30
Not sure	5	10
Disagree	15	30
Strongly disagree	10	20
<b>Total</b>	<b>50</b>	<b>100</b>

Source: Study Findings, 2014

The findings above show that 10% of respondents strongly agreed, 30% of respondents agreed, 10% of respondents were not sure, 30% of respondents disagreed and 20% of respondents strongly disagreed.

## CHAPTER FIVE

### 5.0 CONCLUSION AND RECOMMENDATION

#### 5.1 Discussion of major findings from the Study

##### **5.1:1 The use of a computerized accounting system on performance of payroll accounting**

The study showed that the UWASAs (case study) actually make use of a computerized accounting system. This is evidenced by the results given by the respondents in agreement with the use of the system in the UWASAs. Where the uses of a computerized accounting system are; the system's ability to perform data entry, data processing, data security and data reproduction or reporting such as the generation of financial statements, water billing, payroll report. All these functions of the system have enabled the UWASAs to run its operations smoothly in a much more effective and efficient manner.

##### **5.1:2 The pros and cons of computerized accounting system on performance of payroll accounting**

According to the findings from the study, a computerized accounting system is of a great importance to the running of the UWASAs but is also associated with its own weaknesses that sometimes hinder efficiency in the UWASAs business environment. The most prominent values of the system being: ability to carry out automatic financial auditing and transaction balancing, easy communication, user friendliness, speed and the time saving factor. With all these values at hand, it is clear that the system actually performs its operations very well as far as guaranteeing effectiveness and efficiency of business operations is concerned.

The irregularities of the system however, count in as well. These majorly include risks of system failure and eye strains among others. Most of these weaknesses of the system can actually be combated easily in order to reduce on the business risks that may come up as a result. For example, system failure can be solved through consistent upgrading of the system and the aspect of eye strains can be controlled by avoiding long working hour on computers and operation through working shifts.

**5.1:3 To establish the qualities of payroll reports generated by a computerized accounting system.**

From the findings, payroll reports generated through computerized accounting are mainly consistent, reliable and material among other qualities. These most prominent qualities of financial reports generated through computerized accounting make the system much more unique to the manual accounting system especially where accuracy in payroll calculations and reliability in reporting count. It is one of the strongholds as to why most of the respondents prefer a computerized accounting system to the manual accounting system. With this in mind, it is worth to recommend a computerized accounting system for business operations especially in of the financial nature as compared to the outdated manual accounting system.

**5.2 Overall Findings**

From the findings summarized above, it indicate that adoption of CAS in accounting practices has both, positive and negative impacts. The positive impacts include; simplification of payroll processing, timely preparation of payroll, accuracy of payroll and traceability of payroll deductions. The negative impacts include; risk of fraud and requirement of additional training for users and additional costs.

### 5.3 Recommendations

- i. From the findings and summary, the researcher recommends that first and foremost, the UWASAs needs to acquire a computerized accounting system that suits the organizational needs, enough resources needed to be saved for a tailor made software and system analyst need to be consulted in this important issue.
- ii. There should also be routine system maintenance programs put in place so that the system can get rid of shortfall such as viruses, fraud among others that may affect the system operations, this should be done so that the system can operate to the expectation of management and other users.
- iii. On the management point of view, it is important that staff for handling transactions are trained so as to improve on the accuracy and speed in posting. With increased improvements and versions of accounting packages, staff needs constant and continuous training by the authorized dealers of the packages so that they remain well acquainted with the knowledge and experience of the package. In addition to the training, it is important to constantly appraise the staff to check which staff is failing the system as regards reporting unbiased financial information.
- iv. The UWASAs needs more internal audit reviews to appraise and check the strength of the instituted controls within the system. The computerized accounting system is prone to fraud in cases where physical cash is involved. Without internal audit reviews, there may arise cases of ghost workers fraud that may pass unnoticed. It is therefore important external auditors come in once in a while to do audit.
- v. There is a need to increase the security levels in the internal control system. Management needs to ensure that requisitions are authorized; cheque payment,

vouchers and other source documents are approved. On recording, it is important to have a clerk to enter the data which is then updated yet by another person preferably one with more experience and expertise. Management can also consider the option of using a networked system linking all the system in the finance , accounting and Human Resources department. This is because the current system uses standalone personal computers. In this way, errors and fraud possibilities are minimized thus improving on the quality of financial reports.

- vi. The accounting staff should rotate regularly in different accounting section by doing so it will be difficult for person to be tempted to commit frauds by using the knowledge and experiences he / she has in a specific section
- vii. Although there is accuracy and speed in transmitting information concerning payroll between other departments and payroll section the management should keep updating with new information technology.

#### **5.4 Areas of Further Studies**

There is need to explore whether it is only the qualitative characteristics that determine the quality of payroll performance reporting or if there are other factors. If there are, such factors also need to be established. More research should be carried out about how the computerized accounting system can be run alongside the manual system. It is generally accepted that the computerized system alone is very vulnerable. Therefore, there is need to investigate how the two systems can be used concurrently, and perhaps a research to establish the role of management in promoting the quality of payroll performance reporting in UWASAs will be a great contribution to the Society.

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**APPENDIX 1 : QUESTIONNAIRE**

**Title: Impact of Computerized Accounting System on Performance of Payroll Accounting: Case Of Urban Water and Sewerage Authorities (UWASAs).**

**INTRODUCTION:**

My name is **Bahati Alfred**. I am a student at the Open University of Tanzania (OUT). I have prepared this questionnaire for the purpose of collecting data on a research work titled: “The Impact of Computerized Accounting Systems on Performance of Payroll Accounting: Case Study of Urban Water and Sewerage Authorities” in partial fulfillment for the award of a Masters degree in Business Administration (Finance).

**Please tick or circle where appropriate.**

**SECTION A: DEMOGRAPHIC CHARACTERISTICS**

- 1) Age
  - a) 25-30 years
  - b) 31-35 years
  - c) 36-40 years
  - d) 41-50 years
  
- 2) Gender
  - a) Male
  - b) Females
  
- 3) Level of education
  - a) Diploma
  - b) Bachelor’s degree
  - c) Post Graduate Diploma
  - d) Masters degree
  
- 4) Level of awareness on computerized accounting system
  - a) Totally aware
  - b) Partially aware
  - c) Not aware

5) Level of work experience with computerized accounting systems

- a) 7 years or more
- b) 5-6 years
- c) 3-4 years
- d) 0-2 years

6) Which of the following computerized accounting systems do you use?

- a) Tally
- b) Pastel
- c) SUN
- d) Sage
- e) QuickBooks
- f) Other. Please mention \_\_\_\_\_

### Section B: Extent of Adoption of CAS

7) To what extent do you use computerized accounting system in payroll?

	<b>Strongly agree</b>	<b>Agree</b>	<b>Not sure</b>	<b>Disagree</b>	<b>Strongly disagree</b>
All the time					
Frequently					
Once in a while					
Seldom					
Not at all					

### Section C: Performance of payroll accounting after adoption of CAS

8) How effective has payroll processing become after adoption of computerized accounting system?

- a) Very effective
- b) Effective
- c) Not sure

d) Less effective

e) Not effective

9) Has the adoption of computerized accounting system helped to performance of payroll accounting within your organization?

a) Strongly agree

b) Agree

c) Not sure

d) Disagree

e) Strongly disagree

**Section D: Positive impacts of adoption of CAS in payroll accounting**

10) Which of the following are the positive impacts of adoption of computerized accounting system on payroll accounting within your organization?

	<b>Strongly agree</b>	<b>Agree</b>	<b>Not sure</b>	<b>Disagree</b>	<b>Strongly disagree</b>
Simplification of payroll accounting tasks					
Timely preparation of payroll					
Improved accuracy of payroll records					
Improved performance of payroll accounting					
Time and cost saving in processing payroll					



**Section E: Challenges facing adoption of CAS in payroll accounting**

11) What challenges does your organization face in adopting computerized accounting system in payroll?

	<b>Strongly agree</b>	<b>Agree</b>	<b>Not sure</b>	<b>Disagree</b>	<b>Strongly disagree</b>
Risk of fraud					
Required additional training					
Requires additional costs					
Risk of data loss through theft, fire or human error					
Risk of wrong data entry					

Other, please mention

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12) What measures have been taken by your organization to overcome the challenges faced in adopting computerized accounting system in payroll?

13) Have those measures mentioned above helped your organization to overcome the challenges?

- a) Strongly agree
- b) Agree
- c) Not sure
- d) Disagree
- e) Strongly disagree

14) In your opinion, what measures should be taken by your organization to improve performance of payroll accounting and overcome the challenges faced in adopting computerized accounting system in payroll?

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**Appendix 2 : INTERVIEW QUESTIONS**

- 1) What is your level of awareness on computerized accounting systems?
- 2) What is your level of experience in using computerized accounting systems?
- 3) Which accounting system does your organization use?
- 4) How often do you use computerized accounting systems?
- 5) How effective has payroll processing become after adoption of computerized accounting system?
- 6) Has the adoption of computerized accounting system helped to performance of payroll accounting within your organization?
- 7) Has the adoption of computerized accounting system helped to simplify payroll accounting tasks?
- 8) Has the adoption of computerized accounting system helped to facilitate timely preparation of payroll?
- 9) Has the adoption of computerized accounting system helped to improve accuracy of payroll records?
- 10) Has the adoption of computerized accounting system helped to improve performance of payroll accounting?
- 11) Has the adoption of computerized accounting system helped to save cost and time in payroll accounting?
- 12) Has the adoption of computerized accounting system resulted in fraud?

- 13) Has the adoption of computerized accounting system necessitated the need for additional training for staff members?
- 14) Has the adoption of computerized accounting system resulted in additional costs?
- 15) Has the adoption of computerized accounting system resulted in loss of data through theft, fire or human error?
- 16) Has the adoption of computerized accounting system resulted in wrong data entry?
- 17) What measures have been taken by your organization to overcome the challenges faced in adopting computerized accounting system in payroll?
- 18) Have those measures mentioned above helped your organization to overcome the challenges?