

**EFFECT OF COMPUTER APPLICATIONS ON THE PREPARATION OF
QUALITY FINANCIAL REPORTS FOR PUBLIC UNIVERSITIES
IN WESTERN KENYA**

BY

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ABSTRACT

Computer accounting systems' literature show computer applications are important in the preparation of quality financial reports. Previous studies mainly focus on automated accounting information system and computer security issues, failing to study the extent of computer applications in the preparation of quality financial reports; effect of Ms Navision software application on quality of financial reports and the effect of Ms Excel software application on quality of financial reports in public universities are unknown. Therefore, the purpose of this study was to analyze the effect of computer applications on the preparation of quality financial reports for public universities in Western Kenya. Specific objectives were to: determine the extent of adoption of computer applications in the preparation of quality financial reports, analyze the effect of Ms Navision software application on the preparation of quality financial reports and establish the effect of Ms Excel software application on the preparation of quality financial reports in the public Universities in Western Kenya. The study was anchored on resource mobilization theory employing correlational research design. Study population constituted 35 employees in Finance department of selected five public universities in Western Kenya. Reliability was done using pilot study which yielded alpha coefficient above 0.7 while validity was done using expert reviewers. Primary and secondary data were collected using questionnaires and desk review respectively. Data was analyzed using descriptive and inferential statistics and presented using tables. The findings were that Ms Excel and Ms Navision software are used respectively to a very great extent (Mean = 4.000, Std.dev = .675) and (Mean = 3.000, Std.dev = .844) meaning that computer applications are used widely. Ms Navision application is an insignificant positive predictor of financial reports ($\beta = .336$, $p = .017$) implying that a unit change in application of Ms Navision software leads to an increase in quality of financial reports of 0.336 %, while Ms Excel application is a significant positive predictor of financial reports ($\beta = .800$, $p = .000$) meaning that a unit change in application of Ms Excel software in preparation of financial reports leads to an increase in quality of financial reports of 0.800 %. The study concludes that Ms Excel and Ms Navision software are used to a great extent; use of Ms Navision and Ms Excel software influences quality of financial reports positively. The study recommends that; management of public universities should intensify application of computer applications in preparation of financial reports; management of public universities should intensify application of Ms Navision software and increase application of Ms Excel software. The findings may help public universities to adopt computer applications that would enhance their financial reports and prove to be useful to both academics and industry players in the education sector.

CHAPTER ONE

INTRODUCTION

This chapter covers background of the study, statement of the problem, objectives of the study, hypothesis, and scope of the study, significance of the study and conceptual framework.

1.1. Background of the Study

Information technology has existed almost at every stage of human existence but being reflected differently at each stage (Haigh, 2011). The use of computer technology has made a tremendous global impact in all sectors of life and has made a huge transformation particularly in the way of doing business both within and across countries. Since 1950's when information storage and processing using computers started, it became easier and quicker to handle massive data and produce more accurate and timely reports (Kharuddin *et al.*, 2010). Since then, most organizations have been changing their ways of transacting business to increase their levels of profitability (Elliot, 1992; Porter, 1980; Fisher *et al.*, 2000).

The evolution of computer technology has completely transformed accounting systems, and studies have shown that financial outcome of a firm will always depend on how much one invests and improves the accounting information system being used (Imeokparia, 2013). In the area of accounting and finance, the use of hand in financial reporting has been replaced by the use of computer softwares to enable quick reporting and easy processing and storage of financial information, hence due to facilitation of accounting softwares, preparation and access of financial statements and use of accounting procedures has been made easy (Kharuddin *et al.*, 2010). In the current business world, failure to use computer software almost implies that financial information may not be accurate, delays in financial reporting, and that financial information may not be stored for a long time.

A computerized accounting system can be referred to as an accounting information system that processes the financial transactions and events to produce accurate accounting results as per the user requirements or guidelines. In a computerized accounting system, the process of storage and handling of data, which is normally referred to as operating

environment consists of computer hardware and software under which the accounting system operates. Computer hardware and software are interdependent and so one cannot do without the other. The link here is that, the type of accounting system employed determines the operating environment. More so, the nature of software used determines its hardware so selecting computer hardware depends upon several factors like the number of users, secrecy level and the sectional or departmental activities in the organization, etc. (Adamaka, 2013).

Computerized accounting systems generate accounting information that help rationalize and support economic decisions which affect the resources of communities and consequently the well-being of community members (Kahaleh, Hanan, 1997). The accounting system is strongly connected with various administrative processes; it helps rationalize decisions, makes the administrative process more effective in satisfying the needs of the organization's management and raises the levels of performance in order to realize goals (Kehale, *et al.*, 1997).

Prior studies (Loch *et al.*, 1992; Ryan and Bordoloi, 1997; Henry, 1997; Hood and Yang, 1998; Abu-Musa, 2001; UPA Forex & ICT, 2012 and Patrick *et al.*, 2013) show that computer applications are critical to the production of quality financial reports. While Loch *et al.* (1992) explored the perception of MIS executives regarding the security threats in microcomputer, mainframe computer and network environments, Ryan and Bordoloi (1997) examined how companies moving from a mainframe to a client/server environment evaluated and took security measures to protect against potential security threats. On the other hand, Henry (1997) surveyed the nature of the accounting systems and security in use and found that 80.3 % of the companies backed-up their accounting systems.

On the contrary, Hood and Yang (1998) studied the impact of information systems security on banking in China in comparison to the UK. Similarly, Abu-Musa (2001) investigated security threats of CAIS in the Egyptian Banking Sector (EBS) using a self-administered questionnaire which included 19 CAIS security threats. Hunton *et al.* (2005) in UK examined the extent to which financial auditors and Information Systems (IS) audit specialists recognize differences in the nature and unique business and audit risks associated with enterprise resource planning (ERP) systems, while Patrick *et al.* (2013)

studied the ICT utilization in the financial management of the Ghana Education System (GES). The UPA Forex and ICT (2012) carried out a study on the impact of ICT on accounting practice in Nigeria. The study found out that the application of Information and Communication Technology (ICT), on accounting practice in Nigeria was applied to very great extent and that ICT had a positive impact on accounting practice in terms of preparation of financial reports.

From the foregoing literature, it is evident that computer applications are critical to the production of quality financial reports on a timely basis and the communication of that information to the decision makers. Previous studies focus on security practices of computerized information systems. Study perception of MIS executives regarding the security threats and mainly evaluate security issues in banking sector as opposed to education sector. Therefore, no prior studies establishing the extent of computer applications in preparation of financial reports in public universities in Kenya.

Empirical evidence (Mawanda, 2008; Ismailjee, 1993; Rono, 2006; Hunton, 2002 and Byenkya, 2011) elucidated that computerized accounting systems are important in the production of quality financial reports on a timely basis and the communication of that information to the decision makers. While Mawanda (2008) investigated the relationship between internal control systems and financial performance in an institution of higher learning in Uganda; Ismailjee (1993) evaluated the internal controls of the Nyayo Bus Service Corporation, Nairobi using a descriptive survey design. On the contrary, Rono (2006) studies the effectiveness of the internal control system in the management of finances in public universities in Kenya. Hunton (2002) investigates the relationship between automated accounting information system and organizational effectiveness; while Byenkya (2011) studies the impact of computerized accounting on financial reporting in manufacturing firms in Uganda using correlational research design and found a strong positive relationship between financial reporting and computerized accounting ($r = 0.669$, $p = 0.35$). However, the study focused on computerized accounting in manufacturing sector as opposed to education sector and did not test the relationship between Navision software applications on financial reports.

Previous studies show that computerized accounting systems are important in the production of quality financial reports on a timely basis and the communication of that information to the

decision makers. Previous studies focus on automated accounting information system and organizational effectiveness. The study shows the impact of computerized accounting on financial reporting in manufacturing firms as opposed to education sector. Therefore, the effect of Ms Navision software application on quality of financial reports in public universities is unknown.

Prior studies (UPA Forex & ICT, 2012; Peterson *et al.*, 2010; Byenkya, 2011; Hood and Yang, 1998; Patrick *et al.*, 2013; White and Pearson, 2001 and Warren, 2002) show that use of computer applications in preparation of financial statements may enhance their quality. The UPA Forex and ICT (2012) studies the impact of ICT on accounting practice in Nigeria, while Peterson *et al.* (2010) explored the impact of computers on preparation of financial statements. The study found out that use of computers impacted positively on quality of financial reports in terms of efficiency and reliability. On the contrary, Byenkya (2011) studied the impact of computerized accounting on financial reporting in manufacturing firms in Uganda using correlational research design and found a strong positive relationship between financial reporting and computerized accounting. On the other hand, Hood and Yang (1998) studied the impact of information systems security on banking in China in comparison to the UK. On the contrary, Patrick *et al.* (2013) investigates the ICT utilization in the financial management of the Ghana Education System (GES) while White and Pearson (2001) surveys over 200 USA companies to investigate the security controls of personal use of computers, controlling e-mail accounts, and securing company data. On the other hand, Warren (2002) surveyed the security practices of computerized information systems in three countries: Australia, UK and USA and results indicated that 45 % of organizations did not budget for computer security. In UK, 42 % of organizations did not have an information security policy. The findings also revealed that 49 % of organizations listed budget constraints as being an issue in implementing computer security; while in USA, theft of information and financial fraud caused most financial damage. However, the study focused on security practices of computerized information systems as opposed to Ms Excel software application in preparation of financial reports in public universities.

Reviewed literatures indicate that computer applications are important in the production of quality financial reports on a timely basis. Previous studies focus on security practices of computerized information systems in Australia, UK and USA. They studied the impact of

ICT on accounting practice as opposed to Ms Excel software application. Therefore, the effect of Ms Excel software application on quality of financial reports in public universities is unknown.

1.2 Statement of the Problem

The use of computer technology has made a tremendous global impact in all sectors of life and has made a huge transformation particularly in the way of doing business both within and across countries. Since 1950's when information storage and processing using computers started, it became easier and quicker to handle massive data and produce more accurate and timely reports. Though accounting computer systems' literature show computer applications are important in the production of quality financial reports on a timely basis, previous studies focus on automated accounting information system, computer security issues and organizational effectiveness. They studied the impact of computerized accounting on financial reporting in manufacturing firms as opposed to education sector. Therefore, extent of computer applications in preparation of financial reports; effect of Ms Navision software application on quality of financial reports and the effect of Ms Excel software application on quality of financial reports in public universities are unknown.

1.3 Objectives of the Study

The overall objective of the study was to analyze the effect of computer applications on the preparation of quality financial reports for public universities in Western Kenya.

1.3.1 Specific Objectives

Specifically, the study sought to:

- i. Determine the extent of adoption of computer applications in the preparation of quality financial reports in Public Universities in Western Kenya.
- ii. Analyze the effect of Ms Navision software application on preparation of quality financial reports in Public Universities in Western Kenya.
- iii. Evaluate the effect of Ms Excel software application on preparation of quality financial reports in Public Universities in Western Kenya.

1.4 Research Questions

1. What is the extent of adoption of computer applications in the preparation of quality financial reports in Public Universities in Western Kenya?

1.5 Research Hypotheses

The study was guided by the following research hypotheses:

1.5.1 Ms Navision software application has no effect on preparation of quality financial reports at Public Universities in Western Kenya.

1.5.2 Ms Excel software application has no effect on preparation of quality financial reports at Public Universities in Western Kenya.

1.6. Scope of the Study

The scope of the study is examined in terms of geographical, content (variable) and time scopes. In terms of geographical scope, the research was carried out in the Public Universities in Western Kenya. This was due to availability and convenience of obtaining data about the topic of the study, since the researcher worked for the finance department of one of the institution. In terms of content, the research was based on two variables these are; computer applications and quality of financial reports. In terms of time, the study was based on financial reports and computer applications for the period covering 2009-2013 due to the limited time required to complete the research. This study was carried out to assess the effect of computer applications on the preparation of quality financial reports for public universities, with specific focus on public Universities in Western Kenya.

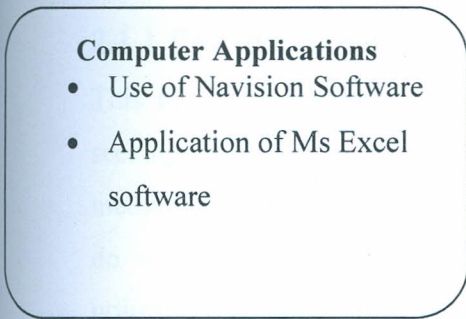
1.7 Significance of the Study

The purpose of financial statements is to present a true and fair view of an organization's financial performance, financial position, equity and cash flows. As such, they are an important means of demonstrating how an organization meets its financial management for timely preparations to users. The findings of this study will enable public universities and other organizations to embrace technology in preparation of their financial statements. The study can also be used as a benchmark to organizations to evaluate the suitability of their ICT strategy towards computerized accounting adaptation and usage.

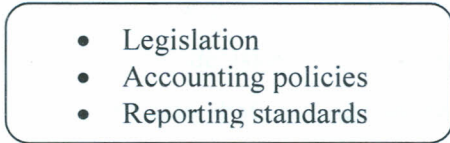
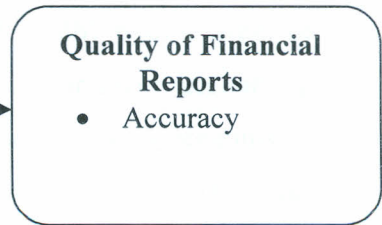
The study may also stimulate further research in the field of computerized accounting systems.

1.8 Conceptual Framework

Independent Variable



Dependent variable



Intervening Variables

Figure 1.1: The relationship of Computer applications and the preparation of quality financial reports.

Source: Adapted from Peterson *et al.* (2010).

The above conceptual framework shows the relationship between computer applications and quality of financial reports. Computer applications which is the independent variable has two dimensions namely, use of Navision software and application of Ms Excel. The dependent variable is the quality of financial reports which is measured in terms of accuracy of financial reports. The relationship is subject to three intervening variables namely legislation, accounting policies, and reporting standards.

CHAPTER TWO

LITERATURE REVIEW

This chapter covers the review of all relevant theories, empirical studies and concepts on the subject and the research gaps.

2.1 Theoretical Review

2.1.1 Positive Accounting Theory (PAT) of Quality of Financial Reports

This theory was developed by Watts and Zimmerman (1978, 1986) with a view of seeking to predict and explain why managers have a preference for given accounting methods (Sugut, 2014). The PAT explains why accounting is what it is, why accountants do what they do and what effect these phenomena have on people and resources utilization (Mutai, 2014). Abdulrazak (2013) argues that PAT is the reason for the choice of accounting methods, techniques and policy decisions. The organization is described by PAT in the form of collection of contracts that are necessary to help self-seeking individuals agree to cooperate such as employee contracts and supplier contracts etc. (Mutai, 2014). These contracts have associated contract costs such as monitoring and evaluation costs, negotiation costs and agency costs. PAT holds that firms seek to minimize the contracting costs that in turn affect the accounting policies adopted. According to PAT, the information in the financial reports can be distorted based on the management motive in several ways (Oluoch, 2014). The management has information advantage over the owners of the business and may seek to influence the reporting of earning and capital structure in financial reports due to conflict of interest between the managers (agents) and owners of firm (principals). The PAT thus seeks to explain the manager's choice of accounting methods in terms of self-interest and relationship between stakeholders. In doing this, PAT has advanced three theories that seek to explain these phenomena; bonus hypothesis, contractual motivation hypothesis and political motivation hypothesis (Abdulrazak, 2013; Mutai, 2014; Oluoch, 2014). The PAT theory was considered relevant to this study as it explains the incentives of use of computer applications and its link to quality of financial reports.

2.1.2: Resource Mobilization Theory Linking Computer Applications to Quality of Financial Reports

In public universities, of all the resources required, a resource in the form of 'money' is the most important one. Without this resource we cannot activate the other resources such as acquisition of computer applications. In the market oriented economy like ours, it is the monetary resource, which determines the expansion or contraction of other resources. The success of any organization lies in its ability to raise enough funds (monetary resources), or to convert other resources in such a way that it can be exchanged for the money, or to plan its activities into fundable projects (Tam and Kiang, 1992).

More and more money is required for facilitating universities expansion and adopting better methods of financial reporting. To get over this crisis, Neocleous (2000) points out that either the state aid is to increase or the agencies have to depend largely upon the community's support. It is not possible to step up the aid from the government. This necessitates a change in our outlook and we should think of more suitable ways and means of raising money from the public.

In resource mobilization theory, mobilization is the process of forming crowds, groups, associations, and organizations for the pursuit of collective goals. Organizations do not "spontaneously emerge" but require the mobilization of resources. Resource mobilization is a sociological theory that forms part of the study of social movements. It stresses the ability of movements of members to acquire resources and to mobilize people towards the furtherance of their goals. In contrast to the traditional collective behavior paradigm that views social movements as deviant aberrations, resource mobilization which emerged in the 1970s views social movements as formed by rational social institutions and social actors taking political action (Lin et al., 2003). Resource mobilization theory was considered relevant to this study as it explains how resources (computer applications) can be mobilized for pursuit of collective goals namely quality financial reports among public universities.

2.1.3 The Concept of Accounting Computer Applications

Accounting computer application can be referred to as an accounting information system that processes the financial transactions and events to produce accurate accounting results

as per the user requirements or guidelines. Every proper accounting system be it manual or computerized must follow the generally accepted accounting principles and also the framework for maintenance of records and generation of reports must be well defined and easily to be understood. In a computerized accounting system, the process of storage and handling of data, which is normally referred to as operating environment consists of computer hardware and software under which the accounting system operates. Computer hardware and software are interdependent and so one cannot do without the other. The link here is that, the type of accounting system employed determines the operating environment. More so, the nature of software used determines its hardware so selecting a computer hardware depends upon several factors like the number of users, secrecy level and the sectional or departmental activities in the organization, etc. (Computerized Accounting Software, Chapter 13,492)

A computerized accounting system also involves the use of computer hardware and software to perform the recording and reporting functions that would otherwise have been done manually by a staff or an owner of a business. Prior to technological advancement, accounting records were being kept only on a manual basis whereby the bookkeeper needed to complete a manual basis document for cash sale or receipt, and then spend all day or better still a week in writing the records of the day or week into special journals, stock cards, as well as debtors and creditors records. This clearly took some time, time that would otherwise have been spent in managing the business. More importantly, completing the accounting records were sometimes seen as a hurdle to business, rather than a way of making it more profitable. (Simmons, Hardy, 2011).

However, the development of computerized accounting systems has transformed the way businesses keep their accounting records. This has permitted organizations to simplify the accounting processes, thus leaving them more time to work on their main business. (Simmons, Hardy, 2011).

2.1.4 The Concept of Financial Reports

According to International Accounting Standards (IAS) 1 of 2010, financial reports are records that outline the financial activities of a business, an individual or any other entity. Relevant financial information is presented in a structured manner and in a format easy to

are providers of risk capital, financial statements that meet their needs would also meet the needs of other users.

2.1.5 The Concept of Quality of Financial Reports

According to the Framework for the Preparation and Presentation of Financial Statements, 2004, qualitative characteristics of financial reports are the attributes that make the information provided in financial reports useful to users. The major principal qualitative characteristics are understandability, relevance, materiality, reliability, faithful representation, and substance over form, neutrality, prudence, completeness and comparability (Framework, 2004).

An essential quality of the information provided in financial reports is that it is readily understandable by users. For this purpose, users are assumed to have a reasonable knowledge of business and economic activities and accounting and a willingness to study the information with reasonable diligence. However, information about complex matters that should be included in the financial report, because of its relevance to the economic decision-making needs of users, should not be excluded merely on the grounds that it may be too difficult for certain users to understand. *Ibid*

To be useful, information must be relevant to the decision-making needs of users. Information has the quality of relevance when it influences the economic decisions of users by helping them evaluate past, present or future events or confirming, or correcting, their past evaluations. The predictive and confirmatory roles of information are interrelated. For example, information about the current level and structure of asset holdings has value to users when they endeavor to predict the ability of the entity to take advantage of opportunities and its ability to react to adverse situations. The same information plays a confirmatory role in respect of past predictions about, for example, the way in which the entity would be structured or the outcome of planned operations.

Information about financial position and past performance is frequently used as the basis for predicting future financial position and performance and other matters in which users are directly interested, such as dividend and wage payments, security price movements and the ability of the entity to meet its commitments as they fall due. To have predictive value, information need not be in the form of an explicit forecast. The ability to make

predictions from financial reports is enhanced, however, by the manner in which information on past transactions and events is displayed. For example, the predictive value of the income statement is enhanced if unusual and infrequent items of income or expense are separately disclosed (AASB, 2004).

The relevance of information is affected by its nature and materiality. In some cases, the nature of information alone is sufficient to determine its relevance. For example, the reporting of a new segment may affect the assessment of the risks and opportunities facing the entity irrespective of the materiality of the results achieved by the new segment in the reporting period. In other cases, both the nature and materiality are important, for example, the amounts of inventories held in each of the main categories that are appropriate to the business. Information is material if its omission or misstatement could influence the economic decisions of users taken on the basis of the financial report. Materiality depends on the size of the item or error judged in the particular circumstances of its omission or misstatement. Thus, materiality provides a threshold or cut-off point rather than being a primary qualitative characteristic which information must have if it is to be useful (Framework, 2004).

To be useful, information must also be reliable. Information has the quality of reliability when it is free from material error and bias and can be depended upon by users to represent faithfully that which it either purports to represent or could reasonably be expected to represent. Information may be relevant but so unreliable in nature or representation that its recognition may be potentially misleading. For example, if the validity and amount of a claim for damages under a legal action are disputed, it may be inappropriate for the entity to recognize the full amount of the claim in the balance sheet, although it may be appropriate to disclose the amount and circumstances of the claim.

To be reliable, information must represent faithfully the transactions and other events it either purports to represent or could reasonably be expected to represent. Thus, for example, a balance sheet should represent faithfully the transactions and other events that result in assets, liabilities and equity of the entity at the reporting date which meet the recognition criteria (AASB, 2004).

Most financial information is subject to some risk of being less than a faithful representation of that which it purports to portray. This is not due to bias, but rather to

inherent difficulties either in identifying the transactions and other events to be measured or in devising and applying measurement and presentation techniques that can convey messages that correspond with those transactions and events. In certain cases, the measurement of the financial effects of items could be so uncertain that entities generally would not recognize them in the financial statements; for example, although most entities generate goodwill internally over time, it is usually difficult to identify or measure that goodwill reliably. In other cases, however, it may be relevant to recognize items and to disclose the risk of error surrounding their recognition and measurement. *Ibid.*

If information is to represent faithfully the transactions and other events that it purports to represent, it is necessary that they are accounted for and presented in accordance with their substance and economic reality and not merely their legal form. The substance of transactions or other events is not always consistent with that which is apparent from their legal or contrived form. For example, an entity may dispose of an asset to another party in such a way that the documentation purports to pass legal ownership to that party; nevertheless, agreements may exist that ensure that the entity continues to enjoy the future economic benefits embodied in the asset. In such circumstances, the reporting of a sale would not represent faithfully the transaction entered into (if indeed there was a transaction). *ibid*

To be reliable, the information contained in financial reports must be neutral, that is, free from bias. Financial reports are not neutral if, by the selection or presentation of information, they influence the making of a decision or judgment in order to achieve a predetermined result or outcome. *ibid*

The preparers of financial reports do, however, have to contend with the uncertainties that inevitably surround many events and circumstances, such as the collectability of doubtful receivables, the probable useful life of plant and equipment and the number of warranty claims that may occur. Such uncertainties are recognized by the disclosure of their nature and extent and by the exercise of prudence in the preparation of the financial report. Prudence is the inclusion of a degree of caution in the exercise of the judgments needed in making the estimates required under conditions of uncertainty, such that assets or income are not overstated and liabilities or expenses are not understated. However, the exercise of prudence does not allow, for example, the creation of hidden reserves or excessive

provisions, the deliberate understatement of assets or income, or the deliberate overstatement of liabilities or expenses, because the financial report would not be neutral and, therefore, not have the quality of reliability. *ibid*

To be reliable, the information in financial reports must be complete within the bounds of materiality and cost. An omission can cause information to be false or misleading and thus unreliable and deficient in terms of its relevance. *ibid*

Users must be able to compare the financial reports of an entity through time in order to identify trends in its financial position and performance. Users must also be able to compare the financial reports of different entities in order to evaluate their relative financial position, financial performance and cash flows. Hence, the measurement and display of the financial effect of like transactions and other events must be carried out in a consistent way throughout an entity and over time for that entity and in a consistent way for different entities (IAS, 1, 2010)

An important implication of the qualitative characteristic of comparability is that users be informed of the accounting policies employed in the preparation of the financial report, any changes in those policies and the effects of such changes. Users need to be able to identify differences between the accounting policies for like transactions and other events used by the same entity from period to period and by different entities (AASB, 2004).

The need for comparability should not be confused with mere uniformity and should not be allowed to become an impediment to the introduction of improved accounting standards. It is not appropriate for an entity to continue accounting in the same manner for a transaction or other event if the policy adopted is not in keeping with the qualitative characteristics of relevance and reliability. It is also inappropriate for an entity to leave its accounting policies unchanged when more relevant and reliable alternatives exist. Because users wish to compare the financial position, financial performance and cash flows of an entity over time, it is important that the financial report show corresponding information for the preceding periods (Framework, 2004).

2.1.6 Relationship between Computer Applications and Financial Reports

A computerized accounting system can be referred to as an accounting information system that processes the financial transactions and events to produce accurate accounting results as per the user requirements or guidelines. In a computerized accounting system, the process of storage and handling of data, which is normally referred to as operating environment consists of computer hardware and software under which the accounting system operates. Computer hardware and software are interdependent and so one cannot do without the other. The link here is that, the type of accounting system employed determines the operating environment. More so, the nature of software used determines its hardware so selecting computer hardware depends upon several factors like the number of users, secrecy level and the sectional or departmental activities, etc. (Adamaka, 2013).

Computerized accounting systems generate accounting information that help rationalize and support economic decisions which affect the resources of communities and consequently the well-being of community members (Kahaleh, Hanan, 1997). The accounting system is strongly connected with various administrative processes; it helps rationalize decisions, makes the administrative process more effective in satisfying the needs of the organization's management and raises the levels of performance in order to realize goals (Kehale, *et al.*, 1997).

The computerized accounting system in any organization consists of a number of human parts represented by all personnel at the accounting department who utilize the material parts needed for accounting work such as equipment, hardware, books and records, in accordance with established accounting rules and procedures in order to record, calculate and deliver data into sets of financial reports and statements to all parties concerned with making decisions (Dahmash, Abu Zir, 2004).

There are several definitions of computerized accounting information systems, such as "a set of sub-systems and parts related to each other and to the surrounding environment, and works as one set in which relationships are interrelated with each other and within the

system where each part depends on the other in achieving the goals of the overall accounting system (Chill, 2010).

Hussein (2004) defined computerized accounting information systems as an essential part of the management information system at the economic unit of business which collects financial data from sources inside and outside the economic unit, then operates such data and transforms it into useful financial data for users inside and outside the economic unit. Later definitions of accounting information systems include Makhadmeh (2007), who defined computerized accounting information systems as a set of financial and human resources at the organization responsible for preparing financial information, in addition to information resulting from the processing of collected data, then providing such information to all managerial levels and for planning and monitoring purposes at the organization as well as other parties related with the organization.

According to Nash (1989), accountants must be familiar with the software tools used in accounting because they help the users perform the accounting function more effectively and efficiently. There are several software tools namely:

Accounting software: This software contains the basic accounting functions such as input - output processing. There are two classifications of accounting software as low - end and high - end. Each module checks data for correctness, process it and updates all relevant accounts, and finally, produces outputs such as reports and documents (Nash, 1989).

QuickBooks: This software is majorly for book - keeping needs and suitable for users who are responsible for accounting but are trained accountants. Payroll support can be added and it is possible to categorize costs and income in two ways (i.e. customer job and class) which could be adopted quite easily for payments requirements. PAYE rates can also be customized (Nash, 1989).

According to Romney *et al.* (1997), accountants can also use word processing software to create reports, billings, memos, and financial statements. Graphics can be prepared using graphic software. Graphics can be printed on paper or displayed on slides, transparencies and photos. Many auditors and managerial accountants use graphic software to graph the data in financial statements and reports.

In addition, it is very costly to process and store documents. Fortunately, these costs can be eliminated with the help of document imaging systems. Image processing captures electronic image of data so that it can be stored and shared. With the help of document imaging, accountants can scan paper documents into computer and process all the files electronically. Companies that use document imaging are moving towards paperless offices. Electronic data interchange enables companies to communicate with each other electronically. Therefore, electronic data interchange enables companies to exchange documents electronically with each other, customers and other stakeholders. For example computerized network enables purchaser and the supplier to exchange purchase orders and invoices electronically in the form of images (Romney *et al.*, 1997)

2.2 Review of Empirical Studies

2.2.1 Extent of Adoption of Computer Applications in the Preparation of Financial Reports

Loch *et al.* (1992) in Texas conducted a survey to explore the perception of Management Information Systems Executives regarding the security threats in microcomputer, mainframe computer and network environments. The researchers developed a list of twelve security threats and empirically examined them. The results indicated that natural disasters: employee accidental actions (entry of bad data and destruction of data); inadequate control over media; and unauthorized access to computerized accounting information system by hackers had been ranked among the top security threats. These results confirmed the experts' claims that the greatest threats come from inside organizations. However, the study did not check on extent of adoption of computer applications in preparation of financial reports and did not focus on public universities.

Ryan and Bordoloi (1997) explored how companies moving from a mainframe to a client/server environment evaluated and took security measures to protect against potential security threats. The results of Ryan and Bordoloi's study in Manchester revealed that the most significant security threats were: accidental destruction of data by employees; accidental entry of erroneous data by employees; intentional destruction of data by employees; intentional entry of erroneous data by employees; loss due to inadequate backups or log files; natural disaster: fire, flood, loss of power, etc. and single

point of failure. However, the study concentrated on computer security issues as opposed to the extent of adoption of computer applications in preparation of financial reports.

Henry (1997) conducted a survey in France to determine the nature of the accounting systems and security in use and found that 80.3 % of the companies backed-up their accounting systems. 74.4 % of the companies secured their accounting system with passwords, but only 42.7 % utilized protection from viruses. Physical security and authorization for changes to the system were employed by less than 40 % of the respondents. The survey results also showed that only 15 companies used encryption for their accounting data, which was a surprising result, considering the number of companies utilizing some form of communication hardware. Almost 45 % of the sample underwent some sort of audit of CAIS data. However, the study concentrated on nature of accounting systems and security in use as opposed to the extent of adoption of computer applications in preparation of financial reports and did not cover public universities.

Hood and Yang (1998) studied the impact of information systems security on banking in China in comparison to the UK. The survey results revealed that all respondents believed that management was aware of security but none believed that their banks had taken enough action to reduce the risks and losses. The most common reason for this was the lack of financial and human resources. Furthermore, all four banks surveyed claimed to have a security policy, but only in one was formally stated. Human security threats were perceived as the most important security threats in Chinese banking sector, especially malicious attack from outsiders. However, the study focused on information security in banking sector as opposed to the extent of adoption of computer applications in preparation of financial reports in public universities.

Abu-Musa (2001) investigated security threats of CAIS in the Egyptian banking sector (EBS) using a self-administered questionnaire which included 19 CAIS security threats. The statistical results of the study revealed that accidental entry of bad data by employees, accidental destruction of data by employees, introduction of computer viruses to the system, natural and human-made disasters, employees' sharing of passwords and misdirecting prints and distributing information to people not entitled to receive them are the most perceived significant security threat. However, the study concentrated on

accounting systems and security in use as opposed to the extent of adoption of computer applications in preparation of financial reports and did not cover public universities.

White and Pearson (2001) surveyed over 200 USA companies to investigate the security controls of personal use of computers, controlling e-mail accounts, and securing company data. The results of the study reinforced the need for better security control in the majority of surveyed companies. The results also revealed that many corporations began to use computer technology before implementing appropriate safeguards consequently; the majority of the company's safeguards continue to be lacking. However, the study focused on security controls of personal use of computers as opposed to the extent of adoption of computer applications in preparation of financial reports in public universities.

Warren (2002) carried out a survey to investigate the security practices of computerized information systems in three countries: Australia, UK and USA. The paper attempted to evaluate security practices from different perspectives and to investigate whether the security practices are varied from one country to another. The results of the survey revealed that in Australia, poor levels of computer security were found among Australian organizations. Many of the security problems were identified due to poor security procedures being implemented. The results also indicated that 45 % of organizations did not budget for computer security. In UK, 42 % of organizations did not have an information security policy. The findings also revealed that 49 % of organizations listed budget constraints as being an issue in implementing computer security; while in USA, theft of information and financial fraud caused the most financial damage. However, the study focused on security practices of computerized information systems as opposed to the extent of adoption of computer applications in preparation of financial reports in public universities.

Hunton *et al.* (2005) in UK carried out an experimental study to understand, assess and examine the extent to which financial auditors and Information Systems (IS) audit specialists recognize differences in the nature and unique business and audit risks associated with enterprise resource planning (ERP) systems, as compared to traditional computerized (non-ERP) systems. The research findings revealed that financial auditors were significantly less concerned than IS audit specialists with the following heightened

risks of the ERP environment in the experimental case: business interruption, network security, database security, application security, process interdependency and overall control risk. Moreover, financial auditors did not recognize the heightened risks of a seeded control weakness as well as reluctance to seek consultation of IS audit specialists. However, IS audit specialists were less confident in financial auditors' abilities to recognize unique risks posed by ERP systems. The findings suggest a lack of understanding and consideration of unique ERP risks by financial auditors, which could have deleterious effects on audit quality. However, the study did not focus on the extent of adoption of computer applications in preparation of financial reports in public universities.

A study by Patrick *et al.* (2013) on the ICT utilization in the financial management of the Ghana Education System (GES) found out that Sub – Saharan Africa remains in a state of quandary as to how best to participate in the global information age. The GES over the years have made some effort to adopt ICT in its financial management with the training of its accounts officers on the use of computers to process financial information in late 1990's. GES introduced the ARKPACK software which was very useful in the preparation of the monthly trial balance. In other findings, the study found that use of computers to process financial information was applied to a moderate extent. However, the study did not focus on public universities.

The UPA Forex and ICT (2012) carried out a study on the impact of ICT on accounting practice in Nigeria. The study found out that the application of Information and Communication Technology (ICT), on accounting practice in Nigeria was applied to very great extent and that ICT had a positive impact on accounting practice in terms of preparation of financial reports. However, the study did not focus on public universities in Kenya.

In Kenya, a study by Peterson *et al.* (2010) on the impact of computers on preparation of financial statements found that: First is that the initial impact of computers is indirect. Their primary impact is to strengthen manual accounts, which organizations continue to rely upon. Secondly, computers promote effective reforms by changing procedures, rather than efficiency reforms by accelerating the throughput of data with existing procedures. Third, computers do not initially promote processing of data but initially do improve data processing and fourth, computers do promote rudimentary analysis. Many

institutions have a fragmented IT environment for financial management systems, for healthcare management systems and for the underlying product systems. These diverse frameworks often use different formats and structures, making it difficult to achieve the overall objectives of computerization. However, the study did not cover the extent of adoption of computer applications in preparation of financial reports in public universities.

Prior studies (Loch *et al.*, 1992; Ryan and Bordoloi, 1997; Henry, 1997; Hood and Yang, 1998; Abu-Musa, 2001; UPA Forex & ICT, 2012 and Patrick *et al.*, 2013) show that computer applications are critical to the production of quality financial reports. While Loch *et al.* (1992) explored the perception of MIS executives regarding the security threats in microcomputer, mainframe computer and network environments, Ryan and Bordoloi (1997) examined how companies moving from a mainframe to a client/server environment evaluated and took security measures to protect against potential security threats. On the other hand, Henry (1997) surveyed the nature of the accounting systems and security in use and found that 80.3 % of the companies backed-up their accounting systems.

On the contrary, Hood and Yang (1998) studied the impact of information systems security on banking in China in comparison to the UK. Similarly, Abu-Musa (2001) investigated security threats of CAIS in the Egyptian Banking Sector (EBS) using a self-administered questionnaire which included 19 CAIS security threats. Hunton *et al.* (2005) in UK examined the extent to which financial auditors and Information Systems (IS) audit specialists recognize differences in the nature and unique business and audit risks associated with enterprise resource planning (ERP) systems, while Patrick *et al.* (2013) studied the ICT utilization in the financial management of the Ghana Education System (GES). The UPA Forex and ICT (2012) carried out a study on the impact of ICT on accounting practice in Nigeria. The study found out that the application of Information and Communication Technology (ICT), on accounting practice in Nigeria was applied to very great extent and that ICT had a positive impact on accounting practice in terms of preparation of financial reports.

Reviewed literatures show that computer applications are critical to the production of quality financial reports on a timely basis and the communication of that information to the

decision makers. Previous studies focus on security practices of computerized information systems. Study perception of MIS executives regarding the security threats and mainly evaluate security issues in banking sector as opposed to education sector. Therefore, there are no prior studies that evaluate the extent of computer applications in preparation of financial reports in public universities in Kenya.

2.2.2 Effect of Ms Navision Software Application on Preparation of Quality Financial Reports

Mawanda (2008) investigated the relationship between internal control systems and financial performance in an institution of higher learning in Uganda. Internal controls were looked at from the perspective of control environment, internal audit and control activities whereas financial performance focused on liquidity, accountability and reporting as the measures of financial performance. The study found that internal control systems do function although with hiccups and that there is a significant relationship between internal control systems and financial performance in an Institution of higher learning. Also, the study found that there is lack of information sharing and inadequate security measures to safeguard the assets of the University (Mawanda, 2008). However, the study focused on internal control system and financial performance as opposed to the Ms Navision software application and preparation of quality financial reports.

A study by Ismailjee (1993) evaluated the internal controls of the Nyayo Bus Service Corporation, Nairobi using a descriptive survey design. Internal controls were looked at from the perspective of control activities; the cash receipts and the cash disbursements. The study found that cash receipts, cash disbursements and the purchase cycle had fairly strong controls. He attributed this largely to the fact that the government accounting system was still in operation in those areas. He however found weakness in the organization chart, payroll and the stores accounting system. However, the study focused on internal control system in transport sector as opposed to the Navision software application and preparation of quality financial reports in education sector.

Rono (2006) studied on the effectiveness of the internal control system in the management of finances in public universities in Kenya. The study found that the evaluation of the effectiveness of the internal control systems in the university depended on the category of the departments. The research revealed that the internal control

systems in Egerton University were effective due to the well established departments charged with the responsibility of implementing the internal controls as they carry out the financial processes for example, finance, supplies and personnel departments with their various sections like cash office, salaries, computer, debtors and creditors. However, the study focused on internal control system in university education sub- sector as opposed to the Navision software application and preparation of quality financial reports in the sector.

Hunton (2002) investigated the relationship between automated accounting information system and organizational effectiveness; showed that there was strong relationship between accounting information system and organizational effectiveness, which means access to accounting information, will lead to organizational effectiveness. However, the study focused on organizational effectiveness of computerized information systems as opposed to the effect of Navision software applications in preparation of financial reports in public universities.

The UPA Forex and ICT (2012) carried out a study on the impact of ICT on accounting practice in Nigeria. The study found out that the application of Information and Communication Technology (ICT), on accounting practice in Nigeria was applied to very great extent and that ICT had a positive impact on accounting practice in terms of preparation of financial reports. However, the study did not focus on public universities in Kenya.

In Kenya, a study by Peterson *et al.* (2010) on the impact of computers on preparation of financial statements found that: First is that the initial impact of computers is indirect. Their primary impact is to strengthen manual accounts, which organizations continue to rely upon. Secondly, computers promote effective reforms by changing procedures, rather than efficiency reforms by accelerating the throughput of data with existing procedures. Third, computers do not initially promote processing of data but initially do improve data processing and fourth, computers do promote rudimentary analysis. Many institutions have a fragmented IT environment for financial management systems, for healthcare management systems and for the underlying product systems. These diverse frameworks often use different formats and structures, making it difficult to achieve the

overall objectives of computerization. However, the study did not focus on public universities in Kenya.

Byenkya (2011) studied the impact of computerized accounting on financial reporting in manufacturing firms in Uganda using correlational research design and found a strong positive relationship between financial reporting and computerized accounting ($r = 0.669$, $p = 0.35$). However, the study focused on computerized accounting in manufacturing sector as opposed to education sector and did not test the relationship between Navision software applications on financial reports.

Empirical evidence (Mawanda, 2008; Ismailjee, 1993; Rono, 2006; Hunton, 2002 and Byenkya, 2011) elucidated that computerized accounting systems are important in the production of quality financial reports on a timely basis and the communication of that information to the decision makers. While Mawanda (2008) investigated the relationship between internal control systems and financial performance in an institution of higher learning in Uganda; Ismailjee (1993) evaluated the internal controls of the Nyayo Bus Service Corporation, Nairobi using a descriptive survey design. On the contrary, Rono (2006) studies the effectiveness of the internal control system in the management of finances in public universities in Kenya. Hunton (2002) investigates the relationship between automated accounting information system and organizational effectiveness; while Byenkya (2011) studies the impact of computerized accounting on financial reporting in manufacturing firms in Uganda using correlational research design and found a strong positive relationship between financial reporting and computerized accounting ($r = 0.669$, $p = 0.35$). However, the study focused on computerized accounting in manufacturing sector as opposed to education sector and did not test the relationship between Navision software applications on financial reports.

Previous studies show that computerized accounting systems are important in the preparation of quality financial reports on a timely basis and the communication of that information to the decision makers. Previous studies focus on automated accounting information system and organizational effectiveness. They study the impact of computerized accounting on financial reporting in manufacturing firms as opposed to education sector. Therefore, the effect of Ms Navision software application on quality of financial reports in public universities is unknown.

2.2.3 Effect of Ms Excel Software Application on Preparation of Quality Financial Reports

A study carried out by the UPA Forex and ICT (2012) on the impact of ICT on accounting practice in Nigeria. The study found out that the application of Information and Communication Technology (ICT), on accounting practice in Nigeria was applied to very great extent and that ICT had a positive impact on accounting practice in terms of preparation of financial reports. However, the study did not focus on public universities in Kenya and failed to test the association between Ms Excel software applications on preparation of financial reports.

Peterson *et al.* (2010) on the impact of computers on preparation of financial statements found that use of computers impacted positively on quality of financial reports in terms of efficiency and reliability. However, the study did not focus on public universities in Kenya and failed to test the association between Ms Excel software applications on preparation of financial reports.

Byenkya (2011) studied the impact of computerized accounting on financial reporting in manufacturing firms in Uganda using correlational research design and found a strong positive relationship between financial reporting and computerized accounting ($r = 0.669$, $p = 0.35$). However, the study focused on computerized accounting in manufacturing sector as opposed to education sector and did not test the relationship between Ms Excel software applications on financial reports.

Hood and Yang (1998) studied the impact of information systems security on banking in China in comparison to the UK. The survey results revealed that all respondents believed that management was aware of security but none believed that their banks had taken enough action to reduce the risks and losses. The most common reason for this was the lack of financial and human resources. Furthermore, all four banks surveyed claimed to have a security policy, but only in one was formally stated. Human security threats were perceived as the most important security threats in Chinese banking sector, especially malicious attack from outsiders. However, the study focused on information security in banking sector as opposed to effect of Ms Excel software application on preparation of financial reports in public universities.

A study by Patrick *et al.* (2013) on the ICT utilization in the financial management of the Ghana Education System (GES) found out that Sub – Saharan Africa remains in a state of quandary as to how best to participate in the global information age. The GES over the years have made some effort to adopt ICT in its financial management with the training of its accounts officers on the use of computers to process financial information in late 1990. GES introduced the ARKPACK software which was very useful in the preparation of the monthly trial balance. In other findings, the study found that use of computers to process financial information was applied to a moderate extent. However, the study did not focus on the effect of Ms Excel software application on preparation of financial reports among public universities.

White and Pearson (2001) surveyed over 200 USA companies to investigate the security controls of personal use of computers, controlling e-mail accounts, and securing company data. The results of the study reinforced the need for better security control in the majority of surveyed companies. The results also revealed that many corporations began to use computer technology before implementing appropriate safeguards consequently; the majority of the company's safeguards continue to be lacking. However, the study focused on security controls of personal use of computers as opposed to its application in preparation of financial reports in public universities and did not test the association between Ms Excel software application and preparation of financial reports by public universities.

Warren (2002) carried out a survey to investigate the security practices of computerized information systems in three countries: Australia, UK and USA. The paper attempted to evaluate security practices from different perspectives and to investigate whether the security practices are varied from one country to another. The results of the survey revealed that in Australia, poor levels of computer security were found among Australian organizations. Many of the security problems were identified due to poor security procedures being implemented. The results also indicated that 45 % of organizations did not budget for computer security. In UK, 42 % of organizations did not have an information security policy. The findings also revealed that 49 % of organizations listed budget constraints as being an issue in implementing computer security; while in USA, theft of information and financial fraud caused the most financial damage. However, the

study focused on security practices of computerized information systems as opposed to Ms Excel software application in preparation of financial reports in public universities.

Prior studies (UPA Forex & ICT, 2012; Peterson *et al.*, 2010; Byenkya, 2011; Hood and Yang, 1998; Patrick *et al.*, 2013; White and Pearson, 2001 and Warren, 2002) show that use of computer applications in preparation of financial statements may enhance their quality. The UPA Forex and ICT (2012) studies the impact of ICT on accounting practice in Nigeria, while Peterson *et al.* (2010) explored the impact of computers on preparation of financial statements. The study found out that use of computers impacted positively on quality of financial reports in terms of efficiency and reliability. On the contrary, Byenkya (2011) studied the impact of computerized accounting on financial reporting in manufacturing firms in Uganda using correlational research design and found a strong positive relationship between financial reporting and computerized accounting. On the other hand, Hood and Yang (1998) studied the impact of information systems security on banking in China in comparison to the UK. On the contrary, Patrick *et al.* (2013) investigates the ICT utilization in the financial management of the Ghana Education System (GES) while White and Pearson (2001) surveys over 200 USA companies to investigate the security controls of personal use of computers, controlling e-mail accounts, and securing company data. On the other hand, Warren (2002) surveyed the security practices of computerized information systems in three countries: Australia, UK and USA and results indicated that 45 % of organizations did not budget for computer security. In UK, 42 % of organizations did not have an information security policy. The findings also revealed that 49 % of organizations listed budget constraints as being an issue in implementing computer security; while in USA, theft of information and financial fraud caused most financial damage. However, the study focused on security practices of computerized information systems as opposed to Ms Excel software application in preparation of financial reports in public universities.

Reviewed literatures indicate that computer applications are important in the production of quality financial reports on a timely basis. Previous studies focus on security practices of computerized information systems in Australia, UK and USA. They study the impact of ICT on accounting practice as opposed to Ms Excel software application. Therefore, the effect of Ms Excel software application on quality of financial reports in public universities is unknown.

CHAPTER THREE

METHODOLOGY

This chapter involves the way in which data was collected, analyzed and presented for the project. It described the research design, the study area, the target population, sample and sampling design, data collection procedures, processing, analysis and presentation.

3.1 Research Design

The study employed a correlational research design which involves relating two or more variables and allows predictions of outcomes based on causative relationships between the variables (Cooper and Schindler, 2003). According to Mugenda and Mugenda (2003), correlational research explores the relationship between variables, that is, the effect of one thing on another and more specifically, the effect of one variable on another. Mugenda and Mugenda (2003) contend that correlational research has the advantage of being relatively cheap and it is used for the current study so as to assess the relationships between study variables.

3.2 Study Area

The study was conducted in Western Kenya; Kenya. This area is located 0.28 latitude and 34.75 longitudes and it is situated at elevation 1,563 meters above sea level. The study focused on the finance department of five selected public Universities in Western Kenya.

3.3 Target Population

When choosing the population to be studied, in other words, an identifiable total set of elements of interest being investigated by a researcher (Hair *et al.*, 2000), the target population needs to be identified. The target population is the collection of elements or objects that possesses the information sought by the researcher and about which inferences are to be made (Malhotra, 2004). The target population size was all the 35 employees in finance department of the 5 selected public Universities in Western Kenya, which comprised of cash office clerks (5), student finance clerks (5), salaries officers (5), imprest clerks (5), Creditors/debtors officers (5), final accounts officers (5) and vote book/budget accountants (5). Of the 35, 10% (4) was used to conduct reliability test hence reducing the effective population to 31 finance department employees. A Census sampling approach was used for 31 respondents since the units of study were not too

many. The study concentrated in five universities and, therefore, accessible, and not prohibitive in terms of cost, time and other resources (Saunders *et al.* 2007; Sekaran, 2000). Such a methodology enhances validity of the collected data by including certain information-rich cases for study (Sekaran, 2000).

3.4 Data Type and Collection Procedure

Both Primary and secondary data was used in the study. Primary data was collected using a semi-structured questionnaire. The researcher administered the questionnaires through the drop and pick later method. The questionnaires were administered to the employees of the department of finance of the five selected public Universities in Western Kenya. Secondary data was collected using document review of financial statements, journals, ledgers, cash books, cash flow summaries, and revenue collections of the said Universities.

3.4.1 Reliability Test for Data Collection Instrument

Reliability refers to the extent to which an experiment, test, or any measuring procedure yields the same results on repeated trials. Primary data research instrument reliability was tested using Cronbach's Alpha Method (Cronbach, 1951). According to Sekaran (2001), alpha values for each variable under study should not be less than 0.7 for the statements in the instruments to be deemed reliable. As such all the statements under each variable were subjected to this test and results compared to the threshold of 0.7. The alpha values of all variables were above 0.70 (see Table 3.4 below).

Table 3.4 Summary of Cronbach's Alpha Reliability Coefficients

Variable	No. of Items	Cronbach's Alpha
Financial reports	9	0.720
Quality of financial reports	1	0.714
Computer applications	2	0.837

Source: Field Data, 2012

Financial reports had alpha of 0.720, quality of financial reports had 0.714 and computer applications had 0.837. This indicates strong internal consistency among measures of

variable items. This implies that respondents who tended to select high scores for one item were likely to select high scores for others. Similarly, those who select low scores for one item are likely to select low scores for others. The data collection instrument was therefore reliable and acceptable for the purposes of the study.

3.4.2 Validity Test for Data Collection Instrument

The validity of the data collection instruments was done using experts in the area of study to edit the questionnaire. In addition, validity was enhanced by conducting a pilot study which is aimed at refining the instruments. As proposed by Mugenda and Mugenda (1999), the pilot was administered on 10 % of the participants of the total population totaling to 4 respondents. These 4 who participated in the pilot were not included in the final study.

3.5 Data Analysis and Presentation

Both descriptive and inferential statistics was used to summarize and analyze the data, involving measures of dispersion and central tendency where means and averages and regression analysis was used. Pearson correlation analysis was also used. The computer package SPSS was used to summarize the data collected for ease of analysis. Data was analyzed using both quantitative and qualitative methods. Data was presented using tables.

3.5.1 Model Specification

In order to exhibit the effect of computer applications on preparation of quality financial reports, the estimation model used by Byenkya (2011) was adopted and modified as:

$$Y = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \varepsilon_i \quad (3.1)$$

Where:

Y = Quality of financial reports (measured in terms of accuracy and efficiency)

X₁ = Ms Navision software application (measured in terms of extent of use in preparation of financial reports).

X_2 = Ms Excel software application (measured in terms of extent of use in preparation of financial reports).

β_0 = Refers to time-invariant firm-specific effects

β_1 and β_2 = are constants

ε = is a random disturbance

Gender	Frequency	Percent	Valid Percent
Male	21	30.4	64.3
Female	12	17.1	35.7
Total	33	100.0	100.0

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Response Return Rate

The researcher administered the questionnaires in person to the respondents. Some respondents filled the questionnaires in the researcher's presence and returned them immediately. Others opted to fill them at their own free time. Out of the 31 questionnaires administered to the respondents, all of them were returned constituting a response rate of 100 % of the administered questionnaires.

4.2 Demographic Characteristics of the Sample

The study sought to establish the background of the respondents in the study in terms of gender, age, education levels, departmental affiliation and years of service. The results were as shown in the following sections.

Table 4.1: Gender of the Respondents

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	20	64.5	64.5	64.5
Female	11	35.5	35.5	100.0
Total	31	100.0	100.0	

Source: Field Data, 2012

Table 4.1 indicates that 64.5 % of the respondents are males while 35.5% of them were females. This implies that majority of employees in finance department of five selected public Universities in Western Kenya are males, hence the data obtained was gender biased.

Table 4.2: Age bracket of respondents

Age bracket	Frequency	Percent	Valid Percent	Cumulative Percent
18-25 Years	4	12.9	12.9	12.9
26-30 Years	4	12.9	12.9	25.8
31-35 Years	10	32.3	32.3	58.1
Above 35 Years	13	41.9	41.9	100.0
Total	31	100.0	100.0	

Source: Field Data, 2012

Most of the respondents were aged above 35 years which is a very active and productive age bracket.

Table 4.3: Highest education level attained

Highest Education Level	Frequency	Percent	Valid Percent	Cumulative Percent
Professional certificate	10	32.3	32.3	32.3
Professional diploma	18	58.1	58.1	90.3
Bachelors degree	3	9.7	9.7	100.0
Total	31	100.0	100.0	

Source: Field Data, 2012

The findings in the Table 4.3 show that 58.1% of the respondents are professional diploma holders, 32.3 % are professional certificate holders and only 9.7 % have bachelor's qualification. This implies that data for the study was obtained from learned respondents who have easily got adopted to the use of computer based systems hence the reliability of the data.

Table 4.4: Experience of the respondents

Working Experience	Frequency	Percent	Valid Percent	Cumulative Percent
Below 1 year	3	9.7	9.7	9.7
2-4 years	6	19.4	19.4	29.0
5-7 years	7	22.6	22.6	51.6
Above 7 years	15	48.4	48.4	100.0
Total	31	100.0	100.0	

Source: Field Data, 2016

Table 4.4 shows that 48.4 % of employees had worked in the universities for over 7 years which therefore an indication of low labour turnover, 22.6 % had worked for the period between 5-7 years and only 9.7 % have been in the university for a period less than 1 year. This implies that the data was obtained from respondents who had gotten experience on the use of the computerized applications and were also more familiar with the variables under study, that is, computer applications (Ms Navision and Ms Excel) and financial reports.

4.3 Extent of adoption of computer applications in the preparation of financial reports

To achieve this objective, descriptive statistics were computed and the results are summarized in Table 4.5.

Table 4.5: Descriptive Statistics on Extent of Adoption of Computer Applications in the Preparation of Financial Reports

Computer Applications	4	3	2	1	Mean	Std. Dev
a. Extent of application Ms Navision Software	18 (58.1%)	8 (25.8%)	4 (12.9%)	1 (3.2%)	3.000	.8440
b. Extent of application Ms Excel Software	20 (64.5%)	8 (25.8%)	3(9.7%)	0(0.0%)	4.000	.6750
Overall Mean/Stdev					3.500	.760

Key: *Very Great Extent=4, Great Extent=3, Moderate Extent=2, Not at all=1*

Source: Field Data, 2012

Table 4.5 shows that the respondents believe that Ms Excel software is used to a very great extent (Mean = 4.000, Std.dev = 0.675) while Ms Navision software is applied to a

great extent (Mean = 3.000, Std.dev = .844). Specifically, a vast majority of respondents agreed to a very great extent (64.5 %) that Ms Excel software was adopted in their respective institutions to a very great extent. Only 9.7 % agreed to a moderate extent while 0.0 % was indifferent about the question. These results are consistent with the findings of The UPA Forex and ICT (2012) on the study carried out on the impact of ICT on accounting practice in Nigeria and found out that the application of Information and Communication Technology (ICT), on accounting practice in Nigeria was applied to a very great extent.

However, the findings are at variance with those of Patrick *et al.* (2013) who found that use of computers to process financial information was applied to a moderate extent.

4.4 Effect of Ms Navision Software Application on Preparation of Quality Financial Reports

To achieve this objective descriptive statistics, Pearson's correlation and multiple regression analyses were conducted and the results are summarized in the sub-sections below.

Table 4.6: Descriptive Statistics on Quality of Financial Reports

Quality of Financial reports	5	4	3	2	1	Mean	Std. Dev
Accuracy of financial reports	18 (58.1%)	10 (32.3%)	3 (9.7%)	0 (0%)	0 (0%)	5.000	.677

Key: *Very high* =5, *High* =4, *Moderate*=3, *Low* =2, *Very low*=1

Source: Field Data, 2012

Table 4.6 indicates that a vast majority of respondents rated the quality of financial reports very high (58.1 %), while 32.3% rated it as high. Only 9.7 % indicated that the quality of financial reports was moderate.

Table 4.7: Bi-Variate Pearson's Correlation between Ms Navision Application and Quality of Financial Reports

		Extent of Ms Navision application	Accuracy of financial reports
Extent of Ms Navision application	Pearson Correlation	1	
Accuracy of financial reports	Pearson Correlation	.937**	1
	Sig. (2-tailed)	(.000)	

Source: Field Data, 2012

As shown in Table 4.7, the correlation coefficient between Ms Navision software application and quality of financial reports is positive and significant ($r = 0.937$, $p = 0.000$, $n = 36$). This implies that use of Ms Navision software influences quality of financial reports positively. This finding is in tandem with findings of previous studies (Byenkya, 2011; Peterson *et al.*, 2010 and The UPA Forex & ICT, 2012) who found a strong positive relationship between computer applications and quality of financial statements.

Table 4.8: Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of Estimate	Durbin-Watson
1	.964 ^a	.930	.926	.31778	1.716

a. Predictors: (Constant), Extent of Ms Excel application, Extent of Ms Navision application

b. Dependent Variable: Accuracy of financial reports

Source: Field Data, 2012

Table 4.9: Multiple Regression Model showing the Effect of Computer Applications on Quality of Financial Reports*

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
(Constant)	.462	.213		2.168	.037
Extent of Ms Navision application	.336	.134	.330	2.516	.017
Extent of Ms Excel application	.800	.162	.648	4.935	.000

*Dependent Variable: Accuracy of Financial Reports

Results in Table 4.9 indicate that extent of Ms Navision application is an insignificant positive predictor of quality of financial reports ($\beta = .336$, $p = .017$). This implies that a unit change in extent of application of Ms Navision software in preparation of financial reports leads to an increase in quality of financial reports of 0.336 %, all else being equal. This finding is in tandem with findings of previous studies (Byenkya, 2011; Peterson *et al.*, 2010 and The UPA Forex & ICT, 2012) who found a strong positive relationship between computer applications and quality of financial statements.

4.5 Effect of Ms Excel software application on preparation of quality financial reports

To achieve this objective, descriptive statistics, Pearson's correlation and multiple regression analyses were conducted and the results are summarized in the sub-sections below.

Table 4.10: Bi-Variate Pearson's Correlation between Ms Excel Application and Quality of Financial Reports

		Extent of Ms Excel application	Accuracy of financial reports
Extent of Ms Excel application	Pearson Correlation	1	
Accuracy of financial reports	Pearson Correlation	.957**	1
	Sig. (2-tailed)	(.000)	

Source: Field Data, 2012

Table 4.10 shows that the correlation coefficient between Ms Excel software applications and quality of financial reports is positive and significant ($r = 0.957$, $p = 0.000$, $n = 36$). This implies that use of Ms Excel software influences quality of financial reports positively. This finding is in tandem with findings of previous studies (Byenkya, 2011; Peterson *et al.*, 2010 and The UPA Forex & ICT, 2012) who found a strong positive relationship between computer applications and quality of financial statements.

Results of multiple regression analysis in Table 4.9 indicate that extent of Ms Excel application is a significant positive predictor of quality of financial reports ($\beta = .800$, $p = .000$). This implies that a unit change in extent of application of Ms Excel software in preparation of financial reports leads to an increase in quality of financial reports of 0.800 %, all else being equal. This finding is in tandem with findings of previous studies (Byenkya, 2011 and Peterson *et al.*, 2010) who found a strong positive impact of computer applications on quality of financial reporting.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents a summary of study findings, conclusions and recommendations based on the major findings, limitations of the study and suggestions for further research.

5.1 Summary of Findings

Based on descriptive statistics, objective one, Ms Excel and Ms Navision softwares are used to a great extent. Equally, objective, two, multiple regression analysis indicate that extent of Ms Navision application is an insignificant positive predictor of quality of financial reports, while, objective three, extent of Ms Excel application is a significant positive predictor of quality of financial reports.

5.2 Conclusions of the Study

From the findings of objective one, it can be concluded that Ms Excel and Ms Navision softwares are used to a great extent. From the findings of objective two, it can be concluded that use of Ms Navision software influences quality of financial reports positively and lastly from the findings of objective three, it can be concluded that use of Ms Excel software influences quality of financial reports positively.

5.3 Recommendations of the Study

From the conclusion of objective one, management of public universities should intensify application of computer applications in preparation of financial reports. Similarly, from conclusion of objective two, management of public universities should intensify application of Ms Navision software as this was found to positively influence quality of financial reports. Lastly, management of public universities should intensify application of Ms Excel software as this was found to positively influence quality of financial reports.

5.4 Limitations of the Study

The study covered only 5 selected public Universities in Western Kenya. There are many other public Universities in Kenya, and these were not incorporated in the study. Secondly, the study was a cross – section data covering only a short period of time. This

limited getting information on future trends on the effect of computer application on the preparation of financial statements for public universities in Kenya. Lastly, the study relied mostly on primary data using interviews and self – administered questionnaires. The respondents may have not given accurate information depending on the sections they work in and fear of being reprimanded by the management of their respective Universities.

5.5 Suggestions for Further Research

An exclusive study on the constraints facing adoption of computer applications in preparation of quality financial reports could be conducted in Kenya. Future research should be conducted on other firms and the extent of computer applications in preparation of financial reports in other sectors. Lastly, future research efforts could use more robust research designs such as time series and survey designs.

REFERENCES

- Adamaka, A. (2003). *The Effect of Computerized Accounting System on Ghanaian Banks: A study of Amanano Rural Bank of Ghana*. Haag – Helia University of Applied Sciences.
- Abdulrazak, M. (2013). The effect of adopting International Financial Reporting Standards on quality of accounting reports of Small and Medium Enterprises in Nairobi County. *International Journal of Business and Management*, 2(4), 17–25.
- Cooper, R., & Schindler, P. (2003). *Business research methods*. New Delhi: Tata Mc Graw Hill Publishing Company.
- Elliot, R. K. (1992). The third wave breaks on the shores of accounting. *Accounting Horizons*, 6 (2), 61-85.
- Ismailjee, A. E. K. (1993). Internal Controls: The case of Nyayo Bus Service Corporation, *A Masters project submitted to University of Nairobi*.
- Fisher, B., & Kenny, R. (2000). Introducing a business information system into an engineering company. *Journal of Information, Knowledge and Systems Management*, 2, 207-221.
- Haigh, T. (2011). The history of Information Technology. *Annual review of information science and technology*, 45, 32-40.
- Hunton, J. E. (2002). Blending information and communication technology with accounting research. *Accounting Horizons*, 16(1), 55-67.
- Imeokparia, L. (2013). Information Technology and financial reporting by Deposit Money Bank in Nigeria. An Empirical Study. *Research Journal of Finance and Accounting*, 4 (11), 39-47
- International Accounting Standards Board (2010). *International Financial Reporting Standards*: London. UK.
- International Accounting Standards Committee. (2004). *Framework for the Preparation and Presentation of Financial Statement*.
- International Accounting Standards Committee. (2000). *Framework for the and Presentation of Financial Statement*.
- International Accounting Standards Committee. (1989). *Framework for the Preparation and Presentation of Financial Statement*.

- Kharuddin, S., Zariyawati, M., Annuar, M.N., (2010). Information system and firms' performance: The case of Malaysian Small medium enterprises. *International Business Research*, 3(4), 42-53.
- Kopplin, J (2002). *An Illustrated History Of Computers: Wikipedia*
- Lin, W., Hwang & Becker, J. (2003). A fuzzy neural network for assessing the risk of fraudulent financial reporting. *Managerial Auditing Journal*, 18 (8), 657-665.
- Mawanda S. P (2008). Effects of internal control systems on financial performance in an Institution of higher learning in Uganda, *a postgraduate dissertation*; Uganda Marytrs University.
- Mugenda, O and Mugenda G. (2003) *Research Methods: Quantitative and Qualitative Approach*. ACTS Press. Nairobi
- Mutai, B. (2014). The effect of adoption of International Financial Reporting Standards on quality of financial reporting by companies listed at Nairobi Securities Exchange. *Journal of Emerging Issues in Economics, Finance and Banking (JEIEFB)*, 2(4), 37-43.
- Neocleous, M. (2000). Social police and mechanisms of prevention. *British Journal of Criminology*, 40: 710-26.
- Oluoch, O. (2014). Demographic diversity in top management team, corporate voluntary disclosure, discretionary accounting choices and financial reporting quality in commercial state corporations in Kenya. *International Journal of Business and Management*, 2(3), 25-30.
- Patrick, O.G et al (2013). *The adoption of Information and Communication Technology in the Public Sector: A study of the Financial Management in the Ghana Education Service*. International Journal of Scientific and Technology Research.2 (12).
- Peterson, M. (2010). *Modeling the effects of e-commerce: Adoption on Business Process Management*. UON
- Porter, M. E. (1980). *Competitive Strategy: Techniques for analyzing industries and competitors*. New York: The Free Press.
- Rono, E. (2006). Effectiveness of the internal control system in management of finances in public universities in Kenya. *A master's project submitted to Egerton University*.

Sanders, Lewis and Thornhill (2007). *Research method for beginners Students*. England: Pearson Education Ltd.

Sogut, O (2014). *The effect of computerized accounting systems on the quality of financial reports of NGO's in Nairobi Kenya*. UON.

Tam, K. & Kiang, M. (1992). Managerial applications of neural networks: the case of bank failure prediction, *Management Science*, 38, No. 7, July, 926–947.

Zimmerman J. L. (1995): *Accounting for decision-making and control*, Chicago: Irwin