ACCOUNTING INFORMATION SYSTEMS AND FINANCIAL PERFORMANCE OF PUBLIC UNIVERSITIES IN WESTERN REGION

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other university.

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DEDICATION

I dedicate this thesis to my late grandparents, Sarah Khamadi Lumwaji and HSC Elam Ngase Lumwaji, for their love, care and support while still alive. All the virtues they instilled gave direction to my life and propelled me towards achieving this significant milestone. God rest their souls in perfect peace!

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ABSTRACT

Accounting information systems are vital in managing entities as they put internal control mechanisms in place and enhance decision-making processes that improve efficiency and financial performance. However, in public universities, they seem not to be quite efficient since they are still experiencing challenges concerning internal controls. Several studies linking AIS and financial performance have been conducted though none focused on universities hence the lack of information on how they influence universities' performance. Therefore, the purpose of this study was to establish the influence of accounting information systems on the financial performance of public universities in Western Region. Specific objectives were to: determine the influence of financial reporting systems on financial performance, analyse the influence of payables management systems on financial performance, examine the influence of receivables management systems on financial performance, and investigate the influence of internal control systems on the financial performance of selected public universities in Western Region. The technology acceptance model, diffusion of innovation theory, and balanced scorecard theories guided the research. The study targeted 215 respondents from 10 selected public universities in Western Region, where simple random sampling was used to obtain a sample of 138 respondents. The study adopted a pragmatic research philosophy and employed a sequential exploratory research design. Data was collected using questionnaires and analysis of audited financial statements. Data was analysed via descriptive and inferential statistics. Multiple regression analysis results indicated that financial reporting systems, payables management systems and internal control systems had a significant negative influence on financial performance (net surplus/deficit) with coefficients of -0.214, -0.136, -0.253 and p values of 0.017, 0.021, and 0.035 respectively which are less than 0.05. Receivables management systems had an insignificant negative influence on financial performance (net surplus/deficit) with a coefficient of -0.105 and a p-value of 0.063, which was greater than 0.05. The study concluded that improving financial reporting systems, payables management systems, and internal control systems would improve financial performance by reducing the net deficit of public universities in Western Region. The findings have a direct bearing on managers of public universities and policy makers to enable them to put strategies in place to improve the existing accounting information systems. The study, therefore, recommends that the management of public universities should enhance their systems to incorporate international financial reporting standards in the preparation of reports, enable automatic tracking of debtors and creditors to improve their liquidity position and solidify their internal controls to diminish the probability of financial loss.

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ACRONYMS

AIS	Accounting Information Systems
FRS	Financial Reporting Systems
GAAP's	Generally Accepted Accounting Principles
IFRS	International Financial Reporting Standards
ICS	Internal Control Systems
KENAO	Kenya National Audit Office
NACOSTI	National Commission for Science, Technology and Innovation
PMS	Payables management systems
RMS	Receivables management systems
SMME's	Small Medium, and Micro Enterprises
SME'S	Small and Medium Enterprises

DEFINITION OF TERMS

Accounting Information Systems	Set of related components that combine payables management systems, receivables management systems, internal control systems and financial reporting systems that gather data and transform it into financial information that is utilized by entities for decision-making purposes (Mahdi, Rostami, & Mogadam, 2010)
Financial Performance	The rate at which entities achieve the objectives they put in place over a specified period. It demonstrates how well entities fulfil their financial obligations toward meeting set goals (Adebawo & Enyi, 2015).
Financial Reporting Systems	An automated system that measures and reports the status of financial resources and communicates it primarily to external users (Hall, 2004).
Internal Control Systems	Refers to an entity's financial and non-financial systems that streamline its operations, safeguard assets, ensure activities are carried out methodically and effectively and advocate for complete and accurate financial records (Ouma, 2015).
Payables Management Systems	It is a subset of the broader accounting software that aids an organization in effectively managing its obligations and other financial liabilities (Kamala & Enow, 2016).
Public University	A university maintained using public funds to train students, conduct research, and oversee public policy (Titi, 2016).

Receivables Management Systems	Systems that enable entities to enhance and automate the invoicing of customers and improve the payment process (Sharma & Kumar, 2011).
Western Region	Refers to areas that border and surround the Kenyan section of Lake Victoria, i.e. the former Nyanza, Western and Western edges of Rift Valley provinces. It covers a total of 11 counties, including; Kisumu, Homabay, Migori, Kisii, Nyamira, Siaya, Vihiga, Busia, Kericho, Bomet and Kakamega (Omwami, 2019)

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Financial performance alludes to how entities meet all their operational and economic goals in a given period, i.e. the short term or long term. It is used to gauge an entity's general financial health within a specified period and compare similar companies' financial performance. In a broad sense, financial performance relates to attaching a monetary value to existing policies and the operation of an entity. Evaluating financial performance is a vital element of financial risk management. Therefore, every firm must ensure that they put strategies in place to pay their extendable and short-run obligations within the required time frame. Failure to; exposes the firm to the risk of financial distress and possible shutdown (Odero, 2014).

Public universities' objective is to make prudent financial decisions that improve their overall financial health and avoid landing in the red zone of not being able to pay their financial obligations when needed. Hence, in the wake of continued technological development, there is a need to put in place accounting information systems so as to install internal control mechanisms that enable efficient decision-making in terms of payables, receivables, assets management and payroll management.

Accounting Information Systems are an assemblage of related modules that combine payables management systems, receivables management systems, financial reporting systems and internal control systems that gather data and transform it into financial information that is utilized by entities for decision-making. The systems are built to take note of all the economic events and transactions of a business and account for them in

accordance with the set legal accounting regulations like the Generally Accepted Accounting Principles and International Financial Reporting Standards. The systems avail economic and financial data to enhance decisions, present financial proposals and formulate budgets (Borhan & Bader, 2018). S

AIS assist entities in the evaluation of their financial performance indicators by providing relevant information regarding the capital structure, which management of public universities must aim to influence to revamp the complete financial health of the entities. However, the quality and reliability of AIS are based on the information systems' quality, timeliness, relevance and reliability. Investment in accounting information systems is widely pegged toward providing firms with options for cost reduction and efficiency. Most firms invest a significant amount of money in enhancing information systems yet often do not use them to their full potential in financial management, which causes financial distress (Nwinee, Akpos, Vincent, & Ibiano, 2016).

Financial distress has become a global concern, and public universities, like other organizations, have their share of financial struggles. A good example is Purdue university in the United States of America which was compelled to reduce student enrolment over the last decade due to its financial distress. Due to the increased costs, the university incorporated dedicated efforts to shift the burden to other stakeholders, such as students and employees; this is all to cut costs and seek alternative revenue sources for sustainability (Winthrop & Dusst, 2019).

To cope with the growing pressure of the financial crisis, institutions have to install accounting information systems to boost accountability while ensuring they are still in a position to rise to the needs of society. A study on the impact of accounting information systems on the financial performance of Fast–Moving Consumer Goods companies in India indicated that the relationship between AIS and profitability of Nestlé Limited, Unilever,

Limited, Asian paints company, Pepsi, Coca-Cola was significant where the systems were fully utilised unlike in Dabour Limited and Godrej Limited where there was the least impact due to underutilization of the AIS (Beg, 2018).

These efficient information systems help put in place some order and development by supporting all the activities of an organization and providing economic information that is used in making decisions that benefit the administration and cope with problems of competitiveness and financial distress. A report on financial reporting systems as a component of AIS and decision-useful information fit towards cost-conscious strategy in higher education institutions in Malaysia gave clear affirmation that implementing an effective accounting information system is essential as it helps the management by providing information and feedback for the creation of value in the respective universities (Shuhidan, Mastuki & Novi, 2015).

A study on implementing financial information systems in both public and private universities in Indonesia showed prudent management of funds and allocation of resources after the implementation process. It led to better payables management, receivables management, tracking of inventories, up-to-date students' finance management and enhancement of payroll functions altogether. (Gunardi, Bramanti & Hartikayanti , 2018).

In Africa, most universities struggle to maintain their daily operations due to escalating financial problems arising from inefficient decision-making processes, with the majority falling into depression. They are left at crossroads on how to deal with the growing pressure and improve their financial health. As far as 2004, universities in Uganda have undergone extreme operational challenges like late payment of lecturers, and employee turnover, which has resulted in unrest among students and lecturers. These challenges make it impossible for operations to run as intended, hence putting a strain on the management, delivery of service

and attainment of set objectives. With accounting information systems, the decision-making process can be enhanced and thus improvement of overall financial health (Kasozi, 2003).

Through several studies, accounting information systems have proved to influence the financial performance of various sectors. Payables management systems were found to significantly improve the performance of SMEs in Kwara Estate in Nigeria. However, the degree of computerization should improve with the existing technological advancement. When introduced in an Enterprise Resource Planning environment in Tunisian firms, accounting information systems also offered a better way of managing all the financial aspects of the firms in the required manner, hence saving on wastage of available resources (Fagbemi & Adeyemi,2016).

Following the global trend, Universities in Kenya have also found themselves in hard financial times due to ineffective decision-making, management and internal control systems circumstances which have all been caused by the underutilization of accounting information systems. The majority are essentially bankrupt, with most failing to pay staff salaries on time, non-remittance of health & statutory pension obligations and inadequate provision of student amenities. The University of Nairobi, Jomo Kenyatta University of Agriculture Technology, Kenyatta University etc. are among the universities facing a financial crisis that is threatening their survival and mass layoffs being the way to go to ease the burden (Tiyambaze, 2020).

Similarly, universities in western region are also facing the same financial dilemma due to the inefficient utilisation of elements of accounting information systems. Universities like Jaramogi Oginga Odinga University of Science and Technology, University of Kabianga, Kisii University, and Masinde Muliro University of Science and Technology have net deficits amounting to an average of 1.02 billion shillings. The financial distress prompted

the universities' vice-chancellors to draft a request to the national treasury for supplemental funding to enable them to pull out of the financial crisis and get a buffer. All of which can be attributed to inefficient decision-making processes and a lack of control mechanisms for effective financial management. Data indicates that despite continued investment in AIS, public universities in western region are yet to attain efficient decision-making processes, which have led to embezzlement and mismanagement of public funds amounting to 60 billion with other funds invested in futile ventures (KENAO, 2015).

The relevance of implementing accounting information systems in universities is unquestionable since the management of the institutions needs the necessary information they can use in decision-making for value creation. Putting in place efficient systems, structures, process curriculum, and financial systems will ensure that public universities in Kenya eliminate domestic misuse and gain maximum usage of resources, which will amass savings that will counterbalance the shortage until they strike a balance and breakeven (Ismail, Barizah and Bakar, 2011).

1.2 Statement of the Problem

Accounting information systems (AIS) are vital in managing entities as they put internal control mechanisms in place and enhance decision-making that improves efficiency and financial performance. In an effort to be on the frontline in financial decisions, public universities continue to increase spending on putting in place accounting information systems (AIS) so as to improve their decision-making processes and establish efficient internal controls. However, the systems seem not to be quite efficient since public universities are still experiencing challenges with respect to internal controls. This has led to the proliferation of public funds where for example, monies amounting to 60 billion shillings were embezzled and misappropriated by public universities in western region (KENAO, 2015). The factor has greatly contributed to higher net deficits, worsening their

already precarious financial situation. As a result, the public universities cannot remit statutory deductions on time, meet operational expenses and even support student amenities. Several studies linking AIS and financial performance have been conducted but focused on other sectors such as automobile, banking and manufacturing and none focused on public universities in western region; hence a lack of information on how they influence universities' performance. Therefore, there is a need for a study to establish the influence of accounting information systems on the financial performance of public universities in Western Region.

1.3 Objectives

1.3.1 General Objective

To establish the influence of accounting information systems on financial performance of public universities in Western Region

1.3.2 Specific Objectives

i. To determine the influence of financial reporting systems on financial performance of public universities in Western Region.

ii. To analyze the influence of payables management systems on financial performance of public universities in Western Region

iii. To examine the influence of receivables management systems on financial performance of public universities in Western Region

iv. To investigate the influence of internal control systems on financial performance of public universities in Western Region

1.4 Research Hypothesis

i. H_0 :Financial reporting systems have no significant influence on financial performance of public universities in Western Region.

ii. H_0 : Payables management systems have no significant influence on financial performance of public universities in Western Region.

iii. H_0 : Receivables management systems have no significant influence on financial performance of public universities in Western Region.

iv. H_0 : Internal control systems have no significant influence on financial performance of public universities in Western Region.

1.5 Justification

Public Universities highly furnish the economic well-being of any country, and their overall financial health is critical to the long-term sustainability of the economy. The study will enable managers of public universities to fully understand the influence of accounting information systems on financial performance, find ways of improving the systems already put in place, and enhance controls that will ensure monitoring of the systems to minimize wastage and proliferation of funds. The study aims to offer insights into the dilemma faced by public universities in Western Region by determining the efficacy of these systems to be able to deduce how their financial performance can be boosted through better management processes and controls to reduce the degree of deficits and hinge on the available scarce funds to foster better financial performance.

The study findings will also promote policy-making where the government policymakers, top-level public university managers, and other education sector entities will be guided on the implications of AIS on financial performance. They will therefore be able to come up with legislation and make informed decisions with regard to taking up and incorporating AIS into operations of higher learning institutions for the sake of efficiency and effectiveness to improve performance.

The research findings will also add to existing literature that may help scholars to identify existing knowledge gaps by providing contextual information necessary for further research. The study will also form a piece of in-depth information for literature review and a reference point in examining different studies on accounting information systems and financial performance.

1.6 Scope of the Study

The study aimed to establish the influence of AIS on the financial performance of public universities in Western Region. Thus, it was centred on 10 public universities located within Western Region. They included Masinde Muliro University of Science and Technology, Maseno University, Kibabii University, Rongo University, Kisii University, University of Kabianga, Kaimosi Friends University, ALUPE University, Tom Mboya University and Jaramogi Oginga Odinga University of Science and Technology. The study focused on the period between 2016 and 2021, where both primary and secondary data were employed. Primary data was sourced from both accountants and auditors of the 10 public universities, while secondary data was derived from audited financial statements of the 10 public universities covering FY 2016/2017 to 2020/2021.

1.7 Limitations of Study

As with most studies, the design of this study was subject to various limitations. First, the research evaluated the influence of accounting information systems on the financial performance of public universities with the use of qualitative independent variables and a quantitative dependent variable. The occurrence rendered it hard to distinctly link the data collected from 5-point Likert scale and the secondary data from the audited financial statements. However, the study used binary regression to bridge the disparity between the collected data and the findings to ensure accuracy.

Second, the sequential exploratory research design was a drawback since it usually involves diminutive samples. This formed a risk of the sample responses not being representative of the target audience. Even though these samples were valuable for a rapid study, they impeded a coherent understanding of the influence of accounting information systems and the financial performance of public universities in western region.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter evaluates relevant theories and scrutinizes and critiques existing literature on accounting information systems and financial performance. It also provides the conceptual framework linking AIS and financial performance.

2.2 Theoretical Review

2.2.1 Technology Acceptance Model

The theory was brought forward by Fred Davies in 1989. It fashions how individuals behave when presented with technology. When individuals and organizations are presented with technology, their selections on how and the appropriate time to use it are influenced by anticipated ease of use and expected usefulness. The anticipated usefulness defines the future users' judgement that incorporating a particular innovation into their activities will improve their life, job and performance.

Anticipated ease of use is the users' estimation that the said innovation will be free from effort or leads to easy execution of the tasks. The theory was adapted from the reasoned action theory and planned behaviour theory. Both approaches were valuable models that could interpret and predict the actual behaviour of individuals; however, problems occurred since they could not give reasons for system acceptance. For this reason, Fred Davies adopted the two theories and proposed Technology Acceptance Model (Davies, 1989).

User's behaviour and intent to use innovation are influenced by 4 determinants; performance expectancy, effort expectancy, influence on social factors and the ease at which it facilitates

arising conditions. Managers who want to know the degree of success in bringing forth new technology can therefore look at the four elements and proactively put in place mechanisms to deal with individuals who will not be receptive to taking up and assisting in the implementation process of innovations. The developments were improvements on the technology acceptance model to give forth the theory of unified acceptance, which explained the use of technology. (Venkatesh, Morris, Davies & Davies, 2003).

The anticipated ease of use of innovation, its subjective norm, easy reproduction and demonstrability of the output as elements of technology acceptance are essential in forecasting how system users deem the system helpful. However, the result of how easy to use a system matched with the benefits derived from the innovation is limited by experience since the subjective norm is moderated by the amount of experience one has.

Thus, there is no direct link-up between the elements that promote the ease of use and the derived benefit. A system can be complex but brings forth excellent results; it all depends on the amount of experience one has. Potential users of an innovation or technology will prefer and use a system based on a trade-off between perceived information quality (perceived usefulness) and the cost associated with access (perceived ease of use) (Venkatesh & Bala,2008).

In relation to the study, the theory complemented the independent variable; accounting information systems. It was relevant since the study sought to analyse public universities' adoption of accounting information systems and comprehend the fit between the cost and return on investment on accounting information systems for increased operational efficiency, performance and enhanced decision-making processes.

Although many studies have continued to increase the popularity of the model, it lacks the ability to comprehend the precursor to technology use or the social influence and the

conditions that facilitate the behaviour toward acceptance of innovation. The model only explains that a given population leans towards technology if they perceive to derive a given benefit from the innovation. The technology acceptance model can also not explain users' behaviour about buying, rejecting, and accepting the use of innovation (Napitupulu, A, & Gerhat, 2017).

2.2.2 Diffusion of Innovation Theory

The theory was postulated by Rodgers Everett in 1962. It explains how and the rate at which innovations spread through a particular population or social system over a specified time interval. After being introduced into a social system, the innovation is taken up by early adopters who spread the technology throughout the population, with more people being receptive to it over time until saturation is attained. Any social system is divided into the late majority, laggards, early majority, innovators and early adopters (Everett, 1962).

Individual preferences and social components need to be assimilated into the diffusion of innovation theory to understand the factors surrounding technology and its adoption. Diffusion cannot be put into quantitative terms due to the complications surrounding individuals and their networks. It is, therefore, beyond the bounds of possibility to precisely put a value on the decisions by individuals to adopt a new idea or technology (Black, Winklhofer & Ennew, 2001).

The willingness of a given population to take up and put new technology to use is wholly based upon the trend of similar innovations or technology adopted previously in a social system. Individuals tend to take up new inventions with reference to past roadmaps of embracing technology and the level of compatibility of the technology with the specific norms that exist in the organizations (Lee, Miranda & Kim, 2004).

Innovations are critical in bringing forth increased productivity. The process of innovation should, however be preceded by an examination of the conventional economic outcomes and all the doubtful and present risks that are associated with putting in place new technology. The major barriers to spreading innovation in a social system are high concentration, psychological population barriers, and low consumer demand. Successful withdrawal of the obstacles will speed up the learning innovation process and thus improve the economic situation (Jdanova & Karminsky, 2013).

The theory supported the accounting information systems variable of the study. This is because accounting information systems are innovations that public universities use to enhance decision-making. Therefore, the theory gives a deeper comprehension of how this innovation spreads through public universities, assesses the likelihood of success or failure before the implementation process, deals with threats accordingly, and thus predicts how it influences financial performance.

The shortcomings of the technology acceptance model led to the adoption of the diffusion of innovation theory. Given that the theory explains the user's adoption and use of new technology, it superseded the first theory. However, the diffusion of innovation theory does not take into consideration the users' resources at their disposal or the social support they have to adopt a new innovation. Resources at one's disposal can either hasten or halt the entire process of diffusion of innovation (Wayne, 2019).

2.2.3 Balanced Scorecard Theory

The theory was postulated by Kaplan and Norton in 1992. It gives a mechanism of measuring strategic performance that, in the end, cascades down to objectives, mission and vision set by an organization. The balanced scorecard is built on four primary constructs; internal procedures perspective, financial perspective, customer perspective and employee growth

and learning. The theory puts together the financial performance of organizations, tracking customer utility and attitudes, defining and working towards internal goals required in attaining client goals and also considering both the shareholder's and client's needs (Kaplan & Norton, 1992).

The relationship between the four constructs of the balanced scorecard is logical and not casual, as suggested earlier when the theory was postulated. Therefore, an organisation must put in place highly integrated performance management systems that incorporate the subjective approach and intuition of high-level managers. Integrating the subjective and objective approach ensures the organization not only focuses on past performance but also on future performances (Nerreklit, 2000).

The success of the balanced scorecard implementation is determined by the support accorded to it by the management of an organization, all the way from the top-level management to the low-level departments. When the management agrees to be accountable for the various measures of the balanced scorecard put in place, then the scorecard will achieve a long-term balance which is key to the longevity of any organization that aims to fulfil its set objectives (Chavan, 2009).

There is need for the adoption of common measures of balanced score card that can be adopted by all the units to enhance uniformity across all the strategic business units. The balanced scorecard needs to take into account the subjective approach and not just the objective approach. Balanced score card needs also to focus on the future and not just on present situations or what happened in the past so as to bring implications on the future endeavour of an organization (Rafik, Zhang, Yuan, Naz & Maqbool, 2020).

The theory is linked to the dependent variable, which is financial performance. Public universities are always left at crossroads when assessing their performance, with most

focusing only on key performance indicators. The balanced scorecard theory assisted in understanding how performance can be evaluated from a diverse scale by incorporating the financial and non-financial measures with other vital indicators of performance like client views, internal processes, employee learning and innovation.

The balanced scorecard theory is a very objective model that focuses on the financial, customer, internal processes, learning and growth aspects, which are vital elements that provide valuable feedback on how well the strategic plan is being executed so that the necessary adjustments are made accordingly. However, the theory neglects the time dimension and does not explain the role of time in the cause and effect relationship, and it does not further separate the cause and effect relationship in time (Milad, Norlena, & Hasni, 2012)

2.3 Conceptual Framework

A conceptual framework is a roadmap which illustrates an existing connection among variables used in a research or study (Kothari, 2014). Figure 2.1 expounds on the relationship between AIS constructs and financial performance. The independent variables emanated and are supported by the technology acceptance model and diffusion of innovation theory, while the dependent variable is based on the balanced scorecard theory. Both the theories and the model elucidate that financial performance is influenced by constructs of accounting information systems which are innovations that are aimed toward enhancing the performance of a job or operational fluidity.

Independent Variable **Dependent Variable**

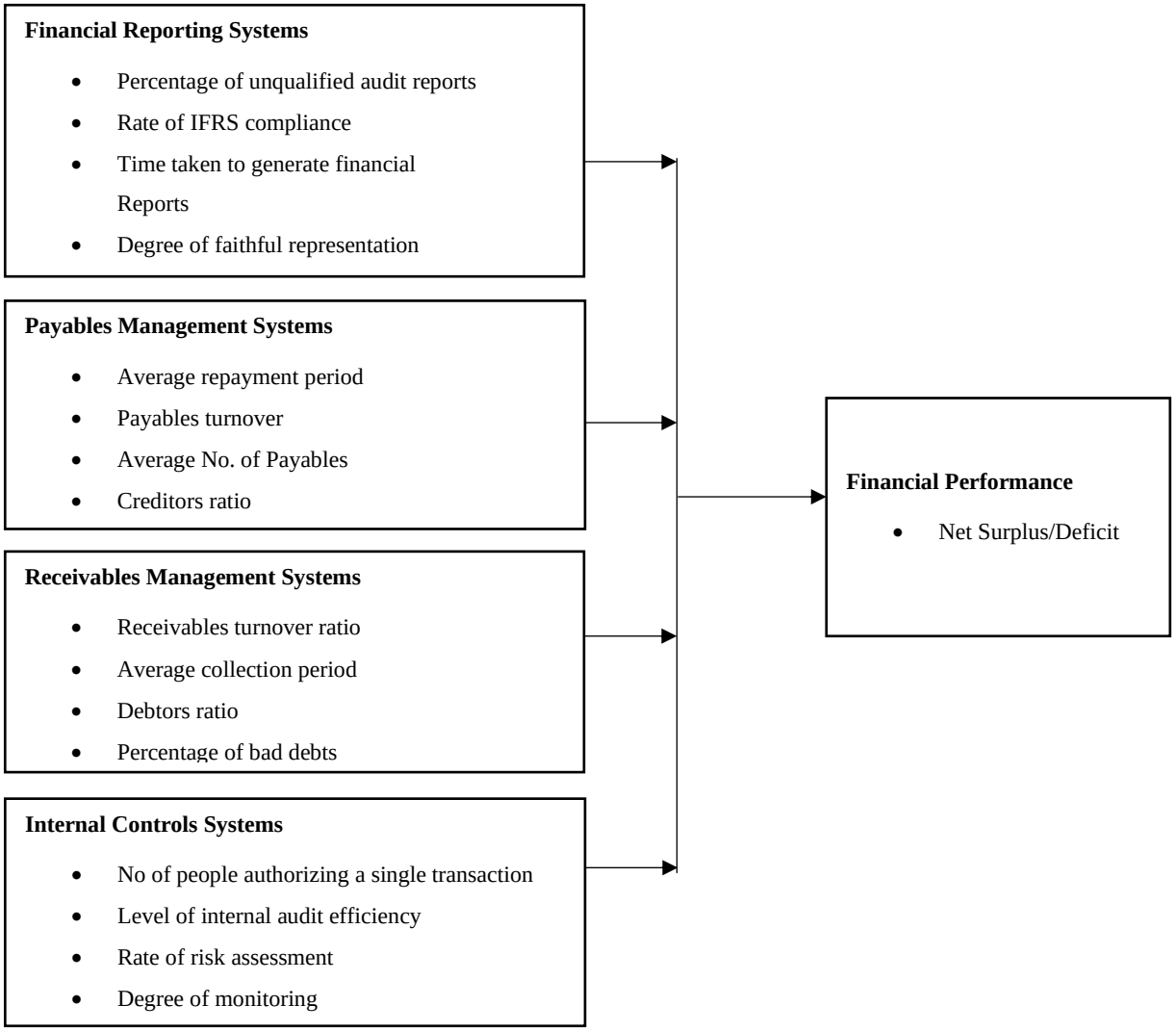

Figure 2.1: Conceptual Framework **(Author, 2022)**

2.3.1 Financial Reporting Systems

Financial reporting systems are automated systems that dispense information concerning the financial affairs of a reporting entity to users of financial information so that they can make informed decisions about the provision of assets to the entity and other decisions. The financial reporting systems act as a focal point through which all the other systems of the firm are interlinked, and information summarised from special journals and subsidiary accounts flows. They are used as inputs in the management reporting systems (Hall,2008).

Financial reporting systems enable organizations to put together financial data and find the trail of accounting records that have an impact on their objectives. The system monitors the effectiveness of the business and helps conclude relevant transactions that are carried out by the entity for the preparation of financial statements that is comprehensive, timely, accurate and credible (Musili & Wepukhulu, 2019).

2.3.2 Payables Management Systems

Accounts payable systems are a subset of the broader accounting software that aids an organization in effectively managing its obligations and other financial liabilities. The payables system enables an entity to effectively and efficiently automate the processing of voluminous transactions between an entity and its suppliers (Kamala & Enow, 2016). The accounts payables systems are an inimitable avenue to regulate an entity's payables, giving assurance of being able to meet their short-term obligations as required and on time. The financial health of an entity relies on the competent management of payables irrespective of the type of business carried out and its size (Mbroh & Attom, 2012).

2.3.3 Receivables Management Systems

Accounts receivable systems enable entities to enhance and automate customer invoicing and improve the payment process. The receivables systems are put in place to ensure customers pay for the goods and services offered by the organization; it manages the accounts receivables or the debtors to an organization and, as a result, streamlines the transaction process between an entity and its customers.

Accounts receivables systems are installed for utilization by the organisation's accountants to promote automated processing of voluminous invoices of customers and, in the process, cut the percentage of time used by accountants in gathering the payments from the customers of the entity. The accounts receivable systems, therefore, improve the whole process of

invoicing and payment and, in turn, increases an entity's cash flow, hence financial Performance (Mukhoma, 2014).

2.3.4 Internal Control Systems

Internal control systems are all the financial and non-financial systems put in place by an entity to streamline its operations to ensure they are carried out in a streamlined and efficient way possible, safeguard assets and promote accurate and complete accounting records, completeness and accuracy of the financial records taking place daily. They are the basic rules, policies and procedures an entity puts in place to make its activities efficient, give direction and ensure conformity to the regulation (Ouma, 2015).

Internal control systems can also be defined as the efforts put in place by the management of an entity to realize set objectives in line with operational effectiveness, efficiency, reliable financial reporting and adherence to the set laws and regulations. The main aim of ICS is to amplify the soundness of financial performance without deviation from the set regulations by enhancing accountability from individuals who give information to the organization. They offer independent reviews of the management's effectiveness in accomplishing assigned responsibilities for better income generation (Michelon, Bozzolan & Beretha, 2015).

2.3.5 Financial Performance

Financial performance is the rate at which entities achieve the objectives they put in place over a given period. It demonstrates how well entities fulfil their obligations towards meeting set goals. The financial performance of public universities is an expression of their activities and strategies in monetary terms. It enables them to estimate their health in financial terms over a specified period. It allows for comparison between public universities or other institutions of higher learning (Adebawo & Enyi, 2015).

Public universities being non-profit entities, various elements can be used to assess their financial performance; however, net surplus or deficit is the most appropriate measure compared to the treasury result and overall result. According to Dragusin, Mihai, and Blanco (2016), net surplus and deficit can be used to evaluate the economic and financial performance of public higher education institutions since it analyzes the revenues and expenditures items given in financial reports.

These items are vital since they reflect in financial terms the training activities, public services, research, academic support, asset exploitation and maintenance and support of student amenities. Financial reports being the main output of accounting information systems, should help the management of public universities in efficient decision-making on financial matters and hence overall financial health (Farah, Farruk & Faizan, 2016).

2.4 Empirical Literature

The section examines studies initially done on financial reporting systems, receivables management systems, payables management systems, internal control systems and financial performance.

2.4.1 Financial Reporting Systems and Financial Performance

Uyar, Gungormus and Kuzey (2017) did a study on accounting information systems and corporate governance. The study sampled 400 firms operating in Istanbul, where 142 firms responded, giving a response rate of 35.5%. The study used simple random sampling, and a partial least square was employed to analyze the collected data, given that the sample size was small. Financial reporting had a significant impact on the performance of Turkish non-listed firms and therefore improved corporate governance. The study also found that the stakeholders rapidly growing need for economic and non-financial information had transformed the financial reporting process and, as a result, enabled the preparation of

financial reports in line with the required accounting and reporting framework to ensure uniformity and comparability.

Ouma (2015) sought to find the relationship between financial reporting quality and the financial performance of Companies indexed at the Nairobi Securities Exchange. A descriptive research design was employed with census sampling used to obtain a population of 68 companies. Financial statements were scrutinized to collect secondary data from 2012 to 2016. ANOVA and ordinary regression analysis were employed to determine the relationship between the dependent and independent variables. A significant positive relationship was found between financial reporting quality and financial performance. Financial reporting quality is always evaluated on the subordinate essential qualitative characteristics, which encompass understandability, comparability, verifiability, timeliness, faithful representation and relevance.

Musili and Wepukhulu (2019) studied the effects of financial reporting on the organizational performance of public corporations under the ministry of tourism. A descriptive research design was used where data collected from 103 respondents who were sampled randomly was analyzed via descriptive statistics and inferential statistics that involved Pearson correlation and multivariate regression analysis. The study established that the influence of financial reporting on the organisational performance of public corporations under the ministry of tourism in Kenya was significant in that improvement in financial reporting led to an increase in financial performance.

Mironuic, Carp and Chersan (2015) studied the relevance of financial reporting on the performance of quoted companies when international financial reporting standards are adopted. The study sampled 65 companies quoted listed on the Bucharest stock exchange and collected secondary data from published financial statements. Financial reporting was

regressed against net income, which was used to measure performance. The study identified that financial performance improved when International Financial Reporting Standards were introduced and incorporated into the financial reporting of the listed firms.

A study by Ogbonna and Appah (2011) investigated the ethical compliance by accountants and financial reporting on performance. The study sampled 25 companies from five sectors selected through purposive sampling. Primary data was collected through questionnaires rated on a five-point Likert scale where descriptive statistics and Spearman rank order correlation methods were used for data analysis. The study concluded that when financial reporting is done in compliance with the required framework, the quality of financial information improves and thus financial performance.

2.4.2 Payables Management Systems and Financial Performance

Ikechukwu and Nwakaego (2016) did a study on the management of accounts payable and its influence on the financial performance of manufacturing companies in Nigeria. The Research targeted all product manufacturing companies in Nigeria that dealt with both domestic and industrial products. The study employed an ex post facto research design with secondary data derived from reports and statements of accounts of the companies. Information from accounts payables, turnover on sales, long-term debt and the profit before tax were used to measure financial performance. Multiple linear regression analysis method was used to analyse the collected data, and it was concluded that accounts payables management has a significant positive relationship with profitability and hence financial performance.

Rotich and Achode (2016) researched the influence of accounts payables as a source of financing on the performance of manufacturing firms listed on the Nairobi Stocks Exchange. Since the study's objective was to make a quantitative comparison between accounts payable

and financial performance, the study utilized the cross-sectional research design. All the firms listed on NSE formed both the target population and sample. The study collected secondary data from the listed company's financial statements over a five-year period from 2009 to 2016. Data was analysed via descriptive and inferential statistics, where binary regression and ANOVA were used to determine the effect of payables on profitability. The debt ratio measured accounts payables, while profitability measured financial performance. The study found a strong and direct relationship between payables and financial management.

Another study by Onchangwa (2019) on the effects of working capital management on the financial distress of non-financial firms listed on the NSE found a positive and significant relationship between management of payables and financial distress, a financial performance indicator. The study examined the effect of inventory cash, receivables and payables management on the performance of non-financial firms listed on the NSE. Published financial statements of 41 listed firms were used as a source of secondary data. Since the listed firms were few, the study adopted a census design with gathered data being analysed via descriptive statistics and inferential statistics. The study recommended good management of payables to improve financial performance.

Likalama, Okeyo and Kirwa (2017) assessed accounts payable management as a determinant of profitability in agro firms in the Eldoret business centre. The study used a descriptive research design targeting a population of 510 respondents. 51 managers were sampled via purposive sampling, while 214 general employees were sampled via a simple random technique. Questionnaires were used to collect primary data, and Cronbach alpha and expert validity were used to test the reliability and validity of the data instruments. After data analysis through descriptive and inferential statistics, management of payables was

found to be a predictor of profitability. Through the study, managers were recommended to create value by efficiently managing accounts payables.

Kamala and Enow (2016) researched accounts payable management practices of small, medium and micro enterprises (SMMEs) in Cape, Metropolis, Southafrica. Data was collected from a sample of 200 SMMEs in Metropolis, South Africa, through close-ended questionnaires. Both descriptive and inferential statistics were used to analyze the collected data and found a significant relationship between accounts payables management practices and the performance of the SMMEs. The study recommended that SMMEs to review accounts payables management practices to ascertain if maximum benefits are sought from an entity's payables.

2.4.3 Receivables Management Systems and Financial Performance

Mukhoma (2014) did a study on accounts receivables management and financial performance of manufacturing firms in Nakuru county, Kenya. A descriptive research design was employed, and purposive sampling was used to sample the respondents from the 25 manufacturing companies in Nakuru county. Since they were few, the census sampling method was ideal for collecting data relevant to establish the relationship between accounts receivable management and financial performance. Secondary data was collected through analysis of financial statements over a five-year period from 2008 to 2013 and later analysed via regression analysis by forming a trend analysis. The average collection period, which was used to measure accounts receivables management had a significant positive association with financial performance measured by return on assets.

Munene and Tibbs (2018), in their study, also sought to establish the influence of accounts receivable management on the financial performance of Embu water and sanitation company in Embu county, Kenya. The study used a descriptive research design to find out the

relationship between the variables. Secondary data extracted from the books of accounts in the finance and accounts office was analysed through descriptive and inferential data analysis methods. The study established a positive relationship between the average collection period and financial performance, showing that if the period of payment by a debtor is increased, financial performance increases generally. The study recommended increasing the average collection period.

Another study was done by Patrick (2020) on accounts receivable management on the financial performance of quoted manufacturing companies in Nigeria. The study's target population entailed listed manufacturing firms in Nigeria from 2010 to 2019. To eliminate bias, 7 consumer goods manufacturing firms which could not provide relevant information were removed from the sample size bringing the total sample size to 19 firms. Secondary data from published financial statements of the firms sampled were collected, and the ordinary least square regression technique was used for data analysis to test the study's hypothesis. The study adopted an indirect approach where firm size and leverage controlled the relationship between accounts receivable management and financial performance. The accounts receivable period was found to positively affect financial performance measured in terms of return on assets.

Odondi, Nteere and Njeru (2015) researched on effects of receivables management on financial performance: a case study of Deloitte East Africa limited. A descriptive research design was adopted. The study used purposive sampling to extract a sample of 82 respondents who would give the relevant information necessary for the study. Through judgement, all the managers of Deloitte East Africa were included in the sample. Questionnaires were used to collect primary data, which was analysed using qualitative and quantitative data analysis methods in line with the research objectives and questions.

After analysis, the data was further summarised, classified and presented in tables, charts, and percentages. It was established that receivables management significantly influenced the financial performance of Deloitte East Africa. Further, proper operating capital management practices should be maintained in the organization for effective utilization of resources to enhance financial performance.

2.4.4 Internal Control Systems and Financial Performance

Muhunyo (2018) studied the effects of the internal control systems on the financial performance of public institutions of higher learning in Nairobi county, Kenya. Control activities, risk assessment and control environment was used to measure internal control systems. The study used a descriptive research design where 96 employees from institutions of higher learning in Nairobi county were sampled. Questionnaires were used to collect primary data and later analysed via descriptive statistics and multiple linear regression. The study concluded that internal control systems significantly influence the financial performance of institutions of higher learning in Nairobi county. Therefore, it was recommended that institutions put in place internal control systems to ensure accountability is adhered to for better performance.

Magu and Kabati (2016) researched the influence of internal control systems on the financial performance of the Kenya Famers Association in Kenya. The study targeted 78 managers of the Kenya Famers Association. The census technique was adopted to obtain the maximum information required for the study and to establish a relationship between the variables. Both secondary and primary data were collected and analyzed via inferential and descriptive statistics. Internal control systems were measured through the control environment and control activities. The study brought forward the fact that there existed a positive relationship between internal control systems and the financial performance of the Kenya Farmers Association.

A study by Odek and Okoth (2019) on the effects of internal control systems on the financial performance of distribution companies in Kenya found internal control systems to impact financial performance positively. Correlational and cases study research designs guided the study. Census sampling was used where all 38 employees of Moon Bluez enterprise formed the study's target and sample size. Primary data was collected through questionnaires, while secondary data was collected from the relevant books of accounts. The reliability and validity of the research instruments were tested through the retest technique and expert views, respectively. Data collected was analysed through mean, standard deviation, Pearson correlation and multiple regression analysis. It was recommended that emphasis be put on proper controls and asset disposal to reduce the risk of material misstatement during financial reporting.

Kabuye, Kato, Akugizibwe and Bugambiro (2019) applied a cross-sectional and correlational research design to determine how internal control systems and working capital management influence the financial performance of supermarkets in Uganda. 110 employees from the supermarkets formed the target population, and internal control systems were found to predict financial performance. Proper internal control systems were found to improve financial performance. The study recommended the same kind of research be done on other sectors of the economy since the results can only be generalised to supermarkets.

2.5 Critique of Gaps in Literature Review

According to the reviewed literature, the following gaps were identified;

Table 2.1: Critique and Gaps

Author	Focus	Design	Findings	Gap
Uyar, Gungormus & Kuzey (2017)	Turkish non-listed Firms	Descriptive	Financial reporting was found to have a significant impact on the performance of Turkish non-listed firms	The study focused purely on non-listed firms in Turkey. It remains unknown how financial reporting as an element of AIS influences the financial performance of public universities in Western Region.
Gunardi, Bramanti, & Hartikayanti, (2018)	Public universities in Indonesia	Quantitative and Descriptive	The role of accounting systems affected private universities in Indonesia	Focused on private universities and not public universities where implications of AIS may differ
Zoubi (2017)	Public and private universities in Jordan	Cross-sectional	Electronic accounting information systems provide financial indicators in public and private universities	The sample was small and hence not representative.
Musili & Wepukhulu, (2019)	Public corporations under the ministry of tourism	Descriptive	Financial reporting had a significant effect on organizational performance	The strength and direction of the effect were not established. The study also focused on public corporations and not public universities.
Minoruic,Carp & Chersan (2015)	Companies quoted on Bucharest Stock Exchange	Quantitative	Financial reporting positively impacts Net income	Performance was measured using net income, so findings cannot be generalized to public universities, which are non-profit entities.

Ikechukwu & Nwakaego(2016)	Manufacturing companies in Nigeria	Ex post-Facto	Accounts payables have a significant positive relationship with profitability	Performance was measured in terms of profitability, and therefore findings cannot be generalized to public universities, which are non-profit entities
Shuhidan, Mastuki, & Novi, (2015)	Malaysian Higher Education Institutions (HEIs)	Quantitative survey	Accounting information systems and decision-useful information influenced cost-conscious strategy and hence performance	The study did not recognize internal control systems as integral to the AIS.
Rotich & Achode (2016)	Firms listed on Nairobi Securities Exchange	Cross-sectional	There was a strong direct relationship between debt ratio and financial performance.	The study focused on firms listed on Nairobi Securities Exchange. Hence it remains unknown how debt ratio as a payables management factor affects public universities' performance.
Likalama, Okeyo & Kirwa (2017)	Agro firms in Eldoret business centre.	Descriptive	Payables management was found to be a predictor of profitability	Profitability was used as a measure of performance; hence results cannot be generalized to public universities which are non-profit making.
Kamala & Ennow (2016)	Small, Medium, and Micro Enterprises in Cape metropolis South Africa	Census	A significant relationship between management practices and performance	The direction of the relationship was not established.
Mukhoma (2014)	Manufacturing Firms in Nakuru County	Descriptive	Accounts receivable management had a positive relationship with return on assets	Return on assets is a measure of profitability and cannot adequately measure the performance of public universities

Munene &Tibbs (2018)	Embu Water and sanitation company in Embu County, Kenya	Descriptive	There was a positive relationship between the average collection period and financial performance	The results from the case study on Embu water and sanitation companies cannot be generalized to public universities.
Patrick (2020)	Quoted manufacturing companies in Nigeria	Census	The accounts receivable period had a positive effect on financial performance measured in terms of return on assets	Performance was measured in terms of profitability which might not give a clear picture of public universities.
Odondi, Nteere & Njeru (2015)	Deloitte East Africa Limited	Descriptive	Receivables management had a significant influence on financial performance	The research was a case study, and hence the results may not be exhaustive.
Muhunyo (2018)	Public Institutions of higher learning in Nairobi County	Descriptive	Internal control systems have a significant influence on performance	The sample size was small and not representative of the entire population. The direction of the relationship was also not clearly defined.
Magu & Kabati (2016)	Kenya Farmers Association	Census	A positive relationship was established between internal control systems and financial performance.	The findings in the case study cannot be generalized to public universities.
Odek & Okoth (2019)	Moon Blues distribution company	Correlational and Case Study	Internal control Systems had a positive impact on financial performance	The study focused on the distribution industry – a case study of Moon blue company. It, therefore, remains unknown how Internal control systems influence the financial performance of public universities.
Kabuye, Kato, Akugizibwe & Bugambiro (2019)	Supermarkets in Uganda	Cross-sectional and Correlational	Internal control Systems were found to be predictors of financial performance.	Findings cannot be generalized to public universities.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter contains the design and paradigm upon which the study is based, study area, techniques used in sampling, target population, research instruments, data collection procedure, reliability and validity, data processing, analysis, and presentation.

3.2 Research Philosophy

The research adopted a pragmatic research philosophy. The research paradigm acknowledges numerous ways of understanding a phenomenon, given that realities have multiple outcomes or occurrences. Identifying the multiple realities is derived through condensing the qualitative and quantitative research techniques to entirely comprehend the circumstances surrounding the problem under study. Based on the type of research the study, the research paradigm was ideal since quantitative and qualitative data was utilised in deriving the statistics and drawing conclusions fit for accurate generalization of results to the larger population. The paradigm also enabled a more profound comprehension and analysis of the research problem (Collins & Hussey, 2014).

A paradigm is a structure of carrying out a study that has been long in practice that gives a baseline and direction that enables the use of appropriate research design, collection procedure and analysis for an accurate understanding of the phenomenon under study.

3.3 Research Design

The research was based on a sequential exploratory research design. Given that the study attempted to investigate the strength and direction of the link between accounting

information systems and financial performance using both quantitative and qualitative data, a sequential exploratory approach was appropriate. Quantitative data was employed to support the findings of qualitative data in the study; hence suitable. Research design is the framework that gives a particular research or studies a foundation on which it will be based. It sets out the structure through which the study conducts data collection and analysis (Kothari, 2014).

3.4 Study Area

The study focused on 10 public universities in Western Region. The public universities have working accounting information systems, while others use Enterprise Resource Planning which carries out financial and accounting functions like AIS. Nonetheless, we have yet to reap the full benefits that AIS has towards quality decision-making and internal control mechanisms. For this reason, there was a need to inaugurate how accounting information systems influence the financial performance of the selected public universities in Western Region. Several studies expound on the relationship between AIS and financial performances in different sectors within Kenya, with limited studies focusing on public universities.

3.5 Target Population

The study targeted 215 employees in the accounting and audit departments of the 10 public universities in western region, Kenya. The population was ideal since the 10 public universities have put in place AIS used to create financial reports to aid decision-making. The targeted respondents have a close interaction with AIS and thus provided vital information necessary for the study. A target population is a group of individuals or components that research intends to examine (Mugenda & Mugenda, 2013).

Table 3.1: Target Population

Respondents	No.	Percentage
Finance Officers	10	4.65
Deputy Finance Officers	10	4.65
Accountants	160	74.42
Auditors	35	16.28
Total	**215**	**100.00**

Source: Universities Human Resource Department (2022)

3.6 Sample and Sampling Technique

Sampling points to identifying specific elements within a group that can be used to form a generalization about an entire chosen population (Cooper & Schindler, 2014). The study's sample was calculated using the Krejcie and Morgan sample size formulae, as shown in equation (3.1). The method was suitable since the population was known.

$$n = \frac{X^2 NP(1-P)}{e^2(N-1) + X^2 P(1-P)} \quad (3.1)$$

Where,

X^2 = Table value for chi-square @ d f 1 for the desired confidence level (3.84)

N = Target Population

n = Sample size

e = Margin of error

P = Population proportion assumed to be 0.50 with a 95% confidence level

$$n = \frac{3.84 \times 215 \times 0.5 \times 0.5}{0.05^2 \times (215-1) + (3.84 \times 0.5 \times 0.5)} = 138$$

In recruiting the 138 respondents, the study applied a simple random sampling technique. The technique was ideal since each element was given the same likelihood of being included in the sample, which minimized biasness hence straightforward generalization of the

research results (Kaplana, 2012). Table 3.2 shows how the sampled 138 respondents were distributed.

Table 3.2: Sample Size

Respondents	No.	Percentage (%)
Finance Officers	6	4.65
Deputy Finance Officers	6	4.65
Accountants	103	74.42
Auditors	23	16.28
Total	**138**	**100.00**

Source: Author, (2022)

3.7 Data Collection Instruments

In order to collect the data needed for the study, questionnaires were used with document analysis. Questionnaires collected primary data, while secondary data was derived through document analysis. The questionnaires were structured to collect information based on a five-point Likert scale so as to investigate the link between AIS and financial performance. Questionnaires were relevant since they are considered cost-effective and time-saving in terms of administration and analysis (Bartram, 2019). Audited financial statements were also utilised to derive secondary data on net surplus/deficit as a measure of financial performance. The statements were audited and hence reliable.

3.8 Data Collection Procedure

The study exploited the drop-and-pick method that saw questionnaires remotely delivered to respondents and later handpicked after two weeks. The period gave respondents adequate time to respond to the questionnaires. Secondary data was collected through the websites of the auditor general and parliament, where the financial statements were closely scrutinized for information on net surplus or deficit, which was a measure of financial performance.

3.9 Pilot Test

A pilot test was done at the University of Eldoret, where 18 questionnaires were distributed to both accountants and auditors of the institution. The institution was ideal since it portrayed the same characteristics as the other public universities in Western Region and has a working accounting information system. An aggregate of 10% of the total sample population is considered sufficient; thus, 18 respondents sufficed compared to the sample size of 138 respondents (Cooper & Schindler, 2014). After being returned, questionnaires were run through Statistical Package for Social Sciences to test for reliability and validity.

3.9.1 Reliability

Table 3.3: Reliability of Research Instruments

Variable	Cronbach alpha	Number of items	Result
FRS	0.834	8	Reliable
PMS	0.754	8	Reliable
RMS	0.719	8	Reliable
ICS	0.827	8	Reliable
Financial Performance	0.705	8	Reliable

Mugenda and Mugenda (2013) describe reliability as the proportion to which a research tool produces invariable outputs after duplicated trials. The reliability of the questionnaires was assessed through internal consistency. It is an element that finds the consonance of study instruments in estimating the characteristics or behaviour of a test. Cronbach's alpha being the most conventional method of assessing internal consistency, was applied to check the reliability of the questionnaires as a collection instrument.

Derived alpha values of more than 0.7 are considered good, while those above 0.80 are regarded as the best. Therefore, any value above 0.70 is reliable and shows that the research constructs could work harmoniously and bring forth consistent results even after repeated trials (Keith, 2018). As shown in Table 3.3, the Cronbach alpha values for financial reporting

systems, receivables management systems, internal control systems, payables management systems, and financial performance were 0.754, 0.719, 0.827, 0.834and 0.705. Given the pilot study results and the alpha values, it is clear all study constructs were deemed reliable since their values were more than the required alpha value of 0.70.

3.9.2 Validity

Table 3.4: KMO and Bartlett's Test Results

				Bartlett's test of Sphericity		
Construct	**No of Items**	**AVE**	**KMO**	χ^2	**df**	**P-value**
FRS	8	0.535	0.851	23.604	21	0.000
PMS	8	0.620	0.938	35.085	21	0.000
RMS	8	0.564	0.827	20.719	21	0.000
ICS	8	0.571	0.901	31.423	21	0.000
FIN PERF	8	0.578	0.900	26.518	21	0.001

Validity points to the rate at which the results of the research can accurately be deciphered and applied to other populations (Kothari, 2014). The study engaged experts who offered comments regarding the face validity and suitability of the questionnaires as an instrument for data collection. The use of experts enabled the study to identify areas that needed alterations, after which modifications were made to realize the study's objectives (Cooper & Schindler, 2014).

Further questionnaires from the pilot study were checked for construct validity through confirmatory factor analysis (CFA). The Kaiser – Mayer – Olkin and Bartlett's tests were used to test the sufficiency of the data for factor analysis. The test was vital in determining the data's sampling adequacy, the partial correlation's strength, and testing the presence of an identity matrix in the model. Table 3.4 exhibits KMO and Bartlett's results, which are considered measures of validity for factor analysis. The test derived the average variance extracted (AVE) and the KMO and Bartlett's test of Sphericity. AVE showed convergent

data validity and measured the level of variance shown by the constructs in relation to the variance caused by measurement error. Values of more than 0.5 are considered acceptable, and from Table 3.4, it is evident that all the constructs had values greater than 0.5, proving the data's suitability.

The KMO test determines the sampling adequacy of the data in the model and gauges the appropriateness of data for factor analysis. The acceptable criterion for the test is that values greater than 0.8 are considered acceptable for factor analysis. Results in Table 3.4 demonstrated that data for all the constructs under study were suitable since they were greater than 0.8. Lastly, Bartlett's Test was used to establish if the constructs had equal variances, and a significant test showed that the data was perfect for factor analysis. All the Bartlett's χ^2 had p-values of less than 0.05 hence significant at 95% confidence interval. The scores showed that the constructs involved correlational matrices, which were not identity matrices; thus, the sampled data from the pilot study proved sufficient for factor analysis and sampling.

3.10 Data Processing, Analysis, and Presentation

Subsequently, after data collection, questionnaires were sorted and coded to check for omissions or any discrepancies and later run through the statistical package for social sciences (SPSS). Data were analyzed via descriptive and inferential statistics. Descriptive statistics were ideal since they enabled summarizing of all the characteristics relating to financial reporting systems, receivables management systems, payables management systems and internal control systems.

Inferential statistics involving binary regression analysis were employed to test the hypotheses and the statistical significance to determine both individual and joint influence of payables management systems, financial reporting systems, receivables management systems, and internal control systems on financial performance. Diagnostics tests were also

performed to assess the assumptions of linear regression with respect to autocorrelation, multicollinearity, heteroscedasticity and normality of model residues. The presentation of data was done via tables since they are the simplest ways of summarizing data. The following multivariate regression model 3.1 was used:

$$\log Y = \beta_0 + \beta_1 FRS + \beta_2 PMS + \beta_3 RMS + \beta_4 ICS + \varepsilon \quad (3.1)$$

$\begin{cases} 1 \\ 0 \end{cases}$ 1 if AIS is adopted, 0 when AIS not adopted

Where:

Y -Financial Performance (Net surplus/ deficit)

β_0 - Regression Constant (Net Surplus/deficit when AIS are not adopted)

β_1 - Regression coefficients indicate the difference in financial performance when FRS, a component of AIS is adopted in public universities

β_2 - Regression coefficients indicate the difference in financial performance when PMS, a component of AIS is adopted in public universities

β_3 - Regression coefficients indicate the difference in financial performance when RMS, a component of AIS is adopted in public universities

β_4 - Regression coefficients indicate the difference in financial performance when ICS, a component of AIS is adopted in public universities

FRS- Financial Reporting Systems

PMS- Payables Management Systems

RMS- Receivables Management Systems

ICS- Internal Control Systems

ε -The error term

3.11 Measurement of Variables

The study utilized both qualitative and quantitative data hence mixed research. The independent variable was qualitative and was measured through measurable sub-variables, while the dependent variable was financial performance which was evaluated via net surplus or deficit.

Table 3.5: Measurement of Qualitative Variables

Independent Variable	Indicators	Measurement tool	Section on Questionnaire	Empirical Studies
Financial Reporting Systems	Percentage of unqualified audit reports Rate of IFRS compliance Time taken to generate reports Degree of faithful representation	5 Point Likert Scale 8 items	Section B	Uyar, Gungornus and Kuzey (2017) Ouma (2015) Musili and Wepukhulu (2019) Minoruic,Carp and Chersan (2015) Ogbonnah and Appah (2011)
Payables Management Systems	Average repayment period Payables turnover The average number of payables Creditors ratio	5 Point Likert Scale 8 items	Section C	Ikechukwu and Nwakaego (2016) Rotich and Achode (2016) Onchangwa (2019) Likalama, Okeyo & Kirwa (2017) Kamala & Enow (2016)
Receivable Management Systems	Receivables turnover ratio Average collection period Debtors ratio Percentage of bad debts	5 Point Likert Scale 8 items	Section D	Mukhoma (2014) Munene&Tibbs (2018) Patrick (2020) Odondi, Nteere& Njeru (2015)

Internal Controls Systems	Number of people authorizing a single transaction Level of internal audit efficiency Rate of risk assessment Degree of monitoring	5 Point Likert Scale 8 items	Section E	Muhunyo (2018) Magu &Kabati (2016) Odek & Okoth (2019) Kabuye, Kato, Akugizibwe & Bugambiro (2019)

Table 3.6: Measurement of Quantitative Variables

Variable	Indicator	Formula	Empirical Studies
Financial Performance	Net surplus / Deficit	Operating Income Less Operating Expenditure	Dragusin, Mihai, and Blanco (2016)

Various elements can be used to assess the financial performance of public universities, but net surplus or deficit was the most appropriate measure compared to the treasury result and overall result. According to Dragusin, Mihai, and Blanco (2016), net surplus and deficit can be used to evaluate the economic and financial performance of public higher education institutions since it analyzes the revenues and expenditures items given in financial reports. These items are vital since they reflect in financial terms the training activities, public services, research, academic support, asset exploitation and maintenance and support of student amenities.

3.12 Ethical Considerations

The study acknowledged that the data collected was sensitive and thus was regarded utmost confidentiality it deserved. The acquired information was strictly utilized for the research and not given out to other individuals since it was susceptible to misuse by third parties, which could put the entities in a precarious position. The respondents were not coerced to avail any data necessary for the research. An authorization letter was also sought from the Kaimosi Friends University Board of Graduate Studies, which was essential for acquiring a research permit from the National Commission for Science Technology and Innovation (NACOSTI).

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

The chapter entails the presentation of data analyzed, results, and discussions of findings. The section is divided into various parts encompassing descriptive statistics, diagnostic tests and inferential statistics.

4.2 Response Rate

To effectively decipher the association between AIS and the financial performance of public universities, questionnaires were issued to 138 respondents in the selected 10 public universities under study through a drop-and-pick method. As in Table 4.1, from the issued questionnaires, 109 respondents were able to respond and return questionnaires, while 29 respondents did not submit their questionnaires. This translated to a return rate of 80%, and a response rate of 50% and above is estimated to form a sufficient basis for analysis and reporting, thus reliable for generalization to a larger population (Kothari,2014).

Table 4.1: Response Rate

Details	**Number**	**Percentage (%)**
Returned questionnaires	109	80%
Unreturned questionnaires	29	20%
Total (Issued questionnaires)	**138**	**100%**

4.3 General Information

4.3.1 Adoption of AIS

As pointed out in Table 4.2, a bulk of the respondents of 67 (61.5%) had used AIS for at least 5 years, it was clear that the selected public universities in Western Region had working AIS in place, and the respondents have been using them for a significant amount of time. Since the study covered five years, the data collected from the respondents were reliable and

sufficient to aid the study in gauging the efficacy of accounting information systems in public universities in Western Region.

Table 4.2 Adoption of Accounting Information Systems

Response	Frequency	Percent (%)	Cumulative Percent (%)
5 Years and Above	67	61.5	61.5
3 - 4 years	25	23.0	84.5
1-2 years	12	11.0	95.5
Below 1 year	5	4.5	100.0
Total	**109**	**100.0**	

4.3.2 Accounting Reports

The information in Table 4.3 shows that 71 (65.1%) respondents out of the 109 indicated that selected public universities in Western Region use AIS to generate management reports compared to 38 (34.9%) respondents who agreed that the entities produce financial reports. The results show that public universities that use accounting information systems to generate management reports are in a better position to make informed decisions concerning payables, receivables, internal controls and financial reporting. On the other hand, institutions that use it to produce financial reports have enhanced the entire accounting process, which ensures compliance with the Generally Accepted Accounting Principles (GAAPs).

Table 4.3:Accounting Reports

Response	Frequency	Percent (%)	Cumulative Percent (%)
Management reports	71	65.1	65.1
Financial reports	38	34.9	100.0
Total	**109**	**100.0**	

4.4 Descriptive Statistics

The section contains descriptive statistics derived from questionnaires issued to the respondents in the selected public universities in Western Region. The data collected was

measured via a 5-point Likert scale to gather information concerning measures of financial reporting systems, receivables management systems, payables management systems, internal control systems, and financial performance.

4.4.1 Financial Reporting Systems and Financial Performance

4.4.1.1 Unqualified Audit Reports

In Table 4.4, it can be seen that out of the 109 respondents, 5 (4.6%) strongly disagreed, 6 (5.5%) disagreed, and 6 (5.5%) remained neutral. In contrast, 56 (51.4%) agreed, and 36 (33.0%) strongly agreed that the selected public universities in Western Region had unqualified audit reports. From the findings, it was evident that third parties can trust the accounting process of the public universities since they conform to the GAAPs. When the accounting process is credible, the entities are better placed regarding access to funds from banking institutions. The general public and other institutions also have the confidence to invest in their monies with the expectation of greater returns.

For those who disagree, it showed that some public universities had qualified audit reports; therefore, the quality of their accounting cannot be trusted; hence may experience misappropriation of funds and misuse of resources. Consequently, they need to put in more effort to adhere to the GAAPs to improve the nature of their audit reports. The public universities could also rejuvenate their audit department to reduce the risks incurred and the occurrence of qualified audit reports.

Table 4.4: Unqualified Audit Reports

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	5	4.6	4.6
Disagree	6	5.5	10.1
Neutral	6	5.5	15.6
Agree	56	51.4	67.0
Strongly agree	36	33.0	100.0
Total	**109**	**100.0**	

4.4.1.2 Nature of Audit Reports Influences Financial Performance

Results from the study portrayed in Table 4.5 show that from the sample of 109 respondents, 3 (2.8%) strongly disagreed, 6 (5.5%) disagreed, 8 (7.3%) were neutral, 47 (43.1%) agreed, and 45 (41.3%) strongly agreed that the nature of audit reports influenced the financial performance of public universities in Western Region. Combining those who agreed and strongly agreed, it was established that 84.4% agreed that the public universities' financial performance was influenced by the nature of audit reports they produce. The findings are similar to a study done by Leyla, Javad, and Isa (2017) on the effect of audit reports on the relevance of accounting information.

Their study found that qualified audit reports increase the public's confidence in the firm and improve financial independence, leading to more company investment and enhanced financial performance. Since the audit reports are unqualified, it shows that the audit reports send a positive signal to lenders, suppliers, and creditors. The public universities are, therefore, able to pay fewer audit fees, get more favourable credit terms from creditors, and access to reduced financing costs.

Table 4.5: Nature of Audit Reports Influence Financial Performance

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	3	2.8	2.8
Agree	6	5.5	8.3
Neutral	8	7.3	15.6
Agree	47	43.1	58.7
Strongly agree	45	41.3	100.0
Total	**109**	**100.0**	

4.4.1.3 Financial Reports Are Prepared According to International Financial Reporting Standards (IFRS)

As shown in Table 4.6, out of the 109 respondents, 1 (0.9%) strongly disagreed, 3 (2.8%) disagreed, 11 (10.1%) remained neutral, 46 (42.2%) agreed, and 48 (44.0%) strongly agreed that their financial reports and statements are prepared as per the International Financial

Reporting Standards. 94 respondents who agreed and strongly agreed translated to (84.4%) of the entire population and affirmed that most public universities are able to give transparency to users of financial information and they can be able to accurately compare their performance with other public universities.

Further, IFRS are also extremely important to public universities all across the world since they provide information that is similar across borders. Additionally, IFRS improve capital allocation by assisting investors in recognizing opportunities and risks around the globe (IFRS Foundation, 2022). The remaining respondents who disagreed proved that 3.7% of the public universities that do not adhere to IFRS have unstandardized accounting and financial reports hence no consistency. Therefore, they cannot effectively compare their financial performance with other similar or different entities to assess their financial health. They should endeavour to adhere to international regulations to harmonize their activities and improve the credibility of their entire accounting process.

Table 4.6: Financial Reports are Prepared According to IFRS

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	1	0.9	0.9
Disagree	3	2.8	3.7
Neutral	11	10.1	13.8
Agree	46	42.2	56.0
Strongly agree	48	44.0	100.0
Total	**109**	**100.0**	

4.4.1.4 Financial Statements Are Prepared on Time

The findings contained in Table 4.7 imply that from the 109 respondents, 8 (7.3%) disagreed, 13 (11.9%) were neutral, 42 (38.5%) agreed, and 46 (42.2%) strongly agreed with the fact that all the financial statements are always prepared on time. Since most respondents agreed that public universities adhere to timely preparation of statements, they can improve the accuracy and timeliness of financial information, hence managing their resources better and

making informed decisions in time. As a consequence, public universities can also make quality investment decisions that can reduce their deficits to foster better financial performance.

The remaining universities that do not prepare financial statements on time risk making inappropriate decisions due to a lack of performance evaluation and therefore don't fully understand their status of affairs (Hemmerle, 2018). When financial statements are not prepared on time, public universities also risk losing substantial amounts of money if the wrong investment choices are made due to insufficient information on available resources. The entities should work toward publishing their financial information on time to reduce the proliferation of funds.

Table 4.7: Financial Statements are Always Prepared on Time

Response	Frequency	Percent (%)	Cumulative Percent (%)
Disagree	8	7.3	7.3
Neutral	13	11.9	19.3
Agree	42	38.5	57.8
Strongly agree	46	42.2	100.0
Total	**109**	**100.0**	

4.4.1.5 Timely Preparation of Financial Statements Influences Financial performance

Out of 109 respondents who returned the questionnaires, 2 (1.8%) strongly disagreed, 6 (5.5%) disagreed, 21 (19.3%) were neutral, 40 (36.7%) agreed, and 40 (36.7%) strongly agreed that timely preparation of financial statement influences financial performance. Table 4.8 shows that the timely preparation of financial statements influenced the financial performance of the selected public universities in Western Region. The findings can be echoed by a study done by Aktas and Kargin (2011), who researched the timeliness of financial reporting and the quality of financial information.

The study also established that firms that are fast in publishing their financial reports had improved financial performance in terms of reduced costs and improved income. Due to

timely preparation of financial statements, the public universities can prepare quality budgets and make it easy for them to make appropriate financial decisions that will lead to improved financial performance and hence the growth of the business.

Table 4.8: Timely Preparation of Financial Statements Influence Financial Performance

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	2	1.8	1.8
Disagree	6	5.5	7.3
Neutral	21	19.3	26.6
Agree	40	36.7	63.3
Strongly agree	40	36.7	100.0
Total	**109**	**100.0**	

4.4.1.6 Financial Statements Represent a True and Fair View of the Institution

With respect to the true and fair view, findings show that 73 (67%) of the respondents agreed that the financial statements of the selected public universities in the Western Region portrayed a true and Fairview. As shown in Table 4.11, 3 (2.8%) strongly disagreed, 14 (12.8%) disagreed, 19 (17.4%) were neutral, 38 (34.9%) agreed and 35 (32.1%) respondents strongly agreed. This implies that the financial statements of most public universities are free from material misstatement and faithfully represent their true financial position and financial performance.

The institutions are, therefore, in a better position to provide critical information to both external and internal users who can obtain reliable information from the statements and make appropriate investment decisions.

It was also evident financial statements of some public universities (27%) don't represent a true and fair view. As a result, they are not able to give a reflection on their financial position and hence can't compare their financial performance with other institutions. These public universities risk mass drainage of funds and resources since the accountants may have doctored the statements to hide the true affairs of the entities to display the worst when that

is not the case. Stakeholders may also lose their monies if they are persuaded by the fraudulent state of affairs portrayed by the financial statement and may end up suing for misrepresentation.

Table 4.9: Financial Statements Represent a True and Fair View

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	3	2.8	2.8
Disagree	14	12.8	15.6
Neutral	19	17.4	33.0
Agree	38	34.9	67.9
Strongly agree	35	32.1	100.0
Total	**109**	**100.0**	

4.4.1.7 Degree of Faithful Representation Influences Financial Performance

Results in Table 4.10 indicate that out of the 109 respondents, 5 (4.6%) strongly disagreed, 7 (6.4%) disagreed, 21 (19.3%) remained neutral, 28 (25.7%) agreed, and 48 (44.0%) strongly agreed that the degree of faithful representation influenced the financial performance of the public universities in Western Region. The majority of the respondents, 76 (69.7%), affirmed that the degree of faithful representation influences financial performance. The findings of Amer and Tareq (2019) also support the results on faithful representation and financial performance.

Hence, public universities must strictly adhere to reporting standards to ensure all their financial statements portray a true and fair view. Faithful representation helps public universities provide the true economic phenomenon of accounting records, reducing errors and cutting the wastage of resources, thus improving the overall financial performance.

Table 4.10: Degree of Faithful Representation Influence on Financial Performance

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	5	4.6	4.6
Disagree	7	6.4	11.0
Neutral	21	19.3	30.3
Agree	28	25.7	56.0
Strongly agree	48	44.0	100.0
Total	**109**	**100.0**	

4.4.1.8 Quality of Financial Reporting Influences Financial Performance

According to the outcome of the study in Table 4.11, it is clear that 3 respondents (2.8%) strongly disagreed, 14 (12.8%) disagreed, 12 (11.0%) were neutral, 40 (36.7%) agreed, and 40 (36.7%) strongly agreed that the quality of financial reporting influences the financial performance of public universities in Western Region. The study's output shows that most of the respondents agreed as opposed to those who disagreed with the inquiry. The results indicate that when public universities improve the quality of their financial reports, their financial performance improves.

Research findings concur with (Ahmad, Magsam, and Naim (2018). They researched the impact of the quality of financial reporting on non-financial business performance and the role of an organization's demographic' attributes (type, size and experience). Public universities are in a better position to point out trends about the collection of revenue and payment of creditors; hence the quality of decisions made by the management is greatly enhanced, and, in the end, financial performance is improved.

Table 4.11: Quality of Financial Reporting Influences Financial performance

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	3	2.8	2.8
Disagree	14	12.8	15.6
Neutral	12	11.0	26.6
Agree	40	36.7	63.3
Strongly agree	40	36.7	100.0
Total	**109**	**100.0**	

4.4.2 Payables Management Systems and Financial Performance

4.4.2.1 Average Repayment Period Is Excellent

Most of the respondents, 74 (67.9%), agreed that the average repayment period of public universities in Western Region is excellent. From 109 respondents, 8 (7.3%) strongly disagreed, 15 (13.8%) disagreed, 12 (11.0%) were neutral, 40 (36.7%) agreed and 34 (31.2%) strongly agreed that their average repayment period is excellent. From the results, most public universities certainly have an excellent average repayment period. It implies that they can pay off their short-term liabilities within the shortest period. Public universities can therefore fund short-term investments, cover operational expenses efficiently, and track activities related to their cash flow.

For the smaller percentage who disagreed (21.1%), it implies that the repayment period for some public universities is not excellent. As a result, they cannot be able to pay their obligations as and when required. The situation can make third parties like investors and creditors limit their investment choices and deny the institutions credit since they view them as un-creditworthy. Since the average repayment is not excellent, these institutions may experience tough financial times due to the accumulation of unpaid debts, thus worsening the gearing level. Public universities should work towards payment of overstayed debts to improve the average repayment period.

Table 4.12: Average repayment Period for Financial Obligations is Excellent

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	8	7.3	7.3
Disagree	15	13.8	21.1
Neutral	12	11.0	32.1
Agree	40	36.7	68.8
Strongly agree	34	31.2	100.0
Total	**109**	**100.0**	

4.4.2.2: Average Repayment Period Influences Financial Performance

The output portrayed in Table 4.13 imply that the average repayment period influences the financial performance of public universities in Western Region. The findings indicate that out of the 109 respondents, 5 (4.6%) strongly disagreed, 14 (12.8%) disagreed, 10 (9.2%) remained neutral, 45 (41.3%) agreed, and 35 (32.1%) strongly agreed that average repayment period influences financial performance. A study by Wafula and Miroga (2020) also showed that the repayment period affects financial performance; hence, public universities need to reduce their repayment period. An excellent repayment period enables public universities to pay their liabilities on time since they are more liquid. They can pay their outstanding creditors and cover their operating and administrative expenses, which leads to improved financial performance.

Table 4.13: Average Repayment Period Influences Financial Performance

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	5	4.6	4.6
Disagree	14	12.8	17.4
Neutral	10	9.2	26.6
Agree	45	41.3	67.9
Strongly agree	35	32.1	100.0
Total	**109**	**100.0**	

4.4.2.3 Payable Turnover Ratio of Your Institution Is Favorable

From the questionnaires received, 6 (5.5%) respondents strongly disagreed, 14 (12.8%) disagreed, 22 (20.2%) were neutral, 40 (36.7%) agreed, and 27 (24.8%) strongly agreed to the fact that the payables turnover ratio of public universities in Western Region is favourable. The feedback shows that most public universities can effectively track the payment of creditors and suppliers and pay them on time. They can therefore be able to increase the line of credit they can access from financial institutions and obtain more resources from suppliers.

The few respondents who disagreed (18.3%) show that a percentage of the public universities have a poor payable turnover ratio. This indicates that public universities take longer when it comes to paying suppliers and other creditors, so the liquidity level continues to dip. Therefore, they may find it hard to acquire important resources from suppliers since their debts are yet to be paid. By improving the payables turnover ratio, public universities will improve their liquidity.

Table 4.14: Payables Turnover Ratio for Your Institution is Favourable

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	6	5.5	5.5
Disagree	14	12.8	18.3
Neutral	22	20.2	38.5
Agree	40	36.7	75.2
Strongly agree	27	24.8	100.0
Total	**109**	**100.0**	

4.4.2.4: Creditors Turnover Ratio Influences Financial Performance

When asked if the turnover ratio influences financial performance, 81 out of the valid 109 respondents agreed and strongly agreed that the creditors turnover ratio influences the financial performance of public universities in Western Region. It translated to 71.4% of respondents who took part in the study. As seen in Table 4.15, 4 (3.7%) strongly disagreed, 4 (3.7%) disagreed, 20 (18.3%) were neutral, 37 (33.9%) agreed and 44 (40.4%) strongly agreed. An efficient creditors turnover ratio improves liquidity. The public universities are, therefore, in a position to easily transform their assets into cash, leading to easy payment of liabilities and debts, thus improved financial performance (Ikechukwu & Nwakaego, 2016).

Table 4.15: Creditors Turnover Ratio Influences Financial Performance

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	4	3.7	3.7
Disagree	4	3.7	7.3
Neutral	20	18.3	25.7
Agree	37	33.9	59.6
Strongly agree	44	40.4	100.0
Total	**109**	**100.0**	

4.4.2.5: The Average Number of Payables in The Institution Is Low

Results in Table 4.16 signify that respondents agreed that the average number of payables in public universities in Western Region is low. Although 21 (19.3%) were neutral and 13 (12.8%) disagreed, the majority of 75 (68.8%), agreed and strongly agreed that the average number of payables is not high. This means that public universities don't have a large number of payables. This can be due to the fact that the public universities have paid up most of the monies owed to vendors or suppliers for goods or services acquired without prior payment. Thus, these universities may be better positioned to access credit from third parties or acquire resources from suppliers.

The results also indicate that 13 respondents disagreed, meaning the average payables in some institutions are high. The result concurs with the findings on the payables turnover ratio. The high number is attributed to the non-payment of third parties, which leads to a low creditor's ratio. A high number of payables shows that institutions have a high liquidity level contributing to the net deficits. The public universities should therefore focus on improving the payables ratio through prompt payment of third parties who provide goods and services.

Table 4.16: Average Number of Payables in the Institution is Low

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	1	0.9	0.9
Disagree	12	11.0	11.9
Neutral	21	19.3	31.2
Agree	41	37.6	68.8
Strongly agree	34	31.2	100.0
Total	**109**	**100.0**	

4.4.2.6: The Average Number of Payables Influences Financial Performance

The study outcome in Table 4.17 shows that out of the 109 respondents, 5 (4.6%) strongly disagreed, 6 (5.5%) disagreed, 16 (14.7%) were neutral, 50 (45.9%) agreed, and 32 (29.4%) strongly agreed that the average number of payables influences the financial performance of public universities in Western Region. Since 82 (75.3%) respondents represent a majority of the entire sample size, it is clear that the average number of payables influences the financial performance of public universities in Western Region. When the average number of payables is not high, the liquidity of the public universities is improved; thus, they are better placed to finance their activities and acquire more resources, enhancing performance. Public universities should work on reducing the average number of payables to improve their liquidity.

Table 4.17: Average Number of Payables Influences Financial Performance

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	5	4.6	4.6
Disagree	6	5.5	10.1
Neutral	16	14.7	24.8
Agree	50	45.9	70.6
Strongly agree	32	29.4	100.0
Total	**109**	**100.0**	

4.4.2.7: Your Institution Takes Advantage of Discounts to Enhance Prompt Payment

The response from the 109 respondents in the sample confirms that the public universities in Western Region utilize discounts to enhance the timely payment of the creditors and suppliers. 5 (4.6%) respondents strongly disagreed, 11 (10.1%) disagreed, 16 (14.7%) remained neutral, 40 (36.7%) agreed while 37 (33.9%) strongly agreed. The outcome connotes that most public universities take advantage of discounts to enhance prompt payment. The institutions, therefore, end up paying less for the resources obtained from the creditors and suppliers.

The other 14.7% of the respondents affirmed that the institutions do not take advantage of discounts to enhance prompt payment. Public universities lose unnecessary money when acquiring resources and spend more when paying creditors and suppliers. The discounts could improve the relationship between the public universities and their suppliers and prompt timely payment of outstanding debts, thus improving their liquidity and overall financial health. They should adequately track creditors to take note of their payments and utilize their discounts.

Table 4.18: The institution Takes Advantage of Discounts to Enhance prompt Payment

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly Disagree	5	4.6	4.6
Disagree	11	10.1	14.7
Neutral	16	14.7	29.4
Agree	40	36.7	66.1
Strongly agree	37	33.9	100.0
Total	**109**	**100.0**	

4.4.2.8: Prompt Payment of Creditors Influences Financial Performance

According to the study's outcome in Table 4.19, prompt payment of customers reduced financial performance. Through the payables management systems, the AIS efficiently ages the payables of the public universities and ensures the oldest suppliers and creditors are paid first before the most recent. From the outcome, 4 (3.7%) strongly disagreed, 5 (4.6%) disagreed, 8 (7.3%) neutral, 46 (42.2%) agreed and 46 (42.2%) strongly agreed.

The outcome shows that when public universities pay their creditors on time, their financial performance is influenced in one way or another. It enhances the liquidity level of public universities; hence their financial performance is improved. The public universities should therefore work towards paying any outstanding creditors to improve their financial performance.

Table 4.19: Prompt Payment of Creditors Influences Financial Performance

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	4	3.7	3.7
Disagree	5	4.6	8.3
Neutral	8	7.3	15.6
Agree	46	42.2	57.8
Strongly agree	46	42.2	100.0
Total	**109**	**100.0**	

4.4.3 Receivables Management Systems and Financial Performance

4.4.3.1 The Institution Has a Favorable Debtor's Turnover Ratio

Concerning the debtor's ratio, 39 respondents strongly disagreed, while 44 disagreed that public universities in Western Region have a favourable debtor turnover ratio. Although 13 respondents were neutral and 13 other respondents agreed. 83 respondents, who were the majority (76.3%) affirmed that public universities were not in a good position in relation to the debtor's turnover ratio.

The finding indicated that the public universities have most of their monies held up by their debtors and thus have a decreased cash flow. The possible reason is that the public universities have inadequate collection processes, and most of their customers are not financially viable. Public universities should advocate for measures that will ensure the timely collection of receivables from the customers. They could start by pushing for the clearing of school fee balances by students.

The smaller percentage who agreed confirmed that some public universities have a favourable debtor turnover ratio. It shows that some universities have efficient policies for the management of debtors. As a result, they have enhanced their operational efficiency due to improved cash flow. Therefore, they are more liquid and can pay off their outstanding debts as and when they fall due.

Table 4.20: The Institution Has A Favourable Debtors Turnover Ratio

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	39	35.8	35.8
Disagree	44	40.4	76.3
Neutral	13	11.9	88.1
Agree	7	6.4	94.5
Strongly agree	6	5.5	100.0
Total	**109**	**100.0**	

4.4.3.2 Debtor's Turnover Ratio Influences Financial Performance

From the study, it was established that the debtor's turnover ratio influences the financial performance of the public universities in western region. Findings contained in Table 4.21 show from a population of 109, 7 (6.4%) disagreed, 8 (7.3 %) were neutral, 54(49.5%) agreed, and 40 (36.7%) strongly agreed. The results show that a more significant number agreed that there was a relationship between the debtor's turnover ratio and the financial performance of the selected public universities. The results are backed up by the findings of Al Dalayeen (2017) in his study on the financial performance of appraisal of selected companies in Jordan, who discovered that financial performance was improved by 1.442 units when the debtor's turnover ratio was increased by one unit. Hence it significantly influenced financial performance.

If too much cash flows are retained by debtors and not paid in time, the public universities may find it hard to cover their expenses due to the liquidity level. Since it was established that most public universities have unfavourable debtor ratios, they should work towards improving their liquidity by demanding uncollected debts from customers to improve their financial performance.

Table 4.21: Debtor's Turnover Ratio Influences Financial Performance

Results	Frequency	Percent (%)	Cumulative Percent (%)
Disagree	7	6.4	6.4
Neutral	8	7.3	13.8
Agree	54	49.5	63.3
Strongly agree	40	36.7	100.0
Total	**109**	**100.0**	

4.4.3.3 Average Collection Period in Your Institution Is Low

The information derived from the study concerning the average collection period showed that public universities did not have a low average collection period. The research output in Table 4.22 points out that 64.3% of the 109 respondents disagreed and strongly disagreed, 15.6% agreed and strongly agreed, while 21.1% remained neutral about the average collection period of the public universities. 69 respondents who disagreed signifies that the selected public universities in Western Region have a high average collection period meaning they take a long period to collect money from their debtors. It could be that they have inefficient systems to track debtors, or the policies in place are not vigilant on the collection of debt. The institutions should institute measures that drive toward speedy receivables recovery from debtors to boost their cash flow.

The 17 respondents who agreed denotes that some public universities have improved debt collection systems that ensure customers pay their dues as soon as possible. Therefore, they can make prudent investment decisions due to adequate cash outlay. These public universities have high levels of liquidity and can reduce the average net deficits that they incur throughout the accounting period to foster better financial performance

Table 4.22: Average Collection Period of Your Institution Is Low

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	35	32.1	33.1
Disagree	34	31.2	64.3
Neutral	23	21.1	21.1
Agree	13	11.9	97.3
Strongly agree	4	3.7	100.0
Total	**109**	**100.0**	

4.4.3.4 Average Collection Period Influences Financial Performance of Your Institution

Table 4.23 contains respondents' results concerning the average collection period and financial performance. The questionnaires returned showed that 1 (0.9%) strongly disagreed, 7 (6.4%) disagreed, 11 (10.1%) were neutral, 49 (45.0%) agreed, and 41 (33.7%) strongly agreed that the average collection period of public universities in Western Region influenced their financial performance. The findings conform with the conclusions of Munene and Tibbs (2018), who studied accounts receivable management and financial performance of Embu water and sanitation company limited.

The study found that the average collection period significantly and positively influenced financial performance. When the average collection period is high, public universities spend a lot to recover unpaid debts. The institution also risks losing money in terms of bad debts and, in the long run, affects financial performance. Public universities must reduce the average collection period to improve liquidity and general cash flow.

Table 4.23: Average Collection Period Influences Financial Performance

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	1	0.9	0.9
Disagree	7	6.4	7.3
Neutral	11	10.1	17.4
Agree	49	45.0	62.4
Strongly agree	41	37.6	100.0
Total	**109**	**100.0**	

4.4.3.5 Effective Debt Collection Influences Financial Performance of Your Institution

The findings relate to effective debt collection by public universities. It was discovered that 76.1% of the population agreed that the financial performance of the institutions is influenced by effective debt collection. As seen in Table 4.24, 3 (2.8%) strongly disagreed, 8 (7.3%) disagreed, 15 (13.8%) remained neutral, 42 (38.5%) agreed, and 41(37.6%) strongly agreed with the question. A larger percentage who agreed to the survey signified that public universities must implement effective debt collection strategies to improve financial performance. Since students are the main customers of these institutions, they should enforce policies to improve the processes involved in recovering debts. The monies tied up in uncollected debts are a short-term resource that, when utilized, can help meet current liabilities.

Table 4.24: Effective Debt Collection Influences Financial Performance

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	3	2.8	2.8
Disagree	8	7.3	10.1
Neutral	15	13.8	23.9
Agree	42	38.5	62.4
Strongly agree	41	37.6	100.0
Total	**109**	**100.0**	

4.4.3.6 Debtors Ratio of Your Institution Is Favorable

When asked about the debtor's ratio of public universities in Western Region, 18 respondents could not agree or disagree if the effective debtor's ratio of the public universities is low. Table 4.25 show that 46 respondents (42.2%) disagreed, 25 (22.9%) strongly disagreed, 4 (3.7%) strongly agreed, and 16 (14.7%) agreed. Based on the findings, it is evident that most of the public universities in Western Region are not efficient in collecting their debts; thus, they consume a considerable amount of time in collecting monies owed to them by customers or clients.

Consequently, public universities cannot make timely short-term investment decisions or cover their operational and contingent expenses when needed. Public universities should reduce the number of credit activities to minimize the average number of debtors to improve the debtor ratio.

The other percentage of respondents who agreed was relatively small compared to those who disagreed. The results depict that some public universities have robust debt collection procedures that have enabled them to have a favourable debtor ratio. When the debtor's ratio is improved, the gearing level of the public universities is lowered; thus, they can attract more funding and partnership with other institutions due to high confidence in the returns on investment.

Table 4.25: Debtors Ratio of Your Institution is Favourable

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	25	22.9	22.9
Disagree	46	42.2	65.1
Neutral	18	16.5	81.6
Agree	16	14.7	96.3
Strongly agree	4	3.7	100.0
Total	**109**	**100.0**	

4.4.3.7 Favorable Debtor's Ratio Influences Financial Performance

The results extended the question of the debtor's ratio of public universities. The respondents indicated that a favourable debtor ratio influenced the financial performance of public universities in Western Region. From 109 respondents, 5 (4.6%) strongly disagreed, 9 (8.3%) disagreed, 16 (14.7%) remained neutral, 40 (36.7%) agreed and 39 (35.8%) strongly agreed with the question. Likewise, from the findings of Srizal, Linzzy, and Shinta (2018), it was also confirmed that the debtor's ratio significantly influenced financial performance, and a favourable debtors ratio would improve the financial health of an entity by reducing the solvency and solidifying longevity.

The results in Table 4.26 pinpoint the fact the management of the institutions should work towards more lenient terms that could include negotiating payment terms with debtors and offering discounts for early repayment to improve the general cash inflow.

Table 4.26: Favourable Debtors Ratio Influences Financial Performance

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	5	4.6	4.6
Disagree	9	8.3	12.8
Neutral	16	14.7	27.5
Agree	40	36.7	64.2
Strongly agree	39	35.8	100.0
Total	**109**	**100.0**	

4.4.3.8 Your Institution Has a Documented Policy on Encouraging Prompt Payment

Concerning prompt payment, the information in Table 4.27 suggests that public universities don't have documented policies to encourage immediate payment by debtors. 36 respondents strongly disagreed, while 39 disagreed, translating to 68.8% of the respondents. 18 respondents were neutral, 9 agreed, and 7 strongly agreed. Due to the lack of a documented policy to dictate debt payment timelines, public universities are at risk of losing money. Customers may not have appropriate incentives to meet their obligations since there are no provisions that might push them towards early payment.

The public universities should implement policies that give the debtors special considerations like discounts that would encourage them to pay up in time.

The remaining 15.7% of respondents agree that some public universities have documented policies. Public universities are, therefore, able to eliminate the probability of having large percentages of bad debts that could cripple their activities. A documented policy also ensures that public universities can effectively and efficiently collect their outstanding debts, providing money for operations and short-term investment due to high cash inflow.

Table 4.27: Your Institution Has a Documented Policy to Encourage Prompt Payment

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	36	33.0	33.0
Disagree	39	35.8	68.8
Neutral	18	16.5	85.3
Agree	9	8.3	93.6
Strongly agree	7	6.4	100.0
Total	**109**	**100.0**	

4.4.4 Internal Control Systems and Financial Performance

4.4.4.1 Transactions Are Verified and Authorized by Different Individuals Who Initiate Them

When asked if different individuals verify transactions, questionnaires from the study showed that 75.3% of the population agreed and strongly agreed. On the other hand, 6 respondents disagreed and strongly disagreed, which translates to 5.5% of the respondents. The other 10 respondents remained neutral and could not give satisfactory answers on verifying transactions by the public universities. The results bear to witness that most respondents (85.3%) agreed with the survey. Thus, it is evident that most public universities have embraced verifying transactions by different individuals. Verifying transactions is vital since it acts as a control measure in the entire accounting process. It enhances accountability and transparency of transactions.

With verification in place, public universities have reduced the possibility of misappropriation and fraudulent activities since another individual can flag suspicious activities. As a result, they take charge of financial transactions before substantial amounts of money are lost. It is also clear that some public universities do not adhere to the verification of the transactions by different individuals. They are, therefore, at risk of losing money through fraudulent activities.

Table 4.28: Transactions are Verified and Authorized by Different Individuals

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	2	1.8	1.8
Disagree	4	3.7	5.5
Neutral	10	9.2	14.7
Agree	40	36.7	51.4
Strongly agree	53	48.6	100.0
Total	**109**	**100.0**	

4.4.4.2 Authorization and Verification Enhances Accountability Hence Financial Performance

Information gathered indicates that respondents agreed that authorization and verification of the transaction by different individuals increases accountability and financial performance. From the questionnaires issued and returned by respondents, 4 (3.7%) respondents strongly disagreed, 10 (9.2%) disagreed, 10 (9.2%) were neutral, 40 (36.7%) agreed, and 45 (41.3%) strongly agreed. Public universities can seal off all the loopholes through which monies can be lost via proliferation.

The institutions need to fully implement verification where accounting transactions are authorized by independent parties to reduce the number of resources lost through unclear transactions. The public universities could install an efficient internal audit department to oversee all the transactions in a particular financial period to mitigate the risk of financial loss due to inadequate verification.

Table 4.29:Verification and authorization Enhances Accountability thus, Financial Performance

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	4	3.7	3.7
Disagree	10	9.2	11.9
Neutral	10	9.2	21.1
Agree	40	36.7	57.8
Strongly agree	45	41.3	100.0
Total	**109**	**100.0**	

4.4.4.3 Internal Audit Department Carries Out Its Activities Effectively

The study found that public universities have internal audit departments which carry out their activities effectively. From Table 4.30, most respondents agreed with the survey. 2 (1.8%) strongly disagreed, 1 (0.9%) disagreed, 17 (15.6%) were neutral, 38 (34.9%) agreed, and 51 (46.8%) strongly agreed that the internal audit departments carry out its activities effectively. The result implies that public universities with efficient audit departments can maintain their operational efficiency by mitigating the various risks they face.

Through the internal audit department, the institutions can eliminate inefficiencies, wastage of resources, theft and fraud, which mitigates financial loss in the long run. An automatic benefit of a vibrant and robust audit department is the automated compliance with regulations; transactions are transparent and accurate.

The result that indicates that some public universities don't have efficient audit departments implies that they are at risk of substantial losses since they are susceptible to theft, fraud and wastage of vital resources (Narayanan, 2019). Audit departments increase the plausibility of an entity's financial reports, and public universities face a high degree of financial statements not portraying the true and fair view of the state of affairs. This limits the uniformity and comparability of their performance to other public universities.

Table 4.30: Internal Audit Department Carries Out Its Activities Efficiently

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	2	1.8	1.8
Disagree	1	0.9	2.8
Neutral	17	15.6	18.3
Agree	38	34.9	53.2
Strongly agree	51	46.8	100.0
Total	**109**	**100.0**	

4.4.4.4 Level of Internal Audit Efficiency Influences Financial Performance

Results in Table 4.33 show that from 109 respondents, 3 (2.8%) strongly disagreed, 5 (4.6%) disagreed, 17 (15.6%) neutral, 39 (35.8%) agreed, and 45 (41.3%) strongly agreed that the

level of internal audit efficiency influences financial performance. The outcome shows that improvement of audit activities is more likely to improve financial performance. Public universities should aspire to bolster the internal audit departments to promote an environment where all accounting transactions are verified and validated accordingly to enhance operational efficiency. Due to this, accountability will be significantly heightened; thus, fraudulent activities that lead to the proliferation of resources will be eradicated.

Table 4.31: Level of Internal Audit Efficiency Influences Financial Performance

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	3	2.8	2.8
Disagree	5	4.6	7.3
Neutral	17	15.6	22.9
Agree	39	35.8	58.7
Strongly agree	45	41.3	100.0
Total	**109**	**100.0**	

4.4.4.5 Risk Assessment Is Done on a Regular Basis

47 respondents agreed that public universities carry out regular risk assessments.35 (32.1%) agreed, 11 (10.1%) remained neutral, 10 (9.2%) disagreed and 6 respondents (5.5%) strongly disagreed. The results are contained in Table 4.32. A greater number of the respondents agreed with the inquiry and confirmed that most public universities carry out risk assessments regularly. The merit is that they can identify sources of risks early enough and assess the magnitude of threats they face when the said events are to take place. The monetary value of resources that can be lost is evaluated, and they take control of the situation before substantial damage is done.

The other percentage of public universities that don’t carry out regular risk assessments are at a major risk of losing money through events that could have been avoided through adequate risk mitigation. Effective risk assessment leads to better management of future occurrences since the risk's probability diminishes. The public universities should therefore

strengthen the internal audit department since their primary role is to identify and mitigate risks.

Table 4.32: Risk Assessment is Done on a Regular Basis

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	6	5.5	5.5
Disagree	10	9.2	14.7
Neutral	11	10.1	24.8
Agree	35	32.1	56.9
Strongly agree	47	43.1	100.0
Total	**109**	**100.0**	

4.4.4.6 Effective Risk Assessment Influences Financial Performance

In relation to risk management, respondents reacted as follows. 4 (3.7%) strongly disagreed, 7 (6.4%) disagreed, 16 (14.7%) neutral, 28 (25.7%) agreed, and 54 (49.5%) strongly agreed to the fact that effective risk assessment influences the financial performance of the selected public universities in Western Region. Similarly, a study by Lagat (2017) on the effect of risk evaluation on financial institutions' performance found that risk evaluation had a positive influence on these firms' financial performance.

Risks may cause an entity to incur additional expenses that would be avoided if the events were dealt with as early as possible. The public universities that have not embraced regular risk assessment have to ensure they incorporate this critical aspect into their accounting process to effectively mitigate the various risks that can arise in a given financial period. Those who undertake a risk assessment should find ways to improve the process and seal all the weaknesses to revolutionize the entire accounting process.

Table 4.33: Effective Risk Assessment Influences Financial Performance

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	4	3.7	3.7
Disagree	7	6.4	10.1
Neutral	16	14.7	24.8
Agree	28	25.7	50.5
Strongly agree	54	49.5	100.0
Total	**109**	**100.0**	

4.4.4.7 Risk Assessment Feedback Is Dealt with Immediately, And Corrective Measures Taken

The study results concerning feedback from risk assessment show that 5 respondents (4.6%) strongly disagreed, 16 (14.7%) disagreed, 13 (11.9%) remained neutral, 39 (35.8%) agreed, and 36 (33.0%) strongly agreed that the selected public universities dealt with feedback from risk assessment with immediate effect. 68.8% of the respondents agreed that a bulk of the Western Region public universities deal with risk assessment feedback and take corrective action immediately. The feedback is vital since it enables the entities to take corrective measures where inadequate measures exist. The institutions can reduce financial deficits that could be incurred in the short run, and consequently, they can cut unnecessary expenses.

The remaining 19.3% of the respondents who disagreed indicated some universities don't deal with risk assessment immediately. Therefore, they run the risk of attracting unnecessary losses, which would have been dealt with beforehand. Public universities must incorporate mechanisms that detect deficiencies in accounting processes and appropriate actions taken. The audit departments have to improve the accounting process by offering advisories on how the problems discovered should be handled to avert future crises and ensure compliance to stipulations.

Table 4.34: Risk Assessment Feedback Is Dealt with Immediately

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	5	4.6	4.6
Disagree	16	14.7	19.3
Neutral	13	11.9	31.2
Agree	39	35.8	67.0
Strongly agree	36	33.0	100.0
Total	**109**	**100.0**	

4.4.4.8 The Management Carries Out Regular Monitoring

Research findings in Table 4.35 indicate that from 109 respondents, 6 (5.5%) strongly disagreed, 10 (9.2%) disagreed, 16 (15.7%) were neutral, 38 (34.9%) agreed, and 39 (35.8%) strongly agreed to the fact that management of public universities in Western Region carried out regular monitoring. The lion's share of the public universities carries out regular monitoring since 70.7% of the respondents agreed to the survey. Therefore, the public universities can highlight issues they face that could threaten their performance before they escalate and cause major economic losses.

Monitoring promotes transparency and accountability, yielding efficient resource use and improved decision-making. Other public universities that do not carry out regular monitoring experience reduced productivity, which is an ultimate precursor to immense financial losses.

Table 4.35: The Management Carries Out Regular Monitoring

Response	Frequency	Percent (%)	Cumulative Percent (%)
Strongly disagree	6	5.5	5.5
Disagree	10	9.2	14.7
Neutral	16	14.7	29.4
Agree	38	34.9	64.2
Strongly agree	39	35.8	100.0
Total	**109**	**100.0**	

4.5 Inferential Statistics

To effectively analyze the direction of the relationship between AIS and financial performance, the research employed inferential data analysis involving multiple binary regression analysis. This was meant to assist in testing the four hypotheses of the study and establish whether AIS had a significant influence on the financial performance of public universities in Western Region.

4.5.1 Diagnostic Tests

As an essential requirement for carrying out linear regression analysis, the study carried out the four vital diagnostic tests to determine normality, multicollinearity, autocorrelation and heteroscedasticity of the residues in the models.

4.5.1.1 Normality Test

Normality refers to a circumstance where the residues for all the cases in the model are normally distributed. The null hypothesis for the normality test states that the residues in the model are normally distributed. The model residual histogram and the Shapiro-Wilk test were administered to test the normality of the variables. As seen in figure 4.1, the histogram formed a bell shape that clearly indicated that the model residues were distributed normally (Keya & Rahmatullah, 2016). The derived mean of 1.99 on the histogram also proves that the variables are normally distributed since it is greater than the standard deviation of 0.981.

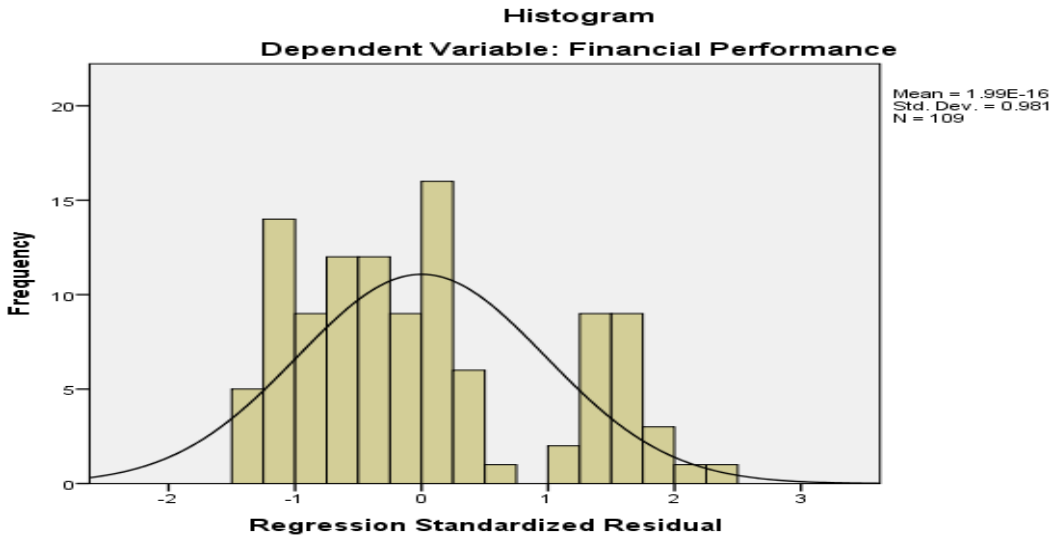

Figure 4.1: Model Histogram

The Shapiro-Wilk test was applied to supplement the results of the model histogram and determine the normality of the variables in the model. The test rejects the null hypothesis if the p values are less or equal to 0.05. Since the derived p values of the variables were more than 0.05, the study failed to reject the null hypothesis and concluded the residuals in the model were normally distributed. The Shapiro W test is used for studies with elements less than 50 but can also be used for values not more than 2000 (Bee & Chiaw, 2017).

Table 4.36: Normality Test

Dependent Variable	Independent Variables	Shapiro-Wilk		
		Statistic	df	Sig.
Financial Performance	**FRS**	.943	104	.061
	PMS	.770	104	.072
	RMS	.884	104	.055
	ICS	.893	104	.052

4.5.1.2 Autocorrelation Test

Autocorrelation is the interrelatedness between each error in the regression model. The basic assumption of the linear regression is that there is no autocorrelation between the model residues and hence independent. The null hypothesis for the test states that linear regression residuals of the data are uncorrelated. The autocorrelation of residues of the model was established via the Durbin Watson test. The values of the Durbin Watson test extend from 0

to 4. Items greater than 2 to 4 indicate negative autocorrelation, while values less than 2 but greater than 0 show positive autocorrelation. When the value derived is equal to 2 it indicates no autocorrelation. The derived value of 2.00 in Table 4.37 suggests that there is no autocorrelation between the construct of the study, indicating the autonomy of the residues in the model (Jesmin, 2014).

Table 4.37: Model Auto Correlation

Durbin-Watson
2.00

4.5.1.3 Multicollinearity Test

Multicollinearity refers to a situation where independent variables in a regression model are highly correlated. The linear regression model assumes a null hypothesis that there exists no Multicollinearity among the variables in the study. The predictor variables in a model should not be highly correlated in that they don't produce autonomous results in the regression model. The Variance Inflation Factor (VIF) was enforced to establish the level of association amidst predictor variables in the regression model. VIF values ranging from 1 to 10 show that the model has no Multicollinearity. Thus, the test results failed to reject the null hypothesis; hence the independent variables were not highly correlated (Jong, 2019). Results of Pearson product-moment correlation also support the findings of the Variance Factor.

Table 4.38: Multicollinearity Test

Model		Collinearity Statistics	
		Tolerance	VIF
1	FRS	.874	1.144
	PMS	.905	1.105
	RMS	.847	1.180
	ICS	.927	1.078

4.5.1.4 Heteroscedasticity Test

Heteroscedasticity refers to a circumstance where the variance of the residuals is uneven throughout a range of measured values. The null hypothesis for the test states that there is no heteroscedasticity in the residual data. The model was tested for heteroscedasticity through the scatter plot and the Breusch Pagan (BP) test, which was used to gauge the linear regression assumption that residues in the model are not heteroscedastic and, thus, homoscedastic. The scatter plot shows the variability of the data over the second comprehensive range of predictor variables. From the distribution of the data in the scatter plot, it is evident that the data set is homoscedastic.

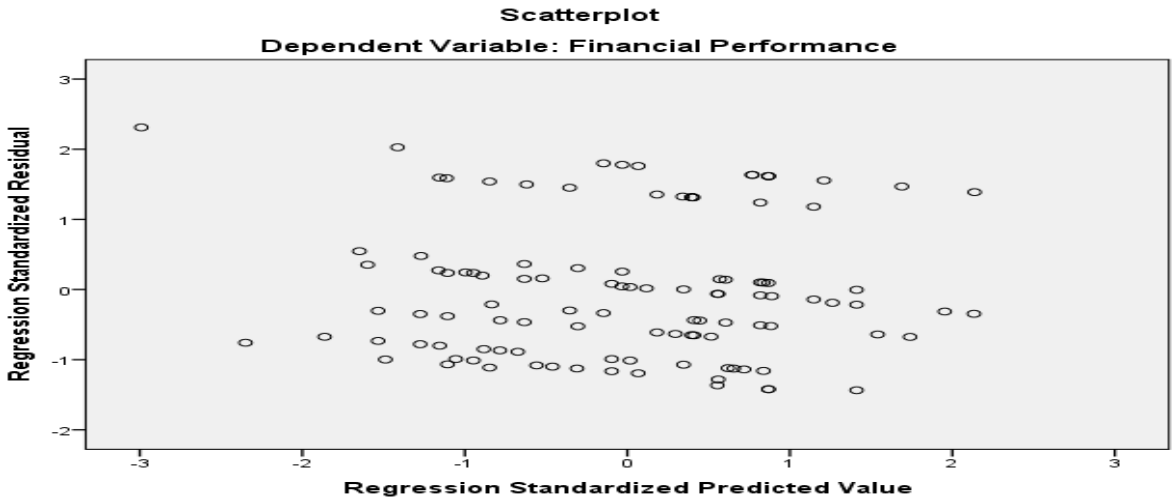

Figure 4.2: Scatter Plot

Further, results from the Breusch Pagan (BP) test were used to establish the homoscedasticity of the variables in the model. The test has a null hypothesis that residuals in the model are homoscedastic. The derived probability of the chi-square was greater than 0.05 at 5% significance level, and the residuals in the model were found to be distributed with equal variance. As a result, the study failed to reject the test's null hypothesis implying no heteroscedasticity.

Table 4.39: Breusch Pagan Test

Model	chi2(1)	Prob > chi2
BP test	2.26	0.1331

4.5.2 Correlation Analysis

Correlation analysis is a qualitative technique used to detect the strength of the linear relationship between variables in a regression model. The study employed Pearson product-moment correlation to comprehend the association between financial reporting systems, receivables management systems and internal control systems and the financial performance of public universities. The correlation method was ideal since the data set under study were normally distributed, as seen in Table 4.40. Correlation coefficients were generated to show the linear association between the variables, with p values signifying the significance of the association between the two pairs of variables.

Pearson correlation coefficients run from 1 to -1, where items near 1 indicate a strong positive association while values nearer to -1 show a strong negative correlation. In determining the significance of the interrelationship between the variables, the p values of the correlation coefficients were assessed based on the 95% confidence interval. Since the test was two-tailed, all values more than 0.025 were considered insignificant, hence the relationship between the variables.

Given correlation coefficients of - 0.601, - 0.570, - 0.730, it was evident that there existed a strong negative correlation between financial reporting systems, payables management systems, internal control systems and financial performance (net surplus/ deficit) of public universities in Western Region. However, the relationship between receivables management systems and financial performance is insignificant given the p-value of 0.057, which was greater than 0.05.

Table 4.40:Correlation Matrix

	FRS	PMS	RMS	ICS	Fin Perf
FRS	1				
PMS	0.269	1			
	(0.208)				
RMS	0.180	0.084	1		
	(0.151)	(0.326)			
ICS	0.208	0.210	0.349	1	
	(0.470)	(0.101)	(0.348)		
Fin Perf	-0.601*	-0.570*	-0.381	-0.730*	1
	(0.010)	(0.015)	(0.057)	(0.000)	

4.5.3 Model Summary*b*

The model summary in Table 4.41 elaborates on the solidity of the relationship between the model variables and the dependent variable. R is a coefficient of multiple correlation that shows the extent of linear correlation between model predicted values with the ones observed. An R-value of 0.785 depicts a strong association between values predicted by the model and the actual values derived after the analysis. R^2 shows the coefficient of determination which indicates the variations in the model between the dependent and independent variables.

The value $R^2 = 0.616$ implied that AIS components explain 61.6% of the variations in the financial performance of public universities in Western Region. The other 38.4% of the variations in financial performance are not accounted for by the model but other factors that are not included in the model.

Table 4.41: Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.785[a]	.616	.592	0.327	1.853

a. Predictors: (Constant), FRS, PMS, RMS, ICS
b. Dependent Variable: Financial performance

4.5.4 ANOVA[a]

The ANOVA Table 4.42 portrays the relationship between AIS constructs and the financial performance of public universities in Western Region. The output indicated that AIS significantly influenced financial performance at 95% confidence interval given a p-value of 0.027, which is less than 0.05. The derived f statistic from ANOVA denoteed the significance of the relationship between AIS constructs and financial performance. An f statistic of 3.587 was more than the f critical value of 2.46, which connoted a significant relationship between elements of AIS and the financial performance of public universities in Western Region

Table 4.42: ANOVA[a]

Model		Sum of Squares	df	Mean Square	f	Sig.
1	Regression	1.540	4	0.385	3.587	.027[b]
	Residual	11.139	104	0.107		
	Total	**12.679**	**108**			

a. Predictors: (Constant), FRS, PMS, RMS, ICS
b. Dependent Variable: Financial performance

4.5.5 Regression Coefficients

The multiple regression produced four coefficients and a constant that were used to decipher the relationship between accounting information system constructs and financial performance. Table 4.43 shows the unstandardized coefficients, t statistics and the significance levels

Table 4.43: Multiple Regression Coefficients

Model	Unstandardized Coefficients		t	Sig.
	B	Std Error		
(Constant)	3.147	.798	3.946	.000
FRS	-.214	-.054	3.963	.017
PMS	-.136	-.062	2.194	.021
RMS	-.105	-.083	1.265	.063
ICS	-.253	-.072	3.514	.035

a. Predictors: (Constant), FRS, PMS, RMS, ICS

b. Dependent Variable: Financial performance

Table 4.43 regression results produced a regression model (4.1) with findings discussed in line with each of the objectives.

$$\log\hat{Y} = 3.147 - 0.214\,FRS - 0.136\,PMS - 0.105\,RMS - 0.253\,ICS \quad (4.1)$$

$\begin{cases} 1 \\ 0 \end{cases}$ 1 if AIS is adopted, 0 when AIS is not adopted

The constant value of 3.147 is significant at 5% level of significance given a p-value of 0.000, which is less than 0.05. The constant indicated that when public universities have not put in place AIS, the average financial performance measured in terms of net deficit or loss of the selected public universities in Western Region stood at approximately Sh. 1.43 billion (Antilog of 3.417).

4.5.5.1 Financial Reporting Systems and Financial Performance

The first objective of this research was to determine the influence of financial reporting systems on the financial performance of public universities in Western Region. The null hypothesis stated that financial reporting systems have no significant influence on the financial performance of selected public universities in Western Region. The regression analysis results in Table 4.43 show that financial reporting systems had a regression coefficient of -0.214 with a p-value of 0.017. The coefficient indicates that the adoption of financial reporting systems (FRS), a component of AIS, would improve financial

performance by reducing the log average net deficit of selected public universities in Western Region by 0.124 from 3.147 to 2.933, resulting in a net deficit of approximately Sh.0.853 billion (Antilog of 2.933).

A derived t statistic of 3.963 was also significant since it was more than a computed t critical value of 1.660. A p-value of 0.017 was significant at 95% confidence interval, given that it was below the probability of 0.05; thus, it is evident that financial reporting systems had a significant negative influence on the financial performance of public universities in Western Region. Therefore, the study rejected the null hypothesis that financial reporting systems have no significant influence on the financial performance of selected public universities in Western Region. The results of the study conform to the findings of descriptive statistics that indicated most respondents agreed that elements of financial reporting like timely preparation of financial statements, compliance to IFRS, faithful representation and degree of monitoring influenced the financial performance of public universities in Western Region.

The findings are in line with the results from a study by Ouma (2015), who conducted a study on reporting quality and financial performance of companies listed on the Nairobi Securities Exchange. He found out that improvement in the quality of reporting leads to improved financial performance measured in terms of net profit margin. The findings also match up to an outcome from a study by Uyar, Gungormus, and Kuzey (2017), who sought to find the relationship between accounting information systems and corporate governance, where financial reporting was found to have a significant impact on the performance of Turkish non-listed firms and therefore improved corporate governance.

4.5.5.2 Payables Management Systems and Financial Performance

The second objective was to analyze the influence of payables management systems on the financial performance of public universities in Western Region. The regression results in

table Table 4.43 shows a regression coefficient of -0.136 with a p-value of 0.021. The p-value is significant at 95% confidence interval since it is less than 0.05, indicating that payables management systems have a significant influence on financial performance. The coefficient implies that the adoption of payables management systems (PMS), a component of AIS, would improve financial performance by reducing the log average net deficit of selected public universities in Western Region by 0.136 from 3.147 to 3.011, resulting in a net deficit of approximately Sh.1.025 billion (Antilog of 3.011).

The t statistic of 2.194 also shows that the payables management systems significantly influence financial performance since it was more than the computed t critical of 1.660. Therefore, the null hypothesis was rejected since it was established that payables management systems had a significant negative influence on the financial performance of public universities in Western region. The outcome of the inferential statistics is in agreement with the results obtained from descriptive statistics. It was found that measures of payables management systems which include the average repayment period, payables turnover ratio, creditors ratio and the average number of payables, influenced the financial performance of public universities in Western Region.

The results conform to the findings of Rotich and Achode (2016), who researched the effects of accounts payables as a financing source on the performance of listed manufacturing firms at the Nairobi Stocks Exchange. A quantitative comparison between accounts payable and financial performance was made, and they found a strong direct relationship between accounts payables management and financial performance. The findings also agree with the findings of Likalama, Okeyo, and Kirwa (2017), who assessed accounts payable management as a determinant of profitability in agro firms in the Eldoret business centre. Payables' management was found to predict of financial performance measured via profitability.

4.5.5.3 Receivables Management Systems and Financial performance

The third objective of the study was to examine the influence of receivables management systems on the financial performance of public universities in Western Region. This was based on the null hypothesis that receivables management systems have no significant influence on the financial performance of selected public universities in Western Region. The regression analysis results in Table 4.43 shows a regression coefficient of -0.105 with a p-value of 0.063. The derived t statistic of 1.265 indicates that the relationship between receivables management systems and financial performance is insignificant since the value is less than the computed t critical value of 1.660.

Furthermore, a p-value of 0.063 is insignificant at 95% confidence interval, given that it is below the probability of 0.05; thus, it is evident that receivables management systems had an insignificant influence on the financial performance of public universities in Western Region. Therefore, the study failed to reject the null hypothesis that financial reporting systems have no significant influence on the financial performance of selected public universities in Western Region.

The findings of inferential statistics agree with the results of the descriptive statistics, where it was found that most public universities do not have favourable turnover ratios, their average collection period is high, and their debtor's ratio is unfavourable. This shows that the public cannot effectively manage receivables through the receivables management systems in place. It was also noted that the results were in line with the findings of a study done by Patrick (2020) on the influence of accounts receivable management on the financial performance of quoted manufacturing companies in Nigeria. The study adopted an indirect approach where firm size and leverage controlled the relationship between accounts receivable management and financial performance. The accounts receivable period was

found to insignificantly influence financial performance measured in terms of return on assets.

4.5.5.4 Internal Control Systems and Financial Performance

The fourth objective was to investigate the influence of internal control systems on the financial performance of public universities in Western Region. The research sought to test the null hypothesis that internal control systems have no significant influence on the financial performance of selected public universities in Western Region. The regression analysis results in Table 4.43 shows a regression coefficient of -0.253 with a p-value of 0.035. The coefficient denotes that the adoption of internal control systems (ICS), a component of AIS, would improve financial performance by reducing the log average net deficit of selected public universities in Western Region by 0.253 from 3.147 to 2.894, resulting in a net deficit of Sh.0.783 billion (Antilog of 2.894).

The derived t statistic of 3.514 indicates that the relationship between internal control systems and financial performance is significant since the value is more than the computed t critical value of 1.660. Furthermore, a p-value of 0.035 is significant at 95% confidence interval, given that it is greater than the probability of 0.05; thus, it is evident that internal control systems had a significant influence on the financial performance of public universities in Western Region.

Therefore, the null hypothesis was rejected, and it can be said that internal control systems have a significant influence on the financial performance of public universities in Western Region. The findings based on the inferential statistics agreed with the results of the descriptive statistics where most respondents agreed that transactions are verified and authorized by different individuals, there was effective risk assessment and feedback dealt with immediately. The public universities also had robust internal audit departments and regularly monitored, all of which influence financial performance.

The results support the findings of a study by Odek and Okoth (2019) on the effects of internal control systems on the financial performance of distribution companies in Kenya, where it was found that internal control systems had a positive impact on financial performance. Data collected was analyzed through mean, standard deviation, Pearson correlation, and multiple regression analysis. It was recommended that emphasis be put on proper controls and asset disposal to reduce the risk of material misstatement during financial reporting.

The results also adhere to findings from a study by Kabuye, Kato, Akugizibwe, and Bugambiro (2019), who applied a cross-sectional and correlational research design to determine how internal control systems and working capital management influence the financial performance of supermarkets in Uganda. Internal control systems were found to be predictors of financial performance, and if proper internal control systems were put in place, financial performance improved significantly.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This section gives a relevant research summary, makes conclusions, and gives the recommendations derived from the results of the research. The section further highlights areas of the research where future studies can be focused.

5.2 Summary

The purpose of the research was to establish the influence of accounting information systems on the financial performance of selected public universities in Western Region, with specific objectives being to determine the influence of financial reporting systems, analyze the influence of payables management systems, examine the influence of receivables management systems, and investigate the influence of internal control systems on the financial performance of public universities in Western Region. In working towards the objectives, the study collected primary and secondary data to assess the relationship between the variables. Information from the questionnaires was measured on a five-point Likert scale with data on the financial performance obtained from audited financial statements, obtained from the Auditor General and parliament websites.

Cronbach's alpha and factor analysis were employed to test the validity and reliability of the questionnaires as a research tool. Data were analyzed via descriptive and inferential statistics, where descriptive statistics were used to summarize the qualitative characteristics of accounting information systems and inferential statistics of multiple regression analysis were utilized to test the four hypotheses of the study. The analysis of variance (ANOVA) tested for the significance of the models with the Durbin Watson test used to find the

correlation level between the variables. A summary of the findings is given under each objective.

5.2.1 Financial Reporting Systems and Financial Performance

The first specific objective was to determine the influence of financial reporting systems on the financial performance of public universities in Western Region. A multiple regression model was run to test the null hypothesis that stated financial reporting systems have no significant influence on the financial performance of selected public universities in Western Region. Study results indicated a regression coefficient of -0.214 for FRS with a p-value of 0.017 and a t statistic of 3.963. The relationship between FRS and financial performance was significant at a a 5% significance level since the p-value was less than 0.05 and the t statistic was also more than the computed t critical of 1.660. The null hypothesis was rejected, and the research concluded that financial reporting systems had a significant influence on the financial performance of public universities in Western Region.

5.2.2 Payables Management Systems and Financial Performance

The research also aimed to analyze the influence of payables management systems on the financial performance of public universities in Western Region. The objective directed the research to test the null hypothesis and find out if the payables management systems had a significant influence on the financial performance of public universities in Western Region. Multiple regression results showed a coefficient of -0.136 for PMS with a p-value of 0.021 and a t statistic of 2.194. The study established a significant negative relationship between payables management systems and financial performance at 95% confidence interval since the p-value was less than 0.05 and the t statistic was also more than the computed t critical of 1.660. The multiple regression results, the null hypothesis was rejected, implying that payables management systems have a significant influence on the financial performance of public universities in Western Region.

5.2.3 Receivables Management Systems and Financial Performance

The third objective was to examine the influence of receivables management systems on the financial performance of public universities in Western Region. The study was geared towards testing the third hypothesis, which stated that receivables management systems have no significant influence on the financial performance of public universities in Western Region. The results of the regression model showed a regression coefficient of -0.105 with a p-value of 0.063 and a t statistic of 1.265. The relationship between receivable management systems and financial performance was insignificant at 95% confidence interval since the p-value was greater than 0.05 and the t statistic was less than the computed t critical of 1.660. Therefore, the null hypothesis failed to be rejected since the results made it clear that receivables management systems did not have a significant influence on the financial performance of selected public universities in Western Region.

5.2.4 Internal Control Systems and Financial Performance

The fourth hypothesis of the study sought to determine if the internal control systems influence the financial performance of public universities in Western Region. The hypothesis was built on the fourth specific objective that investigated the significance of the influence of internal control systems and the financial performance of public universities in Western Region. The results of the multiple regression produced a coefficient of -0.253 for ICS with a p-value of 0.035 and a t statistic of 3.514. The study found a significant relationship between internal control systems and financial performance at 5% significant level since the p-value was less than 0.05 and the t statistic was greater than the computed t critical of 1.660. The fourth null hypothesis was rejected, and the study concluded that internal control systems have a significant influence on the financial performance of selected public universities in Western Region.

Table 5.1: Summary of Hypothesis Tested

No.	Hypothesis	P-value	Results
H_{o1}	Financial reporting systems have no influence on financial performance of public universities in Kenya.	0.017<0.05	Rejected
H_{o2}	Payables management systems have no influence on financial performance of public universities in Kenya.	0.021<0.05	Rejected
$H0_3$	Receivables management systems have no influence on financial performance of public universities in Kenya.	0.063>0.05	Failed to Reject
H_{o4}	Internal control systems have no influence on financial performance of public universities in Kenya.	0.035<0.05	Rejected

5.3 Theoretical Relevance

Concerning the objectives, hypothesis and findings of the study, it is evident that the theoretical framework was relevant and guided the study to correctly decipher the findings of both descriptive and inferential statistics that tested the research hypotheses. The technology acceptance model opines that adopting an innovation by a given population depends on the probability that using it will enhance their job or performance. Both descriptive and inferential statistics indicated that financial reporting systems, payables management systems and internal control systems significantly influenced the financial performance of public universities in Western Region. Hence their improvement would result in a reduction of the average net deficit.

It can be concluded that its adoption can enhance performance since the research output symbolized that the financial performance of public universities was found to be influenced by AIS. Through the study, managers were recommended to create value by efficiently managing accounts payables. The elements contained in the theory of diffusion of

innovation used in the study also support the study's findings since the theory highlights that innovations are critical in bringing forth increased productivity (Jdanova & Karminsky, 2013). The adoption of the AIS by public universities was based on the notion that their financial performance could be improved in the long run, and the results of the inferential and descriptive inferential statistics confer with the theory.

The balanced scorecard theory supported the dependent variable of the study. The approach puts forward the fact that adopting both non-financial and economic measures is a precursor to having better internal processes in the organization. Whether profit-oriented or not, incorporating both measures by an entity ensures long-term environmental sustainability. Non-financial measures sensitize employees to be responsible for environmental sustainability, while financial measures show how the entity utilizes its resources to gain returns. From the analysis, it was established that public universities are operating at deficits and cannot meet their operational expenses appropriately. However, by incorporating accounting information systems, public universities can significantly reduce the average net deficit and achieve optimum operation.

5.4 Conclusion

The study made various conclusions, which are centred on the descriptive and inferential statistics carried out, with the review of the empirical and theoretical literature also being considered.

5.4.1: Financial Reporting Systems and Financial Performance

From the descriptive statistics, it was established that most respondents agreed that financial reporting systems influenced the financial performance of public universities in the western region. Similarly, inferential statistics (α = - 0.214, p = 0.017) indicated a negative and significant relationship between financial reporting systems and financial performance. The

conclusion points to the fact that when financial reporting systems are improved, financial performance improves significantly.

5.4.2: Payables Management Systems and Financial Performance

As per the descriptive statistics, it was evident that a more significant number of the respondents strongly agreed and agreed that payables management systems had an influence on the financial performance of public universities in western region. More so, inferential statistics (α = - 0.136, p = 0.021) disclosed a negative and significant relationship between payables management systems and financial performance. According to the conclusion, it can be said that an improvement in payables management systems leads to a reduction in net deficits, thus improving financial performance.

5.4.3: Receivables Management Systems and Financial Performance

Descriptive statistics from the questionnaires pointed out that most respondents agreed that receivables management systems influenced the financial performance of public universities in western region. In addition, the inferential statistics (α = - 0.105, p = 0.063) also showed that receivables management systems had a negative and insignificant relationship with financial performance.

5.4.4 Internal Control Systems and Financial Performance

Concerning this objective, the descriptive statistics divulged that a bulk of the respondents from the public universities agreed and strongly agreed that internal control systems had an influence on their financial performance. Further from the inferential statistics (α = - 0.253, p = 0.035), it was clear that internal control systems had a negative and significant influence on net deficits, which was a measure of financial performance. As a result, an improvement in internal control systems would improve financial performance by reducing the net deficits.

5.5 Recommendations

The section gives various recommendations based on the study's findings and the conclusions made thereafter.

5.5.1: Financial Reporting Systems and Financial Performance

Since the study found that financial reporting systems influenced the financial performance of public universities in western region, the management should endeavour to improve the quality of their financial statements by complying with the International Financial Reporting Standards. The move would ensure credibility, uniformity and consistency in reporting. The financial statements should also be prepared on time to ensure quality and real-time financial decisions. When financial information is delayed, the management of the public the entire decision-making process lacks effectiveness and efficiency.

As a result, they will not be at the forefront when dealing with risks arising throughout an accounting period, which may lead to the proliferation of funds, misappropriation and questionable investment decisions. Some of the public universities' financial statements were found not to show a true and Fairview. Therefore, they should also see that the financial statements portray a true and fair view of their state of affairs. This will boost the relationship between them and other stakeholders; therefore, they can access more resources for improved operational efficiency. Descriptive statistics findings also showed that quality reporting positively influences financial performance. Hence the management of public universities should reinforce full utilization of the financial reporting systems, which greatly revamp the financial reporting process for better reports.

5.5.2: Payables Management Systems and Financial Performance

Since payables management systems are used in effectively managing creditors, public universities should work towards improving their average repayment period. A shorter

average repayment period ensures that public universities have unlimited access to resources since all their suppliers are paid within the stipulated time. A strategy that can improve the average repayment period is the ageing of payables to pay all the longest outstanding creditors first before paying debts that have not matured. By reducing debts, the net deficits of public universities will automatically decrease, and their financial performance will improve.

Another finding indicated that some public universities have a high number of average payables; they should work towards reducing their average number of payables. The total number of payables an institution automatically affects operational efficiency. It increases the gearing level, which leads to operational inefficiencies like failure to pay suppliers and creditors on time which might lead to bankruptcy. When the average payables are reduced, the public universities will be in a better position to deal with third parties' payment, hence improved financial performance. Regarding discounts, the management of the public universities has to take advantage of discounts offered by creditors to reduce the number of monies paid out to acquire resources.

5.5.3: Receivables Management Systems and Financial Performance

With respect to receivables management systems, the public universities were found to take too long to collect debts; hence they have focused on keeping their average collection period at a desirable level to ensure outstanding debts do not accumulate to high levels. When the debtors are extremely high, the liquidity level of public universities will be affected. As a result, they will not have adequate cash flow to cover operational expenses and meet short-term obligations. The institutions have to ensure that they set a fixed average collection period which dictates the number of days taken to collect outstanding debts from debtors.

The move would ensure appropriate action when outstanding debts go beyond the set limit. As a result, the liquidity level will be improved by generating more working capital to pay

other short-term obligations. Lastly, the public universities should work toward putting in place a documented policy to stipulated debt collection. This would reduce the tedious process of going after debtors when they default on their payments since the policy will establish guidelines on collection and non-compliance to the set regulations.

5.5.4: Internal Control Systems and Financial Performance

Public universities should focus on putting controls in the systems that will enable authorization and approval of accounting transactions by different individuals. Individuals in charge of initiating payments in the system should not be the same ones approving the transactions or carrying out the payment. This will reduce the probability of fraud, theft and misappropriation of funds; thus, the public universities will reduce the chances of losing substantial amounts of money. The management of public universities should carry out regular and effective monitoring of the activities carried out through the systems.

Through monitoring, they can detect adverse financial occurrences like over expenditures and approval of unbudgeted items, which might lead to financial distress due to shortages. As a result, the management will save the institutions from running into unplanned financial crises. The management has to ensure that they give their undue support to the audit departments in their public universities to reduce risks they face throughout the accounting period. Internal audit departments work toward detecting errors and frauds, which would help in attaining unqualified audit reports and reduce frauds, misappropriation and proliferation of funds.

5.6 Further Study Areas

From the study results, future studies can focus on;

i. Determining the relationship between accounting information systems and financial performance of private universities since the results cannot be generalized accurately to private universities in Kenya.

ii. Investigating the other factors that cause variations in the financial performance of public universities in Western Region since it was found that 38.4% of variations in the financial performance of public universities cannot be attributed to accounting information systems.

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APPENDICES

Appendix I: Introduction Letter

Dear Respondent,

I am Kahenda Lyndah of registration number DGS/MBA/G/0010/2019, pursuing a Master of Business Administration (MBA) accounting degree at Kaimosi Friends University. In partial fulfilment of the requirement of this course, I am conducting academic research entitled 'accounting information systems and financial performance of public universities in Western Region.' Information provided will be treated with the utmost confidentiality and used strictly for academic purposes. Please answer all the questions as objectively and accurately as possible.

Your cooperation will be highly appreciated.

Signature …….

Date ……

Appendix II: Questionnaire

SECTION A: BACKGROUND INFORMATION

1. Designated position in the institution.

   Accountant ☐ Auditor ☐

2. How long have you used Accounting Information Systems or ERP in the institution?

   5 years and above ☐ 3 – 4 years ☐

   1 – 2 years ☐ Below 1 year ☐

3. Which records are mainly generated and used by your university?

   Management Reports ☐ Financial Reports ☐

SECTION B: FINANCIAL REPORTING SYSTEMS AND FINANCIAL PERFORMANCE.

Use the 5-point Likert scale below to indicate the extent to which you agree with the following statements.

5 Strongly Agree (SA), 4 Agree (A), 3 Neutral (N), 2 Disagree (D), 1 Strongly Disagree (SD)

Questions	**5 SA**	**4 A**	**3 N**	**2 D**	**1 SD**
1. Audit reports are unqualified					
2. The nature of audit reports influences the financial performance of your institution					
3. Financial reports are prepared according to the required International Financial Reporting standards					
4. Financial statements of your institution are always prepared on time					
5. Timely preparation of financial statements influences the financial performance of your institution					
6. The financial statements represent a true and fair view of the institution					
7. The degree of faithful representation influences the financial performance of your institution					
8. The quality of financial reporting influences financial performance					

SECTION C: PAYABLES MANAGEMENT SYSTEMS AND FINANCIAL PERFORMANCE.

Use the 5-point Likert scale below to indicate the extent to which you agree with the following statements.

5 Strongly Agree (SA), 4 Agree (A), 3 Neutral (N), 2 Disagree (D), 1 Strongly Disagree (SD)

Questions	**5 SA**	**4 A**	**3 N**	**2 D**	**1 SD**
1. The average repayment period for financial obligations by the institution is excellent					
2. The average repayment period influences the financial performance of your institution					
3. The payables turnover ratio for your institution is favourable					
4. The creditor's turnover ratio influences the financial performance of your institution					
5. The average number of payables in your institution is low					
6. The average number of payables influences financial performance					
7. Your institution takes advantage of discounts to enhance prompt payment.					
8. Prompt payment of creditors influences the financial performance of your institution					

SECTION D: RECEIVABLES MANAGEMENT SYSTEMS AND FINANCIAL PERFORMANCE.

Use the 5-point Likert scale below to indicate the extent to which you agree with the following statements.

5 Strongly Agree (SA), 4 Agree (A), 3 Neutral (N), 2 Disagree (D), 1 Strongly Disagree (SD)

Questions	**5 SA**	**4 A**	**3 N**	**2 D**	**1 SD**
1. Your institution has a favourable debtor's turnover ratio					
2. Debtor's turnover ratio influences the financial performance of your institution					
3. The average debt collection period in your institution is low					
4. The average collection period influences the financial performance of your institution					
5. Effective debt collection influences the financial performance of your institution.					
6. The debtor's ratio of your institution is favourable					
7. A Favourable debtors ratio influences the financial performance of your institution					
8. Your institution has a documented policy on encouraging prompt payment and tracking bad debts					

SECTION E: INTERNAL CONTROL SYSTEMS AND FINANCIAL PERFORMANCE.

Use the 5-point Likert scale below to indicate the extent to which you agree with the following statements.

5 Strongly Agree (SA), 4 Agree (A), 3 Neutral (N), 2 Disagree (D), 1 Strongly Disagree (SD)

QUESTIONS	**5 SA**	**4 A**	**3 N**	**2 D**	**1 SD**
1. Transactions are verified by different individuals from those who initiate them.					
2. Authorization and verification of transactions by different individuals enhance financial accountability and hence financial performance.					
3. The internal audit department of your institution carries out its activities efficiently.					
4. The level of internal audit efficiency influences the financial performance of your institution.					
5. Risk assessment is done regularly by your institution					
6. Effective Risk assessment influences the financial performance of your institution					
7. Feedback from a risk assessment is dealt with immediate effect and corrective measures taken					
8. The management carries on regular monitoring of the undertakings of the university					

Appendix V: Secondary Data Sheet

Item	**2016/2017**	**2017/2018**	**2018/2019**	**2019/2020**	**2020/2021**
Revenue					
Recurrent Grants					
Research Grants					
Tuition & other related fees					
Rental Revenue					
Income from Investments					
Other Income					
Total Revenue					
Expenditure					
Staff Costs					
General Expenses					
Finance Costs					
Repair and maintenance					
Amortization $ Depreciation					
Research Expenses					
Council Expenses					
Total Expenditure					
Operating Surplus/Deficit					

Appendix VII: Confidentiality Letter

I _____, via my interaction with and carrying out the study on 'Accounting Information Systems and Financial Performance of Public Universities in Western Region' will have access to exclusive data which encompasses information that the respondents recognize as confidential and private. I fully comprehend that access to confidential data and information is attached to the duty to protect it against unauthorized utilization and comply with data security regulations. The information will not be disclosed or made accessible to any party who is outside the scope of the study. Divulging the derived information would be a breach of the ethical policies of the university and would be a serious violation of the confidentiality sworn by the researcher.

I agree to fulfil my data security and ethical consideration responsibilities by observing the following:

1. I admit to not allowing unauthorized individuals to come in contact with the data through any means whatsoever.
2. I consent not to try and locate other information about the institutions that are not expressly stated in the study except in instances where it is necessary to enrich the study to make accurate generalizations.
3. I agree that in special circumstances where I identify sensitive data about the institutions that don't should be revealed, I will observe the highest degree of confidentiality and make no use of the information in the study.

Name _____

Signature _____

Date _____

Appendix VIII: Informed Consent

TITLE OF STUDY

Accounting Information Systems and Financial Performance of Public Universities in Western Region.

PRINCIPAL INVESTIGATOR

Kahenda Lyndah

Kaimosi Friends University

PO Box 348 - 50309

Lyndahlumwwaji@gmail.com

PURPOSE OF STUDY

To objectively achieve the goals of this research, you are being asked to take part in the study. However, it is vital for you to comprehend the reason for the research and what it will entail before you make your decision. Kindly go through the following details carefully, and feel free to ask any questions for any additional information.

The objective of this research is to establish the influence of Accounting Information Systems and Financial Performance of Public Universities in Western Region

PROCEDURE

The study will involve the gathering of both primary and secondary data. Primary data will be collected via questionnaires measured through a five-point Likert scale. Secondary data will entail the analysis of financial statements to derive all the information necessary to perform analysis and derive conclusions on the study problem and the association of the accounting information systems with financial performance. Questionnaires will be given through drop and pick, where respondents will be given a period of two weeks to appropriately and objectively provide responses to the questions

RISKS

The study is likely to face the risk of bias where responses are given may not sufficiently give a true reflection of the real situation. Respondents may conceal vital information that may help the study form an accurate conclusion. You are free to decline to respond to some or all the questions and even stop your participation at any time of your choosing.

BENEFITS

The study will promote a better comprehension of the relationship between Accounting Information Systems and Financial performance so as to find better ways of improving the financial performance of public universities, given that they are currently operating under losses. The study will also enable you, as the participant, to comprehend how the systems work to improve the functionality and decision-making processes of your institutions.

VOLUNTARY PARTICIPATION

Taking part in this study is voluntary, and the decision to participate rests wholly on you. In case you decide to participate in the research, you will be required to sign a consent form, but you'll be free to withdraw at any given time.

CONSENT

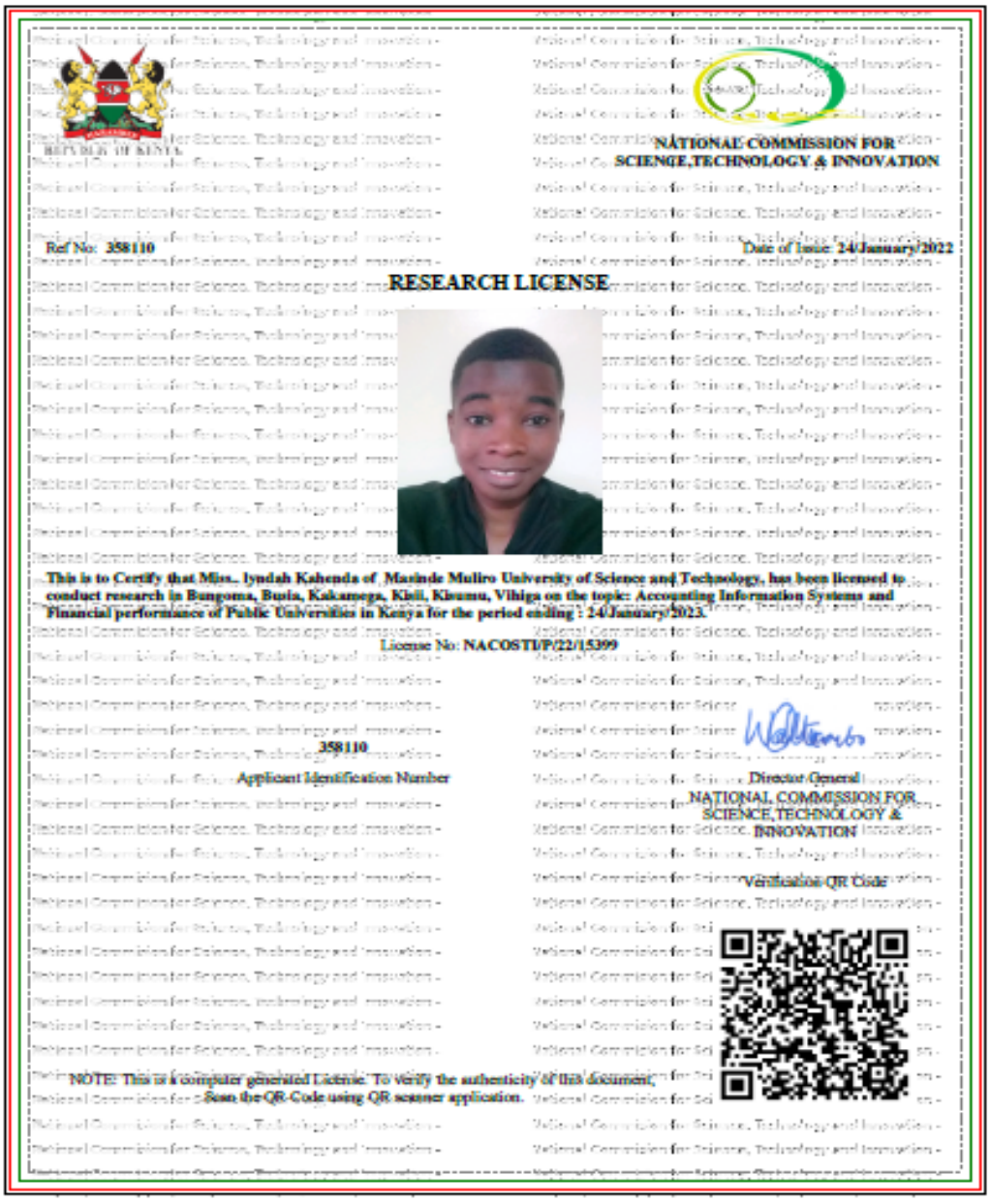
I have gone through the information provided and understood that my participation is voluntary, and I have the liberty to withdraw at any given time without having to give special reasons at no cost. Therefore, I voluntarily consent to be part of this research.

signature _____ Date_____

Appendix VI: List of Public Universities

S/No	University
1	Masinde Muliro University of Science and Technology
2	Kibabii University
3	Maseno University
4	Kisii University
5	Jaramogi Oginga Odinga University of Science and Technology
6	Rongo University
7	University of Kabianga
8	Tom Mboya University
9	ALUPE University
10	Kaimosi Friends University

Appendix VII: NACOSTI Permit



REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 358110

Date of Issue: 24/January/2022

RESEARCH LICENSE

This is to Certify that Miss., Iyndah Kahenda of Masinde Muliro University of Science and Technology, has been licensed to conduct research in Bungoma, Busia, Kakamega, Kisii, Kisumu, Vihiga on the topic: Accounting Information Systems and Financial performance of Public Universities in Kenya for the period ending : 24/January/2023.

License No: NACOSTI/P/22/15399

358110

Applicant Identification Number

Director General

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

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Appendix VIII: t Table

t Table

cum. prob	$t_{.50}$	$t_{.75}$	$t_{.80}$	$t_{.85}$	$t_{.90}$	$t_{.95}$	$t_{.975}$	$t_{.99}$	$t_{.995}$	$t_{.999}$	$t_{.9995}$
one-tail	0.50	0.25	0.20	0.15	0.10	0.05	0.025	0.01	0.005	0.001	0.0005
two-tails	1.00	0.50	0.40	0.30	0.20	0.10	0.05	0.02	0.01	0.002	0.001
df											
1	0.000	1.000	1.376	1.963	3.078	6.314	12.71	31.82	63.66	318.31	636.62
2	0.000	0.816	1.061	1.386	1.886	2.920	4.303	6.965	9.925	22.327	31.599
3	0.000	0.765	0.978	1.250	1.638	2.353	3.182	4.541	5.841	10.215	12.924
4	0.000	0.741	0.941	1.190	1.533	2.132	2.776	3.747	4.604	7.173	8.610
5	0.000	0.727	0.920	1.156	1.476	2.015	2.571	3.365	4.032	5.893	6.869
6	0.000	0.718	0.906	1.134	1.440	1.943	2.447	3.143	3.707	5.208	5.959
7	0.000	0.711	0.896	1.119	1.415	1.895	2.365	2.998	3.499	4.785	5.408
8	0.000	0.706	0.889	1.108	1.397	1.860	2.306	2.896	3.355	4.501	5.041
9	0.000	0.703	0.883	1.100	1.383	1.833	2.262	2.821	3.250	4.297	4.781
10	0.000	0.700	0.879	1.093	1.372	1.812	2.228	2.764	3.169	4.144	4.587
11	0.000	0.697	0.876	1.088	1.363	1.796	2.201	2.718	3.106	4.025	4.437
12	0.000	0.695	0.873	1.083	1.356	1.782	2.179	2.681	3.055	3.930	4.318
13	0.000	0.694	0.870	1.079	1.350	1.771	2.160	2.650	3.012	3.852	4.221
14	0.000	0.692	0.868	1.076	1.345	1.761	2.145	2.624	2.977	3.787	4.140
15	0.000	0.691	0.866	1.074	1.341	1.753	2.131	2.602	2.947	3.733	4.073
16	0.000	0.690	0.865	1.071	1.337	1.746	2.120	2.583	2.921	3.686	4.015
17	0.000	0.689	0.863	1.069	1.333	1.740	2.110	2.567	2.898	3.646	3.965
18	0.000	0.688	0.862	1.067	1.330	1.734	2.101	2.552	2.878	3.610	3.922
19	0.000	0.688	0.861	1.066	1.328	1.729	2.093	2.539	2.861	3.579	3.883
20	0.000	0.687	0.860	1.064	1.325	1.725	2.086	2.528	2.845	3.552	3.850
21	0.000	0.686	0.859	1.063	1.323	1.721	2.080	2.518	2.831	3.527	3.819
22	0.000	0.686	0.858	1.061	1.321	1.717	2.074	2.508	2.819	3.505	3.792
23	0.000	0.685	0.858	1.060	1.319	1.714	2.069	2.500	2.807	3.485	3.768
24	0.000	0.685	0.857	1.059	1.318	1.711	2.064	2.492	2.797	3.467	3.745
25	0.000	0.684	0.856	1.058	1.316	1.708	2.060	2.485	2.787	3.450	3.725
26	0.000	0.684	0.856	1.058	1.315	1.706	2.056	2.479	2.779	3.435	3.707
27	0.000	0.684	0.855	1.057	1.314	1.703	2.052	2.473	2.771	3.421	3.690
28	0.000	0.683	0.855	1.056	1.313	1.701	2.048	2.467	2.763	3.408	3.674
29	0.000	0.683	0.854	1.055	1.311	1.699	2.045	2.462	2.756	3.396	3.659
30	0.000	0.683	0.854	1.055	1.310	1.697	2.042	2.457	2.750	3.385	3.646
40	0.000	0.681	0.851	1.050	1.303	1.684	2.021	2.423	2.704	3.307	3.551
60	0.000	0.679	0.848	1.045	1.296	1.671	2.000	2.390	2.660	3.232	3.460
80	0.000	0.678	0.846	1.043	1.292	1.664	1.990	2.374	2.639	3.195	3.416
100	0.000	0.677	0.845	1.042	1.290	1.660	1.984	2.364	2.626	3.174	3.390
1000	0.000	0.675	0.842	1.037	1.282	1.646	1.962	2.330	2.581	3.098	3.300
Z	0.000	0.674	0.842	1.036	1.282	1.645	1.960	2.326	2.576	3.090	3.291
	0%	50%	60%	70%	80%	90%	95%	98%	99%	99.8%	99.9%
	Confidence Level										

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Appendix IX: f Table

Degrees of freedom in denominator (df2)		Degrees of freedom in numerator (df1)										
	p	1	2	3	4	5	6	7	8	12	24	1000
10	0.100	3.29	2.92	2.73	2.61	2.52	2.46	2.41	2.38	2.28	2.18	2.06
	0.050	4.96	4.10	3.71	3.48	3.33	3.22	3.14	3.07	2.91	2.74	2.54
	0.025	6.94	5.46	4.83	4.47	4.24	4.07	3.95	3.85	3.62	3.37	3.09
	0.010	10.04	7.56	6.55	5.99	5.64	5.39	5.20	5.06	4.71	4.33	3.92
	0.001	21.04	14.90	12.55	11.28	10.48	9.93	9.52	9.20	8.45	7.64	6.78
12	0.100	3.18	2.81	2.61	2.48	2.39	2.33	2.28	2.24	2.15	2.04	1.91
	0.050	4.75	3.89	3.49	3.26	3.11	3.00	2.91	2.85	2.69	2.51	2.30
	0.025	6.55	5.10	4.47	4.12	3.89	3.73	3.61	3.51	3.28	3.02	2.73
	0.010	9.33	6.93	5.95	5.41	5.06	4.82	4.64	4.50	4.16	3.78	3.37
	0.001	18.64	12.97	10.80	9.63	8.89	8.38	8.00	7.71	7.00	6.25	5.44
14	0.100	3.10	2.73	2.52	2.39	2.31	2.24	2.19	2.15	2.05	1.94	1.80
	0.050	4.60	3.74	3.34	3.11	2.96	2.85	2.76	2.70	2.53	2.35	2.14
	0.025	6.30	4.86	4.24	3.89	3.66	3.50	3.38	3.29	3.05	2.79	2.50
	0.010	8.86	6.51	5.56	5.04	4.69	4.46	4.28	4.14	3.80	3.43	3.02
	0.001	17.14	11.78	9.73	8.62	7.92	7.44	7.08	6.80	6.13	5.41	4.62
16	0.100	3.05	2.67	2.46	2.33	2.24	2.18	2.13	2.09	1.99	1.87	1.72
	0.050	4.49	3.63	3.24	3.01	2.85	2.74	2.66	2.59	2.42	2.24	2.02
	0.025	6.12	4.69	4.08	3.73	3.50	3.34	3.22	3.12	2.89	2.63	2.32
	0.010	8.53	6.23	5.29	4.77	4.44	4.20	4.03	3.89	3.55	3.18	2.76
	0.001	16.12	10.97	9.01	7.94	7.27	6.80	6.46	6.20	5.55	4.85	4.08
18	0.100	3.01	2.62	2.42	2.29	2.20	2.13	2.08	2.04	1.93	1.81	1.66
	0.050	4.41	3.55	3.16	2.93	2.77	2.66	2.58	2.51	2.34	2.15	1.92
	0.025	5.98	4.56	3.95	3.61	3.38	3.22	3.10	3.01	2.77	2.50	2.20
	0.010	8.29	6.01	5.09	4.58	4.25	4.01	3.84	3.71	3.37	3.00	2.58
	0.001	15.38	10.39	8.49	7.46	6.81	6.35	6.02	5.76	5.13	4.45	3.69
20	0.100	2.97	2.59	2.38	2.25	2.16	2.09	2.04	2.00	1.89	1.77	1.61
	0.050	4.35	3.49	3.10	2.87	2.71	2.60	2.51	2.45	2.28	2.08	1.85
	0.025	5.87	4.46	3.86	3.51	3.29	3.13	3.01	2.91	2.68	2.41	2.09
	0.010	8.10	5.85	4.94	4.43	4.10	3.87	3.70	3.56	3.23	2.86	2.43
	0.001	14.82	9.95	8.10	7.10	6.46	6.02	5.69	5.44	4.82	4.15	3.40
30	0.100	2.88	2.49	2.28	2.14	2.05	1.98	1.93	1.88	1.77	1.64	1.46
	0.050	4.17	3.32	2.92	2.69	2.53	2.42	2.33	2.27	2.09	1.89	1.63
	0.025	5.57	4.18	3.59	3.25	3.03	2.87	2.75	2.65	2.41	2.14	1.80
	0.010	7.56	5.39	4.51	4.02	3.70	3.47	3.30	3.17	2.84	2.47	2.02
	0.001	13.29	8.77	7.05	6.12	5.53	5.12	4.82	4.58	4.00	3.36	2.61
50	0.100	2.81	2.41	2.20	2.06	1.97	1.90	1.84	1.80	1.68	1.54	1.33
	0.050	4.03	3.18	2.79	2.56	2.40	2.29	2.20	2.13	1.95	1.74	1.45
	0.025	5.34	3.97	3.39	3.05	2.83	2.67	2.55	2.46	2.22	1.93	1.56
	0.010	7.17	5.06	4.20	3.72	3.41	3.19	3.02	2.89	2.56	2.18	1.70
	0.001	12.22	7.96	6.34	5.46	4.90	4.51	4.22	4.00	3.44	2.82	2.05
100	0.100	2.76	2.36	2.14	2.00	1.91	1.83	1.78	1.73	1.61	1.46	1.22
	0.050	3.94	3.09	2.70	2.46	2.31	2.19	2.10	2.03	1.85	1.63	1.30
	0.025	5.18	3.83	3.25	2.92	2.70	2.54	2.42	2.32	2.08	1.78	1.36
	0.010	6.90	4.82	3.98	3.51	3.21	2.99	2.82	2.69	2.37	1.98	1.45
	0.001	11.50	7.41	5.86	5.02	4.48	4.11	3.83	3.61	3.07	2.46	1.64
1000	0.100	2.71	2.31	2.09	1.95	1.85	1.78	1.72	1.68	1.55	1.39	1.08
	0.050	3.85	3.00	2.61	2.38	2.22	2.11	2.02	1.95	1.76	1.53	1.11
	0.025	5.04	3.70	3.13	2.80	2.58	2.42	2.30	2.20	1.96	1.65	1.13
	0.010	6.66	4.63	3.80	3.34	3.04	2.82	2.66	2.53	2.20	1.81	1.16
	0.001	10.89	6.96	5.46	4.65	4.14	3.78	3.51	3.30	2.77	2.16	1.22

Use StaTable, WinPepi > WhatIs, or other reliable software to determine specific *p* values