THE EFFECTS OF INTEGRATED COMPUTERIZED ACCOUNTING PRACTICES ON ENSURING EFFECTIVE FINANCIAL CONTROLS OF SUPERMARKETS IN KISII COUNTY, KENYA

PAUL GAITHO KIMANI

BBAM (ACCOUNTING)

THIS RESEARCH PROJECT HAS BEEN SUBMITTED TO SCHOOL OF POST GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS OF THE AWARD OF DEGREE OF MASTERS OF BUSINESS ADMINISTRATION (ACCOUNTING OPTION) OF THE SCHOOL OF BUSINESS AND ECONOMICS, KISII UNIVERSITY

FEBRUARY, 2020

DECLARATION AND RECOMMENDATION

Declaration by the student

This research project is my original work and has never been submitted for the award of certificate or degree in this institution or any other institution of higher learning.

Signature ……Date……

Paul Gaitho Kimani

CBM12/10585/14

Recommendations by the supervisors

This research project has been submitted for examination with our approval as the university supervisors.

Signature ……Date……

Dr. Andrew Nyang'au, PhD

Lecturer,

School of Business and Economics,

Kisii University.

Signature ……Date……

Prof. Christopher Ngacho, PhD

Associate Professor,

School of Business and Economics,

Kisii University.

DEDICATION

This research project is dedicated to my wife Catherine Njeri and my daughter Monicah Wanjiru without whose encouragement wouldn't have reached this far.

ACKNOWLEDGEMENT

I would like to acknowledge and thank my supervisors Dr. Andrew Nyang'au, PhD and Prof. Christopher Ngacho, PhD for the guidance they have given me through the entire research project.

I would also like to appreciate the input of Co-Ordinator post graduate Dr. Wafula Chesoli, PhD and chair of Accounting and Finance Department Mr. Denis Nyamasege as the reviewers.

I would like to acknowledge and appreciate my parents Mr. & Mrs. Joseph Kimani Gaitho for their support and encouragement throughout the entire research project.

ABSTRACT

Integrated computerized accounting practices (ICAP) were facing the challenges of unauthorized access, alterations and destruction of data thus compromising the confidentiality, integrity and availability of financial information. The research evaluated the effects of ICAP on ensuring effective financial controls of supermarkets in Kisii county, Kenya. The four objectives of the study were; to determine the effect of integrated financial operations on the internal control procedures (ICP) of supermarkets in Kisii County, to determine the effect of operating segments information on the ICP of supermarkets in Kisii county, to determine the effect of computerized integrated accounting on the ICP of supermarkets in Kisii county, and to determine the effect of consolidated financial reporting transactions on the ICP of supermarkets in Kisii county. The findings of the study are helpful to managers of supermarkets in acquiring the ICAP to enhance the internal controls, developers of accounting softwares in programming software that meets the needs of the supermarkets and future researchers as it forms the basis of future researches. The study used descriptive survey designs on a target population of the 24 comprising of managers branch managers, branch supervisors and branch accountants of the supermarkets in Kisii county. A census method conducted where 21 responded to the closed ended questionnaire used to collect data. The questionnaire was reliable with a Cronbach alpha of 0.759 and the fitness for model was significant at 0.003 tested using ANOVA. The data was analyzed through descriptive and inferential statistics with the aid of SPSS version 22.0 and presented using tables & figures. Descriptive methods used were mean and standard deviation. The inferential statistics used include multivariate regression analysis to test the model fit and correlation analysis. The hypothesis were tested using t-test for a significance level of ±5 at a degree of confidence of 95%. The findings of the study showed that IFO, OSI, CIA, and CFRT were significant on the ICP. The study concluded that cash management was the most integrated financial operation, categorization of products and services was the most used method of segmentation, financial accounting transactions were the most computerized branch of accounting, and subsidiaries transactions were the most consolidated financial reporting transactions. The researcher recommended the supermarkets to integrate financial transactions relating to baking of cakes and breads, improve segmentation based on service delivery, computerize fund accounting transactions and consolidate accounting transactions for assets jointly held in partnership with other organizations.

TABLE OF CONTENTS

DECLARATION AND RECOMMENDATION ..... **ii**

DEDICATION ..... **iii**

ACKNOWLEDGEMENT ..... **iv**

ABSTRACT ..... **v**

TABLE OF CONTENTS ..... **vi**

LIST OF TABLES ..... **x**

LIST OF FIGURES ..... **xi**

LIST OF APPENDICES ..... **xii**

LIST OF ABBREVIATION AND ACRONYMS ..... **xiii**

CHAPTER ONE

INTRODUCTION **1**

1.1 Background of the study 1

1.2 Statement of Problem 10

1.3 Objective of the Study 11

1.3.1 Overall Objective 11

1.3.2 Specific Objectives 11

1.4 Research Hypothesis 11

1.5 Significance of the Study 12

1.6 Scope of the Study 12

1.7 Limitation of the Study 13

1.8 Assumption of the Study 13

1.9 Operational Definition of Terms 13

CHAPTER TWO

LITERATURE REVIEW 16

2.1 Theoretical Review 16

2.1.1 Systems Theory 16

2.1.2 Agency Theory 18

2.1.3 Contingency Theory 18

2.1.4 Positive Accounting Theory 22

2.2 Empirical Literature 23

2.2.1 Integrated Financial Operations and the Internal Controls 23

2.2.2 Operating Segments Information and the Internal Controls Procedure 27

2.2.3 Computerized Integrated Accounting and the Internal Controls 29

2.2.4 Consolidated Financial Reporting Transaction and the Internal Controls 31

2.2.5 Internal controls Procedures 34

2.3 Research Gaps 36

2.4 Conceptual Framework 38

CHAPTER THREE

RESEARCH METHODOLOGY 40

3.1 Research Design 40

3.2 Study Area 40

3.3 Target Population 40

3.4 Census Technique 42

3.5 Data Collection Procedure 42

3.5.1 Data Collectionn Instrument 42

3.5.2 Content Validity 42

3.5.3 Reliability....43
3.6 Data analysis and presentation....45
3.6.1 Descriptive Analysis....45
3.6.2 Inferential Statistics....45
3.6.3 Assumptions of the Regression Model....46
3.7 Ethical Considerations....47
CHAPTER FOUR
DATA ANALYSIS AND DISCUSSION OF FINDINGS....48
4.0 Introduction....48
4.1 Response Rates....48
4.2 General Background Information....49
4.2.1 Age distribution of the Respondents....49
4.2.2 Gender of the Respondents....49
4.2.3 Academic Qualifications....50
4.2.4 Working Experience....51
4.3 Descriptive Statistics....51
4.3.1 Integrated Financial Operations....51
4.3.2 Operating Segments Information....53
4.3.3 Computerized Integrated Accounting....55
4.3.4 Consolidated Financial Reporting Transactions....56
4.3.5 Internal Control Procedures....57
4.4 Correlations Analysis....59
4.5 Diagnostic Tests....61
4.5.1 Tests of Normality....61

4.5.2 Collinearity Test.....62
4.5.3 Autocorrelation Test.....63
4.6 Multiple Regression Analysis.....63
4.6.1 Multiple Regression Model Summary.....63
4.6.2 Analysis of Variance (ANOVA).....64
4.6.3 Regression Coefficients.....65
4.7 Hypothesis Testing.....66
4.7.1 Effects of Integrated Financial Operations on the Internal controls.....67
4.7.2 Effects of Operating Segments Information on the Internal Controls.....68
4.7.3 Computerized Integrated Accounting on the Internal Controls.....69
4.7.4 Consolidated Financial Reporting Transactions on the Internal Controls.....70
CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS.....72
5.1 Summary of findings.....72
5.2 Conclusion.....74
5.3 Recommendations of the Study.....76
5.4 Suggestion for Further Research.....77
REFERENCES.....78
APPENDICES.....88

LIST OF TABLES

Table 3.1 Target population 41

Table 3.2 : Reliability statistics table 44

Table 4.1: Age distribution 49

Table 4.2 : Gender distribution 50

Table 4.3 : Academic qualification 50

Table 4.4 : Working experience 51

Table 4.5 : Integrated financial operations 52

Table 4.6 : Operating segment information 54

Table 4.7 : Computerized integrated accounting 55

Table 4.8 : Consolidated financial reporting transactions 56

Table 4.9 : Internal Controls Procedures 58

Table 4.10 : Inter Item Correlation matrix 60

Table 4.11 Shapiro-Wilk test of normality 61

Table 4.12: Collinearity analysis 62

Table 4.13 : Multiple Regression Model Summary 64

Table 4.14 : ANOVA 65

Table 4.15 :Coefficients 66

Table 4.16 : t -test critical values and significance 67

LIST OF FIGURES

Figure 2.1: Conceptual Framework 38

Figure 4.1 : Pie chart of response rate.....48

LIST OF APPENDICES

APPENDIX I : INTRODUCTORY LETTER 88

APPENDIX II : QUESTIONNAIRE 89

APPENDIX III : KISII UNIVERSITY AUTHORITY LETTER 94

APPENDIX IV : NACOSTI RESEARCH PERMIT 95

APPENDIX V : NACOSTI AUTHORIZATION LETTER 96

APPENDIX VI : SUMMARY OF ANTI-PLAGIARISM REPORT 97

LIST OF ABBREVIATION AND ACRONYMS

AIS : Accounting Information System

ANOVA Analysis of Variance

CAIS : Computerized Accounting Information Systems

CFRT : Consolidated Financial Reporting Transactions

CIA : Computerized Integrated Accounting

ERP : Enterprise Resource Planning

FC : Financial Controls

IAS : International Accounting Standards

ICAP : Integrated Computerized Accounting Practices

ICAS : Integrated Computerized Accounting Systems

ICP : Internal Control Procedures

ICS : Internal Controls Systems

ICT : Information Communication & Technology

IFMIS: Integrated Financial Management Information Systems

IFO : Integrated Financial Operations

IFRS : International Financial Reporting Standards

OSI : Operating Segment Information

USA : United States of America

VAT : Value Added Tax

VIF : Variance Inflation Factor

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Accounting can be traced back to ancient times in Egypt, China, Greece and Mesopotamia. Ancient Egypt and Chinese civilization were handling treasury and other government records of tax matters. Egyptians bookkeepers kept records that were checked by an elaborate internal verification process. Records from Mesopotamia showed list of incomes and expenditures. Further development of accounting happened in medieval period with introduction of cashbook in the Roman Empire (Alexander, 2013; Alrawi & Thomas, 2014; Edwards, 2013).

During the Renaissance period, there was introduction of double entry by Luca Pacioli, the father of accounting, which has brought a great impact to modern accounting. The origin of using Latin word debit "he owes" and Credit "he trust" were introduced in the accounting. Pacioli recommended the use of memorandum, journal and ledger as the books of account in his treatise of accounting (Edwards, 2013; Rogers, 2014).

Large and complex companies developed during industrial revolution leading to introduction of cost accounting by developing systems of recording and tracking cost. Cost accounting was one of the oldest management tools to be used. It was during this time that Queen Victoria of Scotland gave a royal charter to recognize accounting as a profession (Edwards, 2013; Schneider, 2015; Tanis, 2013; Wiley, 2013).

In Germany, a descriptive study on integration of management accounting and financial accounting showed that a good management accounting information was not only Characterized by relevance, timeliness, accuracy, or technical reliability with respect to a given

control problem, but also by consistence from a user perspective. It may be difficult to achieve consistency if relevant Generally Accepted Accounting Principles (GAAPs) are not applied even if legal and tax requirements have been fulfilled. Consistency was not about internal reporting though must adhere to provision of IFRS 8 - Operating Segment. There are two fundamental options to provide Accounting information for management control purpose; IAS where financial records are used as a database for management accounting and/or as third set of books that was different from Financial and tax accounting records (Weibenberger & Angelkort, 2014).

In Saudi Arabia, an investigation on investigation on the perceived threats of computerized accounting information systems in developing countries (CAIS) revealed that almost 50% of Saudi organization suffered loss due to breach of CAIS. The most significant perceived threats of CAIS are accidental and intentional entry of wrong data, accidental destruction of data by employees, unauthorized documents visibility, computer viruses, sharing of passwords, suppression and destruction of reported output, direct print and distribution of information to people who are not entitled. The empirical survey was done using questionnaires administer to 30 users of CAIS. (Abu-Musa, 2016).

In Bangladesh, information generated by accounting information systems (AIS) increased operation processes, management reports, budgeting and controls. Effectiveness of AIS was analyzed on timeliness, scope, and aggregation. Scope covers both non-financial and financial, external and internal information useful for prediction of the future events. Aggregation was a means of collecting and summarizing information within a given period. The study sampled 400 employees and used descriptive methods, ANOVA and regression models to analyze data.

The concept of AIS uses accurate, content, ease of use, format, and timelines (Fowzia & Nasrin, 2015).

In Bahrain, a descriptive survey on the accountants' perception of internal control problems associated with the use of computerized accounting systems showed four main internal control systems problems related to input, output, processing, storage and controls. The problems of input are invisibility of input data, unauthorized access, and unfamiliar user inputting incorrect data. The processing stage problems are lack of judgment by computer equipment, centralization of data and separation of duties, misuse of computer speed and potential errors. The storage problems are invisibility of audit trail, change of information without a physical trace, ease of stealing information and loss of information. The problems of output stage are user over trusting computer results and creation of different reality (Cordoş, et al., 2014).

In Ghana, a descriptive study to explore the conception, motivation, assessment, benefits and challenges surrounding CAIS in developing countries found out that external and internal factors, as well as potential benefits of CAIS contribute to its adoption. The factors include increased workload, budgetary constraints, size of the firm, competition, external agents, computer set of efficacy of decision makers, the level of ICT expertise and technological innovation. The benefits of CAIS in state owned enterprises were speed, accuracy, improvement in work life of employee, effective supervision, and improved decision making, reduced human errors, and increased reliability of financial institution. CAIS improves the quality of financial statements and compliance with regulations and improves data processing. It was also found out that there was no integration of CAIS with other was to allow real time access of data. The main challenge of CAIS was found out to be the organizations own employees. Reports generated by CAIS are used by internal management, staff and external

stakeholders. These reports include analysis of receipts, payments, accounts payable, accounts receivable, cash management petty cash utilization and inventory balances (Appiah, Agyemang, Agyei, Nketiah, & Mensah, 2013).

In Tanzania, a descriptive study on the impact of computerization on internal controls over cash in Iringa municipal council by Selfano, Peninah, & Sarah (2014) showed that computerization of accounting systems brought a considerable improvement on internal control of cash. The authorizations and approvals must be done on the computerized systems which are secured through password and segregation of duties and responsibilities.

In Kampala city, Uganda, a descriptive study on the impact of accounting information systems on profitability level of small scale businesses revealed that most small scale businesses do not have AIS resulting to continue low performance. It showed a positive relationship between AIS and profit levels of small businesses in Kampala. This was because AIS increase speed of processing data and classifying it easily reduces time. Reliability and safety of data which can be retrieved late was guaranteed by the system back up (Muhindo, Mzuza, & Zhou, 2014).

Integrates financial operations of an organization are computerized by ICAS to produce instant reports on Aged debtors' summary, Trial balance, trading and profit and loss account, balance sheet, Stock valuation, Sales analysis, Budget analysis and variance analysis, VAT returns, Payroll analysis(Hadler, 2014). The advantages of Computerized accounting systems on integrated financial operations are Automatic document production, Speed , Accuracy , Up-to-date information, Availability of information, VAT return, Management information, Legibility, Efficiency, Cost savings , The ability to deal in multiple currencies easily, Reduce frustration, and Staff motivation (Hadler, 2014; Magloff, 2014).

The integrated financial operations of an ICAS are; revenue cycle, production cycle, expenditure cycle, human resource and payroll cycle, and general ledger cycle. Revenue cycle involves receiving sales order, shipping of goods, billing customers and cash collection respectively. Expenditure cycle involves making order for goods and services to suppliers, receiving goods, acknowledging supplier invoice, and cash payments respectively. Production cycle involves product design, planning & scheduling, production operation, and cost accounting respectively. Payroll cycle involves updating employees' data, validating, preparation and payments. General ledger cycle involves update accounts, adjusting where necessary, prepare a trial balance and financial statement (Stolowy & Touron, 2013). A computerized accounting system is a wholesome system of accounting that has several integrated financial operations. The elements of CAS are accounts receivable, accounts payable, benefits management and payroll, assets, budgeting, supply chain management project reporting, and reporting.

Operating segments information is defined by the international financial reporting standard (IFRS 8). The standard requires publicly traded entities to disclose information about their geographical areas and operating segments in which they operate, major customers and products and services based on internal management reports of identification of operating segments and measurements of disclosed operating segment information. Geographical area relates to accounting for various branches of an organization while product segments relates to various categories of product such as clothing, furniture, electronics, food staff etc. (International Accounting Standard Board 2013c).

Operating segments information are the components of an entity that; engages in business activity that earns revenue and incur expenses, operating results are regularly reviewed by

entity chief operating decision makers, and discrete financial information was available. This was a conceptual analysis hence the need to empirically test the five component of operating segment as incorporated in integrated accounting systems, applied by the chief decision maker and their on the effect on internal controls (Hope, Thomas, & Winter, 2014).

Computerized integrated accounting systems leads to a better compliance of the requirement for periodic performance measurement systems on the internal information supply. This was as result of integration of management and financial accounting systems on an empirical analysis of an integrated accounting systems on managerial information (Hoffjan, Weide, & Trapp, 2014) .

Computerized integrated accounting relates to the transaction affecting various branches of accounting. These affected branches of accounting are financial accounting, management accounting, cost accounting, taxation and auditing. In integrated accounting system inventory is maintained through perpetual method while in interlocking accounting inventory counted physically through stock taking hence the reason for computerizing integrated accounting (Fowzia & Nasrin, 2015).

Consolidated financial reporting transactions over internal controls guideline issued by Center for Quality audit describes the process used by public entities to enhance the reliability of the financial statements by reducing the risk of material misstatement or errors. The guideline introduces the consolidated financial reporting controls that are designed to provide reasonable assurance that the entities' financial statements are reliable and prepared in accordance with international financial reporting standards (Center for Audit Quality, 2013).

Consolidated financial reporting transactions are accounted for as per the requirements of international financial reporting standards (IFRS 10). According to IFRS 10 requires that an organization to prepare and present consolidated financial statements of itself and the companies it control. Control requires right & exposure to variable returns and ability & power to control the returns. It defines subsidiary as the company where the organization hold more than 50% of the shares and have control such as having a director and associate as a company where the organization owns a majority shares of between 20% -50% and have control such as having a director in the company. IFRS 12 requires an organization to disclose its interest in subsidiaries, associates, joint arrangements and unconsolidated "structured entities". The organization should prepare consolidated financial statements that includes; consolidated statement of financial position, consolidated statement of comprehensive income, consolidated statement of changes in equity, consolidated statement of cash flows and notes to the financial statements (International Accounting Standard Board, 2014b).

In Kenya, a descriptive survey by Karanja & Nganga (2014) on IFMIS an integrated financial management information system adopted by Government of Kenya which has strengthened public finance management leading to growth & development of the country. An investigation on the effects of IFMIS on cash management practices in the public sector showed that a reliable system was timely, complete, accurate, secure from destruction, consistent in collection of information, corruption, unauthorized access & breach of confidentiality. ICAS should guarantee confidentiality, integrity and availability of data and information. Reliability and flexibility of IFMIS affects cash management positively. Some of the highlighted weaknesses of IFMIS are lack of internal control over data entry, transaction processing and reporting; poor standard data classification for recording financial events; duplication of processes for similar transactions; and, duplication of data entry (Selfano, et al., 2014). The

factors that influence implementation of IFMIS in Kenya government ministries are implementation cost, capacity & technical skills, complexity of IFMIS, and motivation of workforce.

In Kisumu, Kenya, a descriptive study of effects of integrated computerized accounting practices (ICAP) on audit risk management in public enterprises highlighted the impact of ICAP as strengthening manual account, promoting effectives of organization by changing procedures, improving data processing and promoting rudimentary analysis. Risk management systems have failed in many cases due to lack of corporate governance and audit monitoring procedures due to lack of ICAP. Accounting functions falls in two major branches; Management accounting that gives reports to internal managers for decision making and financial accounting for external stakeholders. The ability of a company to protect financial information using software safeguards the company from legal and financial liabilities. The study found out that ICAP increases the internal control process that leads to a positive external auditor's report which was useful to leaders and other stakeholders (Otieno & Orina, 2013).

Internal controls systems was defined by Committee of Sponsoring Organization of the Treadway Commission on the Internal Control - Integrated Framework. The framework also outline the objectives and the components of internal controls. The objectives are operations, compliance and reporting. The components of internal controls are control activity, risk assessment, control environments, monitoring , and information and communications. Control activities includes segregation of duties, physical access, integrity, and job rotation (Steinberg, Everson, Martens, & Nottingham, 2013).

A descriptive survey research by Karanja & Nganga (2014) on a case of Uchumi on influence of vender inventory management on organization performance in retail outlets showed that

vender inventory management influences organization investment in inventory. The inventory movement also, influences the organization performance. The study recommended use of information communication & technology (ICT) in inventory management function since it increases organizations performance.

Supermarkets in Kisii county showed that proper book keeping, approval of business transactions, and proper procurement procedures had a positive significant effect on the profitability. A case study of the supermarkets in Kisii county on effect of internal control systems on profitability in Kenyan supermarket showed that there was self-governing progression checks (Gichama, Nyakundi, & Mogwambo,2016).

The supermarkets in Kisii town studied by Kuloba & Wesonga (2015) had availability of adequate number of cashiers as a way of reducing queuing time. The descriptive study showed that the ownership of the supermarket did not influence customers rating of the supermarkets. In the ranking of the supermarkets the use of modern technology attracted more customers.
The supermarkets in Kisii Town depended on inventory management systems to improve on service delivery and the internal controls. A descriptive study by Irungu and Wanjau (2015) showed that vender managed inventory systems effectiveness was affected by; the ICT infrastructure, the quality of ICT information sharing, and inventory flow but not quality of relationship.

1.2 Statement of Problem

The integrated computerized accounting practices were used in integration of financial operations, generation of operating segment information, computerization of integrated accounting and consolidating financial reporting transaction. These had an effect on the internal controls in any organisation (Hadler, 2014; Magloff, 2014).

Some of the perceived security threats of the integrated computerized accounting practices identified by Hayale & Abu (2013) were**;** accidental & intentional destruction of data, accidental & intentional entry of erroneous data by employee and/or other personnel. On March 2016, Uchumi supermarket closed down its five branches in; Kisii, Taj Mall, Eldoret, Nakuru and Embu due to financial distress (Michira, 2016) that could be traced to three years of "cooked books", weak internal controls, fraudulent procurement and mismanagement. According to Michira (2016) the supermarket had manipulated the financial records during the process of integration of their computerized accounting systems. Therefore, integrated computerized accounting practices were faced with the challenges of unauthorized access, alterations and destruction of data thus compromising the confidentiality, integrity and availability of financial information.

Hayale & Khadra (2014) evaluated the level of effectiveness of internal control systems in computerized accounting information practices that were implemented by the Jordanian banking sector to preserve confidentiality, integrity and availability of the bank's data and their information systems. Hayale & Abu (2013) also investigated perceived security threats of computerized accounting information practices on Jordanian banking sector. Their studies focused on the perception of heads of computers, controllers and internal auditors on information systems without a specific focus of the practices and the level of integration on accounting systems. Thus this study sought to evaluate the effects of integrated computerized accounting practices on the internal controls of supermarkets in Kisii County, Kenya.

1.3 Objective of the Study

1.3.1 Overall Objective

The main objective of the study was to assess the effects of integrated computerized accounting practices (ICAP) on ensuring effective financial controls of supermarkets in Kisii County, Kenya.

1.3.2 Specific Objectives

The specific objectives were;

i. To determine the effect of integrated financial operations on the internal control procedures of the supermarkets,

ii. To determine the effect of operating segments information on the internal control procedures of the supermarkets,

iii. To determine the effect of computerized integrated accounting on the internal control procedures of the supermarkets, and

iv. To determine the effect of consolidated financial reporting transactions on the internal control procedures of the supermarkets

1.4 Research Hypothesis

The study was guided by the following null hypothesis

H_o1: Integrating financial operations have no significant effect on the internal control procedures of the supermarkets,

H_o2: Operating segments information have no significant effect on the internal control procedures of the supermarkets,

H_o3: Computerized integrated accounting have no significant effect on the internal control procedures of the supermarkets, and

H_o4: Consolidating financial reporting transactions have no significant effect on the internal control procedures of the supermarkets.

1.5 Significance of the Study

The study was helpful to the management of the supermarkets in making decision regarding acquisition of computer systems to strengthen the internal controls . Further it helps the developers of integrated computerized accounting softwares understand the requirements of a systems that strengthen the internal controls of supermarkets. The findings, recommendations and suggestions of the study are also helpful to future researcher as these forms the basis for future research.

1.6 Scope of the Study

The ability of a company to safeguard its assets largely depends on the strength of internal controls system. Integrated computerized accounting system was the latest tool in integrated computerized accounting practices used to strengthen the internal controls systems .

The study examined the number integrated source records in the integrated accounting modules, number of various type of operating segment information, number of various types of transactions relating to various branches of accounting, and number of various types of related entities on accounting softwares adopted by the supermarkets in Kisii County, Kenya and the strength the internal controls systems of the respective supermarkets. Kisii County, a metropolitan transit county, had branches of the major supermarkets in Kenya such as Chamunda, Oshwal, Tuskys and Naivas etc. hence the study gave a general view of the country. Therefore, similar results would be obtained if the same study was conducted in any other county.

The study was conducted on branches of supermarkets operating in Kisii county on 2016 when the data was collected. Uchumi supermarket closed down the branch on march 2016 before the data had been collected while Nakumatt supermarket closed down on 2017 after data had been collected.

1.7 Limitation of the Study

The study required information from branch managers, accountants, and supervisors of the supermarkets who were busy and would fail to return questionnaire. The researcher simplified the questionnaire and made follow up calls to ensure the questionnaires are returned.

Most of the respondents were not willing to disclose their identity. The researcher therefore labeled the questionnaires alphabetically to represent the respondents rather than to identify the respondents by their names.

The study was limited to supermarkets in Kisii County. However, the same result could be obtained in other counties and/or throughout the country since most supermarkets in target population have branches in most of all the counties in Kenya.

1.8 Assumption of the Study

The study assumed that the respondents were honest and candid in their response. It also assumed that junior employees of the supermarket have limited rights in the systems limiting their ability to give objective response hence not targeted by the research.

1.9 Operational Definition of Terms

Accounting : Accounting is an art or a systematic process of collecting financial data as source records, recording in journals, classifying into ledgers, summarizing the balances, communicating financial information through reports & financial statements and interpreting them through ratio analysis to enable users make informed decision.

Computerized Integrated Accounting: It is a computerized system of accounting that financial accounting, tax accounting, management accounting and/or other branches of accounting are maintained in the same set of books and inventory is normally valued using a perpetual method.

Consolidated Financial Reporting Transactions: It is a system (computerized or otherwise) of accounting for group of related entities where transaction relating to holding company, subsidiary, associates, investments property, joint arrangements, investment properties and unconsolidated "structured entities".

Integrated Computerized Accounting Systems: A computerized application (integrated or independent) that has the capability to accept financial data as input, process it using preset of controls, stores it and retrieve/ output the reports when needed and is used to integrate and/or consolidate various accounting module/functions, branches of accounting, and operating segments information for a group of related entities.

Integrated Financial Operations: Activities within the organisation that either generate or uses funds and/or have monetary value.

Interlocking Accounting Systems: It is a system (computerized or otherwise) of accounting that financial accounting, tax accounting, management accounting and/or other branches of accounting are maintained in the different set of books and inventory was valued normally using periodic method but a perpetual method may also apply.

Internal Controls: Strategies, policies, manuals, procedures, methods, culture, values, measures and tools adopted by an organization to safeguard it assets and ensure

reliability of financial reports, efficiency and effectiveness of business operations, and compliance with laws, standards, policies & regulations.

Operating Segment Information: discrete financial and statistical information generated by a component of an entity that is viewed as a profit center which can be reviewed regularly by chief decision maker.

Supermarket : Retail chain stores where customer can pick and purchase consumer goods.

System : a set of components and/or procedures that works together to achieve common objective and/or goals.

CHAPTER TWO

LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Systems Theory

Systems theory was proposed by Ludwig von Bertalanffy in 1940's reacting against reductionism (breaking a whole part into small parts) and attempting to revive the unity of science and furthered by Rose Ashby in 1964. The basic elements of a system are input, output, throughput, process, and feedback. Systems theory provides approaches to understand, analyze and think about organisation by viewing an organisation as being made of numerous small parts known as subsystems that works together in harmony to form a large system that works to achieve a common goal. In systems theory, individual employees, work group, sections, department, and division can be viewed as subsystems of the organisation. The success of the organisation relies heavily on synergy i.e. the combined output, interdependence between subsystems, and interconnections within and between the organisation and the environment. The characteristics of systems theory are communication and flow of information among the subsystems, existence of subsystems, systems and super systems, existence of physical, systematic, linguistic, and psychological boundaries that separates system from its environment, goal orientation through feedback mechanism to achieve organisations goal, and holistic view of the interaction of the whole connected parts (Mhango, Kasawala, Khonje, & Nsiju, 2015).

The underlying assumptions of several traditions in the systems theory and cybernetics are; an entity is best understood by taking a holistic view, the entity is reduced into units that have relationship with each other, it is inherently impossible to determine the direction of change in advance, the environment plays an important role in manifestation of the phenomena, existence

of cause and effects of observation and level of explanation, the elements of a system self-organize themselves by moving towards a stable equilibrium state, the observation are independent of the characteristic of the observer, and ability to generate new states by new thoughts and doing new things. The assumptions are summarized as holism, relationship, cause and effect, observation, determinism, self-organisation, and interdependence (Dent & Umpleby, 2013).

The strength of the system theory are that it deals with complexity though reductionist believe that a complex system is just but small parts joined together. The theory takes a holistic view and can easily manage change through interaction with the environment. Open system (biological in nature) consciously interacted and exchange materials with the environment while closed systems (physics) do not interact with environment and are not influenced by the surroundings. The system theory recognizes the importance of subsystems, systems and super systems and are easy to improve since they utilizes feedback (Mhango, Kasawala, Khonje, & Nsiju, 2015).

The limitation of system theory in management is that the theory is not prescriptive. The theory does not specify techniques and tools used by practicing managers, and does not address the social inequalities, their power and causes, and it is too abstract hence difficult to apply in practical problems. (Strauss, 2013)

The criticism of the general systems theory is that it is just a pseudoscience that take things in a holistic way. The critics of the system theory did not take into consideration that systems theory is a paradigm or perspective that plays an important role in development of a scientific theory (Pouvreau, 2014).

The theory is relevant to the study in that in integrated computerized accounting practices, there are several financial operation of related entities that are integrated together into one complex system that is used in preparation of consolidated financial reports. The Supermarkets consolidate the financial reporting transactions of several separate entities. They also integrated various branches of accounting. Small component interact in a single unitary system with a common goal for the organization hence the theory is relevant to this study.

2.1.2 Agency Theory

Agency theory originates from economics and was exposited by Alchian and Demsetz in 1972 and further developed by Jensen and Meckling in 1976. Agency theory explains the relationship between principal(s) and agent(s). The agency relation may exist between shareholders and management, head office and branch, management and staff, holding company and subsidiaries. The principal hires the agent to perform work on his behalf. The agent may have self-interest which conflict with the self-interest of the principal and vice versa. The theory aims at solving the problems that exist between the principals and the agents (Panda & Leepsa, 2017).

The principle assumption of the agency theory is that the parties are resourceful and innovative in maximize their own utilities i.e. individuals will almost always work for the best of their own self-interests. Agency is a consensual relationship whereby the agent(s) agree to work for the principal(s). The relationship exist because the principal(s) don't have the training and expertise to perform the work, have other occupation and engagements, and may be scattered around the world and requires someone work to perform the work on their behalf (Worsham, Eisner, & Ringquist, 2015).

The limitation of agency theory are that; agency theory is more of a description, less powerful than the explanation and does not explain more details other than definition. Social power gives another explanation of why people behave that way (Namazi, 2013).

A surveyed what could be the potential benefits and drawbacks of the most common mechanisms a shareholder can use to monitor and control a manager according to the agency theory. He found that despite the wide array of policies and instruments shareholders had at their disposal, all the mechanisms exhibited inherit flaws which limited their applicability. He also found out that powerful board to the ownership structure, management compensation plans, capital structure and market for corporate control mitigated the conflict between shareholders and managers to some degree and raised questions regarding applicability and effectiveness, inquiring additional consideration. The study concluded that there was no single solution for every environment but rather a specific mix according to the specific environment of each company, and recommended that the policy makers need to take into consideration all the characteristics of the firm (Carasu, 2015).

The major criticism of the agency theory is that it presupposes incompatibilism. Agency theory is influential though it is unable to provide sufficient understanding on many issues related to practices for the fact that corporate governance is not happening in a social vacuum. This is stated in a critique of the agency theory in corporate governance research in emerging countries by (Yusof, 2016).

Agency theory is related to this study in that, the branches acts as agents of the head offices. Policies and procedures that forms part of the internal control systems are issued by the head office and implemented by the branches. The employees are the agents of the managers and

supervisors. The managers and supervisors assign duties to staff and monitors how the staff perform the duties. Providers of the integrated computerized accounting solutions act as the agent of the supermarkets in designing the procedures that best suit the supermarkets.

2.1.3 Contingency Theory

Contingency theory was proposed by Woodward in 1965 and developed by Van de Ven in 1974 and states that "The choice of a technique or system was inherently dependent on specific circumstances". There is no control system universally that is best but organizational context and circumstance determines the appropriate control systems (Fisher, 2015). There was a lot of work-related uncertainty hence the need for managers to have a lot of information. Supervision, coordination and control procedures are the mechanisms that provide required information (Alrawi & Thomas, 2014)..

The theory assumes three forms of control structure as developed by Van de Ven and associates are; bureaucratic, personal and group. While bureaucratic requires formal pre-established procedures, personal and group rely on team relation. Personal procedures are hierarchical while group procedures are lateral. Information processing requirement are affected by both internal factors such as technology & level of professionalism and external factors such as the size of the work unit. The three situations defined by contingency theory are leader members relation, positional power and task structure. The information processing requirement of a work unit was propositional to information processing capacity of a control practice used (Alrawi & Thomas, 2014).

The strength of contigency theory is that it has been widely tested empirically, its model is predictive with a well defined method of evaluating least preferred coworker and situations, it

focoses on matching a leader to task thus reducing the expectation from the leaders, and can be used to create leadership profile in an organisation a valuable organisation instrument during management change and re-organisation (Gupta, 2014).

There are four major limitation of the contingency theory; there are universal principles to specific management situations which the theory does not follow, Henry Fayol talked of the flexibility of management principles hence the theory adds nothing to that, does not provide foundation of management principles to be applied to help managers save on time and money and make the right choices, and because of lack of time, money and ability the managers may not be able to gather all factors relevant in decision making. (Mitchell, Biglan, Oncken, & Fieldler, 2017)

The theory has been criticised due to its failure to explain its empirically developed model hence unable to provide reasons for leadership effectiveness in some situations. The theories least preferred coworker scale is hard to understand how evaluation of coworkers can reflect on own leadership style. The theory does not blend well with a career growth of a leader since it is not leadership development (Gupta, 2014).

The theory is relevant to this study since integrated computerized accounting solutions are used to implement the control procedures and to provide necessary information to make the choice of bureaucratic, personal or group control structures. Supervision, coordination and control procedures are the mechanisms that provide required information.

2.1.4 Positive Accounting Theory

Positive Accounting Theory started in 1960s from empirical works of Ross Watts and Jerold Zimmerman. It was concerned with predicting actions such as the choices of accounting policies by firms and how the firms would respond to proposed new accounting standards. Positive Accounting Theory makes prediction of real world event by translating them into accounting transactions. It explains and predicts actions such as which accounting policies firms would choose and how it would react to newly propose accounting standards. The firm would want to minimize her contract cost such as negotiation, renegotiation, and monitoring costs. Therefore, the firm would adopt the policies that align her to her contracts (Boland & Gordon, 2013).

The assumption of the theory is that it is based on three hypotheses; bonus plan, debt covenant and political cost hypothesis. Bonus plans is about management compensation. If the firm compensates the management based on performance, then management would adopt the accounting policies that shift future profit to current period to maximize the current returns for personal gains. Debt covenant was concerned with meeting financing obligation. The managers of firm with large debt-equity ratio would adopt a policy that shift future profit to current period for better performance in order to meet the current debt covenants. Political costs on the other hand focuses on minimizing external intervention and regulation. A highly profitable firm attracts politicians, government, media and consumer watch groups. This may lead to more taxes and regulations. To minimize the political costs for a larger firm, the management adopts accounting policies that defers current profit to future periods (Milne, 2013).

The major limitation of the positive accounting theory is that it assumes that every business owner and manager acts only out of self-interest rather than overall good of the entity. The

theory also allows the assets to be inaccurately disclosed and accounted for. This signifies weaknesses of the internal controls where material changes in assets may be hidden leading to collapse of organisation (Rudzioniene, 2013).

The three main criticism of the positive accounting theory are based on; technical research methodology used, philosophy of science issues, and limitation of the economic based accounting research. Positive accounting theory does not give prescription for accounting policies and practices since it does not say something about good or bad accounting policy or practice. Positive accounting theory does not state what ought to happen. It also ignores what people should do and dwells on what people might do. It also assumes managers and owners have self-interest that override other interest (Boland & Gordon, 2013).

The theory is relevant to the study since that the three assumptions and the limitations of the positive accounting theory are purely dealing with internal controls system. Manipulation of profits either by increasing it to earn higher bonuses and acquire debts, or by lowering the profits to pay less taxes and salaries is an indication of weaknesses in the internal control system. hence the relevance of the theory on this study.

2.2 Empirical Literature

2.2.1 Integrated Financial Operations and the Internal Controls

Ramadhan, Joshi, & Hameed (2015) investigated Bahrain a sample of 62 accountants' perceptions of internal control problems associated with integrating financial by use of integrated computerized accounting solutions and possible solutions to such problems. They used descriptive statistic and ANOVA to analyze data. They found out that internal control problems relate to integrating financial operations on inputs, processing, storage and output.

Input problems were; invisibility of input, entry of wrong data by unfamiliar user and unauthorized access. Processing problems were; centralization of data and centralization of duties, lack of human judgment, misuse of computer speed and potential of errors. Storage problems were; change of information without a trail, loss of information, and lack of audit trail. Output problems are creation of different reality and over reliance on computer results. Their study focused on the problem of the individual accounting modules but they did not evaluate the integrated modules to see the effects they would have on the internal controls.

Hsiung & Wang (2014) did an empirical study on the factors of affecting internal control benefits under enterprise resource planning (ERP) system in Taiwan showed that ERPs integrated financial and non-financial operations of the organizations. It also showed that the quality variables of an information system, service quality, system and information quality, and internal control quality are critical factors influencing the internal control benefits of an enterprise while good communication can also improve the internal control benefits. Similarly, enhancing the internal control systems requires personnel's understanding of an ERP system by fully explaining the functions, service quality, and information qualities of an ERP system using a good communication interface can improve the internal control benefits of an ERP system. Among the factors studied integration of financial operations, presentation of operating segments information and financial reporting were not studied despite being very important roles of an ERP.

Saharia, Koch, & Tucker (2013) conducted a descriptive survey on enterprise resource planning systems (ERP) and internal audit examined internal auditors' ability to identify and manage operational, technological, financial, compliance and other risks as the organization migrates to an ERP environment found out that the internal auditors perceive a reduction in operational and financial risk and an increase in technical risks. It was also found out that the

effects were somewhat mitigated by their ability to assess and manage these risks. However, their study did not evaluate the effectiveness of integrated financial operations on the internal controls .

Stolowy & Touron (2013) highlighted some of financial operation that are integrated in accounting software as; revenue cycle, expenditure cycle, human resource and payroll cycle, production cycle, and general ledger cycle. Revenue cycle involves receiving sales order, shipping of goods, billing customers and cash collection respectively. Expenditure cycle involves making order for goods and services to suppliers, receiving goods, acknowledging supplier invoice, and cash payments respectively. Production cycle involves product design, planning & scheduling, production operation, and cost accounting respectively. Payroll cycle involves updating employees' data, validating, preparation and payments. General ledger cycle involves update accounts, adjusting where necessary, prepare a trial balance and financial statement. This was a conceptual analysis hence the need to empirically test the effects these cycles have on the internal controls.

Mndzebele (2013) in a quantitative methodology study on the usage of accounting information systems (AIS) for effective internal controls in the hotels examined if the usage of AIS had improved the internal control systems in the hotels despite integrating the hotels financial operation. The study showed that AIS had policies, organizational design, procedures and physical barriers that contribute to the internal control structure resulting to better internal controls enabling the hotels achieve their operational goal. An article on tutorialspoint.com about management information systems list the components of an information system as; data, people, software, hardware, and controls. The study by Mndzebele (2013) was on done on

only one of the five component of AIS i.e. controls. It left out other fours components of AIS i.e. financial data, personnel, hardware and computerized accounting software (CAS).

Bosire (2016) in a case study of 34 users of integrated financial management information system (IFMIS) in the ministry of foreign affairs on the impact of IFMIS on financial probity in the public sector in Kenya showed that corruption cases had reduced since the implementation of IFMIS. The study found out that employees ethical conduct had improved since the introduction of the IFMIS in the ministry of foreign affairs. Provision of rules with clear instructions, procedures and processes was the most prevalent culture among the employees. The study conclude that integrating financial operations of the ministry by IFMIS have strengthened the internal control system of in management of the finances (Bosire, 2016). The study focused on the internal control environment of the public sector hence the need to focus on the internal control activities and procedures of both public and private sector.

Karanja & Nganga (2014) an a descriptive research case of Uchumi supermarket on influence of vender inventory management system on organization performance in retail outlets showed that vender inventory management systems influences organization investment in inventory. The inventory movement also, influences the organization performance. The study recommended use of information, communication and technology in inventory management function since it increases organizations performance. In sharp contrast, Okoth (2016) explained that Uchumi's financial difficulties were as a result of manipulated books of accounts, weak internal control systems, fraudulent procurement and poor management. This raises the question on the effects of the vender inventory management system on internal controls.

2.2.2 Operating Segments Information and the Internal Controls Procedure

Hope, Thomas, & Winter Botham (2013) in a descriptive empirical test on disclosure of geographical segment earnings and trading volume showed that decrease in disclosure of geographical earnings by multi-nationals in United States of America (USA) reduced public information hence being detrimental to trading volume in the stock exchange. Another empirical test by Hope, et al. (2014) on the impact of non-disclosure of geographic segment earnings on earnings predictability showed that non-disclosure of geographical segment did not affect the user's ability to forecast earning. The two test applied descriptive analysis. However, the two tests did not show why there was reduction in trading volume yet the ability to forecast earnings was not affected. This research sought to know if the inconsistency of the results were an effect of the operating segments information on the internal controls.

Weibenberger & Angelkort (2014) on a dyadic research survey in Germany studied on integration of management accounting and financial accounting showed that a good management accounting information was not only characterized by relevance, accuracy, timeliness, or technical reliability with respect to a given control problem, but also by consistency from a user-side perspective. The study applied dyadic research design surveying a sample dyadic sets of 149 for both representatives of general management and controllers. The study concluded that it would be difficult to achieve consistency if relevant Generally Accepted Accounting Principles were not applied even if legal and tax requirements have been fulfilled. Consistency was not about internal reporting though must adhere to provision of international financial reporting standards (IFRS 8) – Operating segment. There were two fundamental options to provide accounting information for management control purpose; integrated accounting system where financial records are used as a database for management

accounting and/or interlocking accounting system whereas third set of books that was different from Financial and tax accounting records. .

Jiang & Lin (2017) published a report in USA on an investigation on improving the internal controls over operating segment reporting was instituted by Securities and Exchange Commission on 2016 to settle a cease and desist order against Power Secure International Inc. for allegedly failing to identify and report its segment as required by Financial Accounting Standards Board. The objective was to show the importance of appropriate design and operation of internal controls on identification of chief operating decision maker, on identification of operating segment, and on aggregation of operating segments. It was found out that material weaknesses in internal controls over segment reporting contributed to faulty segment reporting. The report recommended for further investigation on other companies that did not comply with the requirement of FASB on disclosure of operating segment information.

In the 2016 published annual financial statement and integrated report of Equity Group Holding Limited, Equity Bank Kenya Limited a Kenyan subsidiary of the multinational group had 177 branches grouped into 8 regions within the country. The bank had savings accounts, current accounts and fixed deposit accounts for various individuals, corporates, institutions, associations and government agencies. The customers were drawn from salaried persons, SMEs, large businesses, and government agencies. The customers could access their account through the banking hall, agency banking, mobile banking and/or internet banking. The chief executive officer would want to measure the performance of the bank based on the regions, type of accounts, class of customers, market and/or mode of service delivery. The group operated an single integrated financial system called Finacle 12 in operation and in preparation of the financial reports which included operating segment reports. The messages from the

chairman, chief executive officer and external audit report indicated existence of a strong internal controls within the group due to the use of a great integrated financial system (Equity Group Holding Limited, 2017). This was a conceptual view hence the need to empirically test if in deed that strong internal control system was as a result of integrated financial system despite having such a robust segmentation structure within the bank and the group.

2.2.3 Computerized Integrated Accounting and the Internal Controls

Weinberger & Angelkort (2014) did a study on computerized integrated accounting on integration of management accounting and financial accounting in Germany. The study showed that an increased level of integration in the accounting system design lead to an increased level of output quality attributed to the controller's services to management and increased unification level of financial language as perceived by management. Similarly, the study also focused on only two branches of accounting i.e. financial accounting and management accounting leaving out all the other branches of accounting such as tax accounting, fund accounting and cost accounting.

Touron and Stolowy (2014) conducted a survey on the opinion of the users of off the shelf accounting software on integrated accounting i.e. the integration of financial accounting, management accounting and cashflow accounting in Paris France. The study found that integrated accounting has double impact i.e. in terms of information and in changes in the accounting business internal control processes. The unity of data source and availability of the source made information more reliable, timely and relevant. The study focused more on the impact of computerized accounting software on service delivery and not on the internal controls. The study was done on stand-alone computerized accounting softwares hence the need to study on integrated computerized accounting practices on the internal controls.

Stolowy & Touron (2013) did a survey on the users' opinion on the integration of financial accounting, management accounting and cash flow accounting showed that the benefits of integrated accounting systems was improved data reliability and relevance of the information, changing from accounting approach to management approach, and being an instrument of organization change. Integrated accountings brings together financial accounting, management accounting and cash flow management. The study focused on only two branches of accounting i.e. financial accounting and management accounting leaving out all the other branches of accounting such as tax accounting, fund accounting and cost accounting.

Pendse (2015) and Stolowy & Touron (2013) highlighted the advantages of integrated accounting systems are as; simple to understand, no need for reconciliation, less costly, cross checking, user friendlily, availability of both financial and cost data, time saving and use of machines such as computers. The accounts under integrated accounting systems are stock control account, cost of sales account, debtors and creditors control account, prepaid expenses and outstanding expenses account, direct wages and overhead control account, separate cost centre account and cash account. This was a conceptual analysis hence the need to empirically test the advantages of integrated accounting systems and their effect on the internal control. (Pendse, 2015; Stolowy & Touron, 2013).

Essent (2017), an accounting softwares development firm, outlined the four advantages of integrated accounting on their website as elimination of re-keying, provision of real-time information, automatic performing of job costing, and accuracy of calculations. Re-keying of data entry may lead to errors and omissions as well as it cost time ad labor. Standalone accounting systems takes time to upload data from one system to the other while integrated accounting system means up-to-date financial information for decision making. Integrated

accounting system automatically performs sophisticated accounting processes such as job costing without errors and omissions . This was a conceptual analysis hence the need to empirically test these advantages of integrated accounting systems to find out if they are significant hence focus of the study on effect of integrated accounting systems on the internal controls.

According to an article by Achary (2016) on integrated accounting: meaning and points to be considered on yourarticleslibrary.com. In integrated accounting, cost accounting and financial accountings records are kept and integrated in the same set of books to ensure that all relevant expenditure were absorbed in cost accounts making it possible to ascertain marginal cost, variances and abnormal gains and losses. The four points to be considered in preparation of financial reports were; treatment of financial items not included in cost accounts, treatment of cost accounting transactions not included in financial accounting, treatment of abnormal gains and losses, and valuation of closing inventory (finished stock and work in progress). The treatment of financial items in financial statement is influenced by the internal controls of the organization. This was a conceptual analysis hence the need to empirically test the four points and their effects on the internal controls.

2.2.4 Consolidated Financial Reporting Transaction and the Internal Controls

Fleischmann, Zanetti, & Beier (2014) reviewed the internal control procedures of numerous groups within the ICT-based group consolidated financial reporting. The descriptive analysis of 171 sampled firms showed that when software solutions are used for group accounting the internal controls were often insufficient or not effective enough and compliance with the basic principles of proper accounting was not always ensured to the extent required. The accounting rules built into the software that automatically generated entries for consolidated statements

were also not sufficiently documented and could not be interpreted by a competent reader within a reasonable amount of time. They also discovered that the rules were sometimes set incorrectly and/or incompletely in a number of applications assessed thus leading to erroneous or incomplete entries in the consolidated statements. They also found out that it takes a long time to replicate figures calculated by software in the consolidated reports resulting in partial compliance with the basic principles of proper accounting especially to the consolidated figures in the cash flow statement, translation reserves, and the statement of changes in equity. This research sought to validate whether the consolidated financial reporting transactions in a computerized environment weaken the internal controls as alleged by their report.

A study by Morris (*2015*) on the impact of enterprise resource planning (ERP) systems on the effectiveness of internal controls over consolidated financial reporting. The study evaluated compliance data on Sarbanes-Oxley (SOX) Act, a legislation in United States of America (USA) for a sample of 31 firms that implemented ERP systems. The descriptive analysis findings showed that firms implementing ERP in financial reporting had less internal control weaknesses than firms that were not implementing ERP. The study concluded that built-in controls and other features of the ERP helped to improve internal control over financial reporting (Morris *2015*). The study was limited to USA where Sarbanes-Oxley (SOX) Act was legislated therefore the need to conduct similar study outside the USA. The study was also general to the ERP hence the need to conduct a test on the effects that each specific financial modules and their functionality have on the internal controls.

Fowzia & Nasrin (2015) did a descriptive study on effect of accounting information systems (AIS) and softwares on qualitative features of accounting information in Iran. The study showed that using AIS and software packages significantly affect consolidated financial reports

of companies accepted in Tehran Stock Exchange. The study focus on only the preparation and presentation of the financial statement leaving out the internal controls which is fundamental in the reliability of the financial statements.

A 2014 article by Hadler outlines the advantages of using computerised accounting softwares on IT education website as; ability to produce instant reports on Aged debtors' summary, Trial balance, trading and profit and loss account, balance sheet, Stock valuation, Sales analysis, Budget analysis and variance analysis, value added tax (VAT) returns, Payroll analysis(Hadler, 2014). Magloff also on an article on advantages & disadvantages of computerized accounting on small business chronicles outline the advantages of computerized accounting systems as; Speed , Automatic document production, Accuracy , Up-to-date information, Availability of information, Management information, VAT return, Legibility, Efficiency, Staff motivation , Cost savings , Reduce frustration, The ability to deal in multiple currencies easily (Hadler, 2014; Magloff, 2014). Therefore, since this was a conceptual analysis there was the need to empirically test these advantages and their significance in the internal controls of the organizations.

According to an article by Okoth on Kenyan daily nation online on 14th March 2016, Uchumi Supermarkets briefed its shareholders at its 35th Annual General Meeting that it would seek to partner with 200 small branded shops stocking low volume packed items as franchise in its recovery strategy. It was to brand and supply goods through the franchise in a bid to retain her market share as a result of closed five non-performing branches including Kisii branch. The Uchumi's had financial difficulties as a result of manipulated books of accounts, weak internal control systems, fraudulent procurement and poor management (Okoth, 2016). Such franchise partnership constituted joint controls defined by International Accounting Standard Board

(2014c) on International Financial Reporting Standards IFRS 11 - Joint Arrangements i.e. there would be contractual agreement for control and arrangement to be jointly controlled. Therefore, there was need to empirically test the how the integrated computerized accounting system used to implement the requirements of IFRS 11 would affect the internal controls of such arrangements.

2.2.5 Internal controls Procedures

Hayale and Khadra (2014) on an empirical survey evaluated the effectiveness of control systems implemented in a computerized accounting information of Jordanian domestic banks to preserve their confidentiality, integrity and availability. The study showed that Jordanian banks effectively use fraud and error reduction controls. However, they do not do enough on physical access, logical access, data security, documentation standards, disaster recovery, internet, communication and e-control and output control security. This research was conducted on the perception of the head of computer departments and internal audit on effectiveness of control systems implemented in computerized accounting information but did not consider any role that was prayed by the level of integration in the softwares used. The study also left out other important prayers in the internal controls such as branch managers and accountants.

Ayagre, Gyamerah & Nartey (2014) did a case study of Ghanaian banks on the effectiveness of internal control system. The study showed that strong controls exist in the control environment and monitoring activities components of internal control systems. Other components of internal control systems were risk assessments, information and communication, and control activities. The study recommended the management of Ghanaian banks to set the right tone at the top by giving direction to rest of the organization on the

importance of internal controls. The study raises the need for right to at the top but did not explore how the banks could yield from technology in setting and montering the right tone from the top to the lowest employee.

An investigation by Abu-Musa (2016) on the perceived threats of computerized accounting information systems in developing countries (CAIS) revealed that almost 50% of Saudi organization suffered loss due to breach of CAIS. The most significant perceived threats of CAIS are accidental and intentional entry of wrong data, accidental destruction of data by employees, sharing of passwords, computer viruses, suppression and destruction of reported output, unauthorized documents visibility, direct print and distribution of information to people who are not entitled.

Mwangi & Muturi (2018) conducted a descriptive cross sectional research on influence of internal control mechanism of financial performance of supermarkets in Kenya. The study was conducted on 184 licensed supermarkets in Kenya on 2016 using both primary and secondary data. The study concluded that control activities such as segregation of duties, authorization and approval, and reconciliation & verification has a positive change on the financial performance. The study also concluded that monitoring activities such as internal audit, continuous supervision and periodical evaluations had a significant positive effect on financial performance of the supermarkets (Mwangi & Muturi, 2018). The study focused on how internal controls affected performance hence the need to know what can be done to improve the internal controls.

Nyakundi, Nyamita & Tinega (2014) did a cross sectional survey on effect of internal control systems on financial performance of small and medium scale business enterprises in Kisumu

City, Kenya. The survey showed existence of the five elements of internal control systems i.e. control activities , control environment, risk assessment, information and commutations, and monitoring of controls. Control activities involves elements i.e. establishment of polices of what should be done and formulation of procedures to effect the policies. The control activities are segregation of duties, verification, authorization, approvals, security of assets, reconciliations, and review of operating performance. Control environment is the tone of the organizational. The factors of control environments are ethics and integrity, operating style and leadership philosophy, commitment to competence, and management of people through staff development, assignment of responsibility and authority. Monitoring of controls is the process of assessing the quality of internal control systems over time. Processes, procedures and conditions changes over time hence the need to assess the adequacy of the internal control system to address the changing circumstances. The study did not show the effect of current changes in information communication technology (ICT) especially on the internal controls.

2.3 Research Gaps

Ramadhan, Joshi, & Hameed (2015) investigated Bahrain accountants' perceptions of internal control problems associated with integrating financial by use of integrated computerized accounting solutions and possible solutions to such problems. Their study sampled 62 accountants in Bahrain. They used descriptive statistic and ANOVA to analyze data. The study failed to apply regression analysis which is essential in analyzing the relationship between independent variables and dependent variable.

Hope, Thomas, & Winter Botham (2013) empirically tested on disclosure of geographical segment earnings and trading volume by multi-nationals in United States. A sample of 6083 firms was descriptively analyzed using mean and standard deviation. The study failed to apply

regression analysis which is essential in analyzing the relationship between independent variables and dependent variable.

Weinberger & Angelkort (2014) did a study computerized integrated accounting on integration of management accounting and financial accounting in Germany. The test analyzed only two branches of accounting i.e. management and financial accounting and was limited to Germany. A dyadic research design surveying a sample dyadic sets of 149 for both representatives of general management and controllers. The study failed to apply descriptive research design which is essential in describing the behavior of variables without influencing them in any way.

Morris (*2015*) studied on the impact of enterprise resource planning (ERP) systems on the effectiveness of internal controls over consolidated financial reporting. A descriptive analysis for a sample of 31 firms that implemented ERP systems was used. The study failed to apply regression analysis which is essential in analyzing the relationship between independent variables and dependent variable.

2.4 Conceptual Framework

A conceptual framework shows the relationship between dependent variables and independent variables as well as intervening variables if any. The research gaps have been demonstrated through conceptual framework as shown in figure 2.1 below.

Independent Variables

Integrated computerized accounting practices (ICAP)

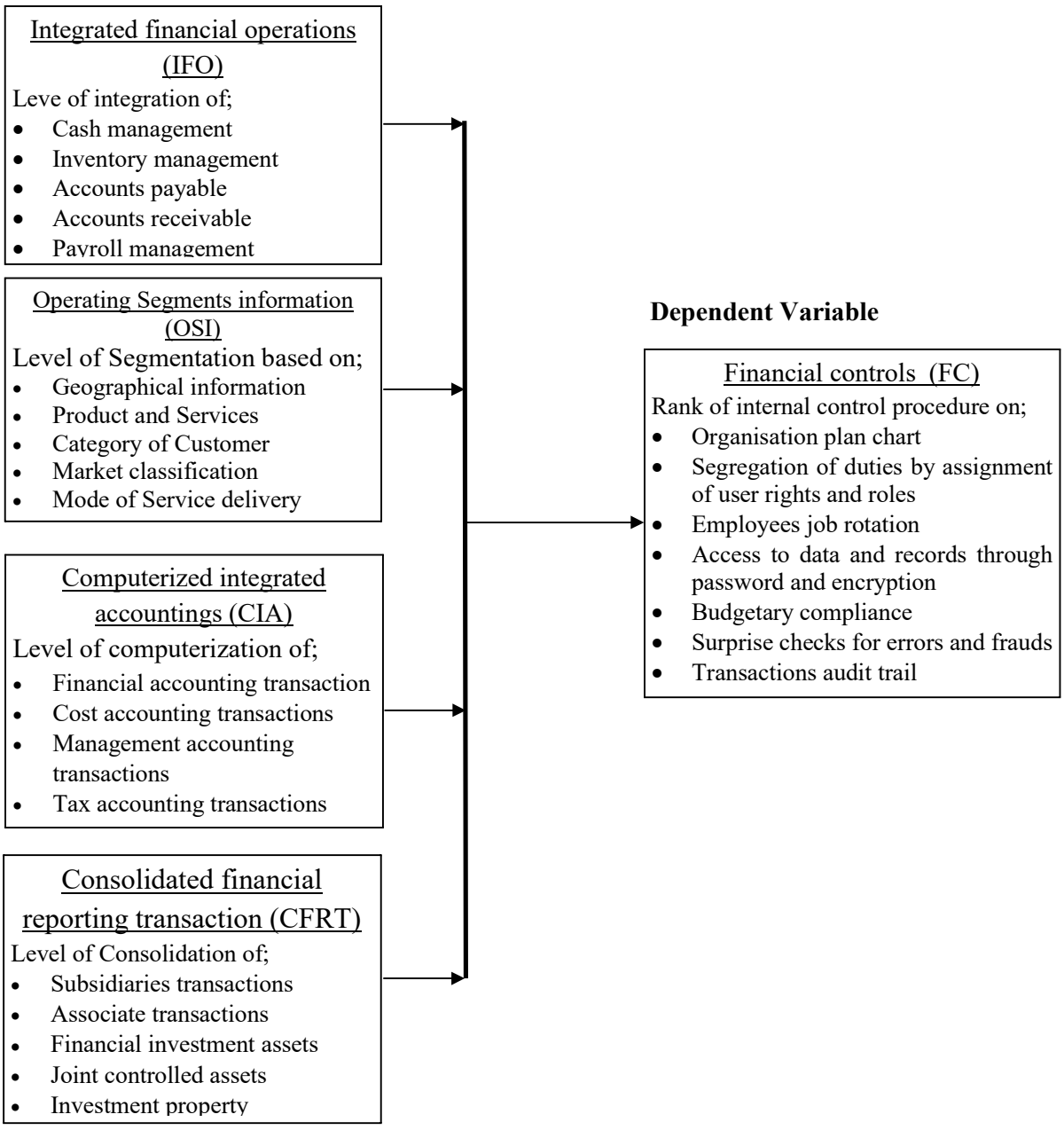


Figure 2.1: Conceptual Framework

Source: Researcher, 2019

Figure 2.1 above shows the independent variables on integrated computerized accounting system which were integrated financial operation (IFO), operating segment information (OSI), computerized integrated accounting (CIA) and consolidated financial reporting transactions (CFRT) while dependent variable on internal controls was internal control procedures (ICP).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design

The study applied a descriptive survey research design. Descriptive survey research design is a scientific method in which factual information necessary for decision making is collected without changing the environment and/or the variables, described using descriptive measures such as means, mode and median and reports on the happenings (Mugenda, 2013). The major purpose of descriptive research design was to describe the state of affairs as it exists (Nyakundi, Nyamita, & Tinega, 2014). This design was successfully used by Hayale, et al. (2014) in the study to evaluated the level of Control Systems effectiveness in computerized accounting information systems (CAIS) that was implemented in the Jordanian banking sector. It involves collection of primary data for the variables using questionnaire, interview and observation.

3.2 Study Area

The study was carried out on all the supermarkets Kisii County, Kenya. Most of the supermarkets were in Kisii Town, a cosmopolitan transit town in south western Kenya that had branches for most of the major supermarkets and other business organization in Kenya.

3.3 Target Population

Target population is the total number of units that data can be collected from and include but not limited to individuals, events, artifacts and/or organizations (Mugenda, 2013). The study targeted 24 senior branch officials that is; 8 branch managers, 9 branch supervisors, and 7 branch accountants because the questions required a good understanding of the integrated accounting system used by the supermarket as well as the internal control system of the supermarkets.

As at 2016, there were eight supermarkets Kisii County with ICAS namely; Tusker Mattress Ltd (Tuskys - Chigware), Tusker Mattress Ltd (Tuskys - Echiro), Naivas Mattress Ltd (Naivas), Kisii Matt Ltd, Oshwal Supermarket, Shivling Supermarket, Chamunda supermarket, and Uchumi Supermarkets Ltd. However, Uchumi Supermarkets Ltd closed down on March 2016 due to financial distress (Michira, 2016) caused by manipulation of the books of account and weak internal control system (Okoth, 2016) forcing the researcher to reduce the target population to seven supermarkets.

Table 3.1 Target population

Supermarket	Managers	Supervisors	Accountants	Totals
Chigware	1	2	1	4
Echiro	1	3	1	5
Naivas	1	1	1	3
Shivling	1	1	1	3
Chamunda	1	0	1	2
Oshwal	1	1	1	2
Kisii Matt	2	1	1	5
Totals	**8**	**9**	**7**	**24**

Source: Researcher 2019

Table 3.1 shown the distribution of target population among the branch managers, branch supervisors and branch accountants of all the 7 supermarket in Kisii County totaling to 24. Since the target population is small the researcher adopted census method.

Due to small number of supermarkets with ICAS in Kisii County, the study adopted a census approach. This would enhance validity of the data collected by including all branch managers, branch accountants and supervisors in the supermarkets under the study unlike in sampling

where only a small group was selected to represent the entire target population (Bryman, 2013; Kothari, 2015).

3.4 Census Technique

Kothari (2015) defines census as an attempt to list all elements in a group and to measure one or more characteristics of those elements. Researchers select census since it provide detailed information on all or most elements in the population, thereby enabling totals for rare population groups or small geographic areas (Mugenda & Mugenda, 2013). In Census, just like sampling, the researcher can use of a questionnaire to collect data, the need to process and edit the data, and there may be susceptibility to various sources of error. This study used census approach where all the 8 branch managers, 9 supervisors and 7 branch accountants were selected.. A census is considered necessary in situations where there is a small target population.

3.5 Data Collection Procedure

3.5.1 Data Collectionn Instrument

The researcher used closed questionnaires to gather primary data. The questionnaire was divided into 6 sections. Section A dealt with general information about the respondents. Section B, C, D, & E dealt with independent variables; integrated financial operation (IFO) , operating segments information (OSI), computerized integrated accounting (CIA) , and consolidated financial reporting transactions (CFRT). Section F dealt with dependent variable the internal controls procedures (ICP).

3.5.2 Content Validity

Validity is how best a tool measures what it is supposed to measure. It is the meaningfulness and accuracy of the study results (Mugenda, 2013). Validity of a data collection tool (questionnaire in this research) refers to the extent to which the tool measures what it claims to

measure. Content Validity is the extent to which the items on the test fairly represent the entire domain the test is measuring (Mugenda & Mugenda, 2013).

The researcher prepared the questionnaire and cross checked it against the requirements and provisions for accounting and financial reporting provided for by international financial reporting standards. The questionnaire was then presented it to the supervisors who scrutinized its relevance, clarity, and suitability. It was found out that content of the questionnaire was valid for data collection.

3.5.3 Reliability

Reliability is the degree to which a research instrument produces consistent and stable results (Mugenda, 2013). Reliability or fitness of the multivariate regression models was measured by measuring the internal reliability of the questionnaire using Cronbach alpha while reliability of the respondent over the time was measured using test-retest.

3.5.3.1 Pilot Test

To evaluate the feasibility, duration, cost, and adverse events of this research project, a pilot test was conducted in a sample of twelve (12) respondents from supermarkets in Nyamira County. Kisii County borders Nyamira county and have the same ethnic groups hence making the pilot to be heterogeneous to the main research area. To verify that the questionnaires was understandable, the researcher then conducted the internal consistency reliability and stability test of the pilot group.

3.5.3.2 Internal Consistency Reliability (Cronbach's Alpha)

According Glen & glen (2013) when using Likert-type scales it was imperative to calculate and report Cronbach's alpha coefficient for internal consistency reliability for any scales or subscales one may be using. The rule of thumb for Cronbach alpha is that a value; greater than 0.9 is excellent, greater than 0.8 is good, greater than 0.7 is acceptable, greater than 0.6 is

questionable, greater than 0.5 was poor while less than 0.5 was unacceptable (George & Mallery, 2013).

Cronbach Alpha was established for the variables which formed the scale. The variables were integrated financial operations, operating segments information, computerized integrated accounting system, consolidate financial reporting transactions and the internal control procedures. The result of the finding are shown by table 3.2 below.

Table 3.2 : Reliability statistics table

Variables	**Cronbach's Alpha**	**Number of Items**
Integrated Financial Operations (IFO)	0.853	12
Operating Segment Information (OSI)	0.917	12
Computerized Integrated Accounting (CIA)	0.982	12
Consolidated Financial Reporting Transactions (CFRT)	0.970	12
Internal Controls Procedures (ICP)	0.869	12
Overall	**0.759**	**12**

Source: Researcher, 2019

Table 3.2 showed that Integrated Financial Operations , Operating Segments Information, Computerized Integrated Accounting, Consolidated Financial Reporting Transactions and the Internal Controls Procedures had Cronbach's Alpha of 0.853, 0.917,0.982, 0.970, and 0.869 respectively for 15, 5, 6, 7, and 11 items respectively. The overall Cronbach's alpha was found to be 0.759 which was good. All the Cronbach's Alphas were within the acceptable level of greater than 0.7.

3.5.3.3 Stability Test (Test-Retest Reliability)

Test-retest (also called coefficient of stability) is used to measure the reliability that the same result could be obtained from the same group over the time. The coefficient of stability varies from 0 to 1 where 1 is perfect reliability, greater than 0.9 is excellent reliability, between 0.8 to 0.9 is good reliability, between 0.7 to 0.8 is acceptable reliability, between 0.6 and 0.7 is questionable reliability, between 0.5 and 0.6 is poor reliability, less than 0.5 is unacceptable reliability and 0 means no reliability. (Kothari, 2015).

Test-retest was used to establish the consistence of the respondents in answering the same question over the time. Twelve (12) respondents were asked to complete the same questionnaires two times in an interval of one week. The test results were compared to assess the stability of the score. The average measure of intraclass correlation coefficient was 0.866 which shows good reliability.

3.6 Data analysis and presentation

3.6.1 Descriptive Analysis

Data was analyzed using descriptive statistics and inferential statistics. Descriptive analysis was essential in describing the behavior of variables without influencing them in any way. The descriptive statistics involves the use of measures of central tendency (mean, mode, median) and measure of dispersion (standard deviation).

3.6.2 Inferential Statistics

Inferential statistics involves correlation analysis and ordinary least square (OLS) regression analysis. The questionnaires used to collect data were coded alphabetically and logged into the computer using Statistical Package for Social Science (SPSS) Version 22.0 as the tools for

analysis. The researcher then conducted the appropriate analysis of the foresaid research methods using the tools. The null hypothesizes were tested for acceptance or rejection by applying a confidence level of 95% at ±5 significance level using t-test. Analyzed data was presented using tables or figures.

The study used various inferential statistics such as regression and correlation analysis. The variables were factored in the regression model. Variables were measured using rating / Likert scales and then converted to mean values to permit the application of regression model. The proposed regression equation was as follows:

$$\mathbf{Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon}$$

Where;

Y = Internal controls procedures

$\mathbf{X_1}$ = Integrated financial operations

$\mathbf{X_2}$ = Operating segments information

$\mathbf{X_3}$ = Computerized integrated accounting

$\mathbf{X_4}$ = Consolidated financial reporting transactions

$\boldsymbol{\alpha}$ = Constant

$\boldsymbol{\beta_1, \beta_2, \beta_3, \beta_4}$ = Slopes

$\boldsymbol{\varepsilon}$ = Margin of error.

3.6.3 Assumptions of the Regression Model

The researcher assumed that the model was normally distributed, there was no autocorrelation or collinearity for all variables, and was appropriate in predicting the dependent variable using analysis of variance.

The researcher tested and enhanced compliance with model's assumptions using diagnostic tests such as test of normality, autocorrelation and collinearity for all variables, and finally assessed the appropriateness and power of the regression models in predicting the dependent variable using analysis of variance (ANOVA).

3.7 Ethical Considerations

Before embarking on data collection, the researcher sought permission from the university i.e. the school of business and economics as well as from National Commission for Science Technology and Innovation (NACOSTI). The research project report was tested for plagiarism through Turn it anti-plagiarism software to ensure less 20% plagiarism.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.0 Introduction

This chapter discusses the presentation and interpretation of findings. The purpose of the study was to evaluate the effect of Integrated Computerized Accounting System on the Internal Control of Supermarkets in Kisii County Kenya. The researcher made use of figures and frequency tables to present the findings.

4.1 Response Rates

This was to determine by the percentage of questionannaires returned out of all the questionnaires distributed. A graphical representation of the response rate is shown by figure 4.1 below.

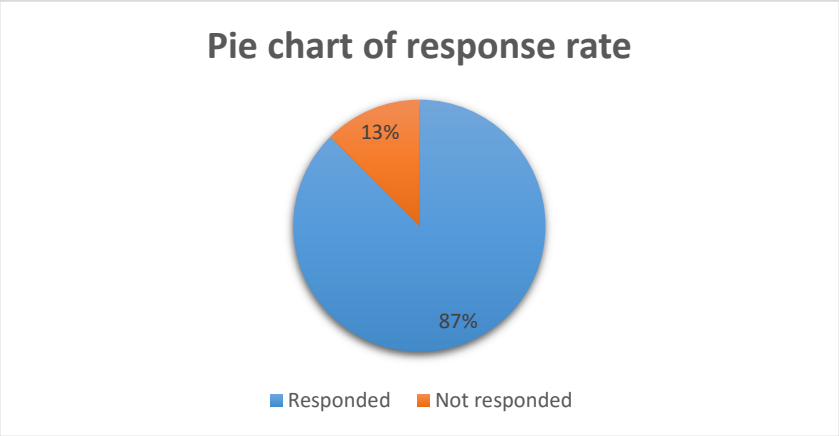


Figure 4.1 : Pie chart of response rate

Source: Researcher, 2019

As shown on figure 4.1, the researcher targeted systems in 24 managers, supervisors and accountants of supermarkets in Kisii County out of which 21 responses were obtained representing 87% response rate. This was a reliable response rate for data analysis as Boban (2016) posited that any response of 50% and above is adequate for analysis. It is also preferable that a high response rate of above 80% from a small sample of up to 50 respondents.

4.2 General Background Information

4.2.1 Age distribution of the Respondents

The researcher sort to know the age distribution of the respondents. The respondents selected the age brackets either 18-24, 25-35, 36-50, 50-60 or 0ver 60. The findings observed are as per the table 4.1 below.

Table 4.1: Age distribution

Age group	Frequency	Percentage
18-24	1	4.76%
25-35	4	19.05%
36-50	5	23.81%
51-60	9	42.86
Over 60	2	9.52%
Total	**21**	**100%**

Source: Researcher, 2019

Table 4.1 showed that age groups 18-24, 25-35, 36-50, 51-60, and Over 60 had 1, 4, 5, 9, and 2 respondents respectively representing 4.76%, 19.05%, 23.81%, 42.86%, and 9.52% respectively. The Majority of the respondents were in the age bracket of 50-60 years representing 42.86% while minority were between 18-24 years representing 4.76%.

4.2.2 Gender of the Respondents

The researcher wanted to know the gender distribution of the respondents. The respondent were to select either male or female. Table 4.2 below show the results of the finding.

Table 4.2 : Gender distribution

Gender	Frequency	Percentage
Males	15	71.43%
Females	6	28.57%
Total	**21**	**100**

Source: Researcher, 2019

Table 4.2 showed that majority of the respondents were male representing 71.43% while female represented 28.57% respectively.

4.2.3 Academic Qualifications

The study sort to know the maximum level of academic qualification of the respondents. The respondents were to select diploma, bachelor's degree, master's degree or doctorate (PhD). The finding are shown by table 4.3 below.

Table 4.3 : Academic qualification

Qualification	Frequency	Percentage
Diploma	**6**	**28.57%**
Bachelor's degree	**9**	**42.86%**
Master's degree	**6**	**28.57%**
Doctorate degree	**0**	**0**
Total	**21**	**100**

Source: Researcher, 2019

Table 4.3 showed that the qualification of the respondent from diploma, bachelor's degree, master's degree and doctorate degree as 2, 3,2, and 0 respectively representing 28.57%, 42.86%, 28.57% and 0%. Therefore, majority of the respondent had bachelor's degree at 42.86% while none (0%) had a doctorate degree.

4.2.4 Working Experience

The researcher also wanted to know the working experience of the respondents within the supermarkets. The respondents were supposed to select from less than 1 year, 1-5 years, 6-10 years, and over 10 years. The findings are shown on table 4.4 below.

Table 4.4 : Working experience

Working experience	Frequency	Percentages
Less than 1 year	0	0
1 – 5 years	3	14.27%
6 – 10 years	12	57.14%
Over 10 years	6	28.57%
Total	**21**	**100**

Source: Researcher, 2019

Table 4.4 showed that majority of the respondents had 6-10 years of experience within supermarkets representing 57.14% while none (0%) had less than 1 year experience. 28.57% of the respondent had over 10 years' experience while 14.27% had 1-5 years' experience.

4.3 Descriptive Statistics

4.3.1 Integrated Financial Operations

To determine the level of integration of financial operations within the supermarkets in Kisii county, the researcher sort to know how the respondents agreed that the integrated computerized accounting practices used in their supermarkets integrated the following 15 financial operations. The ranks were shown on a scale of 1, 2, 3, 4, and 5 representing not at all, to a small extent, moderately integrated, integrated to a great extent, and fully integrated. The findings are shown by table 4.5 below.

Table 4.5 : Integrated financial operations

Integrated financial operations	Min	Max	Mean	Standard Deviation
Cash management	4	5	4.857	0.378
Inventory management	3	5	4.000	0.577
Supply chain management	2	4	3.429	0.787
Accounts payable management	3	5	4.000	0.577
Accounts receivable management	4	5	4.000	0.378
Revenue management	4	5	4.143	0.378
Customer relationship management	3	5	4.000	0.577
Baking of cakes and breads	1	4	2.571	0.976
Project management	2	5	2.857	0.976
Non-current asset management	2	5	3.429	1.069
Payroll management	3	5	4.000	0.577
General ledger management	3	4	3.714	0.488
Debt management	3	5	3.857	0.690
Budgeting and budgetary compliance	3	5	3.714	0.756
Taxation	3	5	4.000	0.577

Source: Researcher, 2019

From table 4.5 above cash management, inventory management, supply chain management, accounts payable management, accounts receivable management, revenue management, customer relationship management, baking of cakes and breads, project management, non-current asset management, payroll management, general ledger management, debt management, budgeting and budgetary compliance, and taxation had a mean of 4.857, 4.0, 3.429, 4.0, 4.143, 4.0, 2.571, 2.857, 3.429, 4.0, 3.714, 3.857, 3.714, and 4.0 respectively with

a standard deviation of 0.378, 0.577, 0.787, 0.577, 0.378, 0.378, 0.577, 0.976, 0.976, 1.069, 0.577, 0.488, 0.690, 0.756, and 0.577 respectively.

The highest level of integration by supermarkets in Kisii was on cash management with a mean of 4.857 and standard deviation of 0.378 The lowest level of integration was on Baking of cakes and breads with a mean of 2.571 and standard deviation of 0.976. This could be because most of the supermarket in Kisii county makes cash sales and do not engage in a lot of productions except for a few that bake cakes. It also agreed with the findings of Stolowy & Touron, 2013 that computerized accounting softwares integrate various financial operations of an entity.

4.3.2 Operating Segments Information

In determining the segmentation information, the researcher sort to know often the respondent use integrated computerized accounting system in classification and categorization of financial transactions and information into the following 5 categories. The ranks were shown as 1, 2, 3, 4, and 5 representing never, rarely, sometimes, most of the times and always respectively. The findings are shown by table 4.6 below.

Table 4.6 : Operating segment information

Operating segment information	Min	Max	Mean	Standard Deviation
Geographical segmentation i.e. consolidation and reporting of various branches of the supermarket	3	5	4.429	0.787
Product segmentation i.e. categorization of products and services	4	5	4.571	0.535
Customer segmentation i.e. classification of customers	3	5	4.143	0.690
Market segmentation i.e. categorization and classification of market served by the supermarket	3	5	4.000	0.816
Mode of service delivery to customers such as card and online sales	2	5	3.571	0.976

Source: Researcher, 2019

Table 4.6 above showed geographical segmentation, product segmentation, customer segmentation, market segmentation, and mode of service delivery had a mean of 4.429, 4.571, 4.143, 4.0, and 3.571 respectively with standard deviation of 0.787, 0.535, 0.690, 0.816, and 0.976 respectively.

The highest level of segmentation was categorization of product and services with a mean of 4.571 and standard deviation of 0.535 while the least was mode of service delivery with 3.571 and standard deviation 0.976. This agreed with the provision of international financial reporting standard (IFRS 8) which requires entities to report financial transactions based operating segment if the reportable segments engages in business activity that earns revenue, incur expenses, operating results are regularly reviewed by entity chief operating decision makers , and discrete financial information was available.

4.3.3 Computerized Integrated Accounting

To determine the level of computerization of integrated accounting system the researcher sort to know how the respondents ranks the level of integration of transactions relating to the following branches of accounting. The ranks were shown as 1, 2, 3, 4, and 5 representing not at all, to a small extent, moderately integrated, integrated to a great extent, and fully integrated. The findings are shown by table 4.7 below.

Table 4.7 : Computerized integrated accounting

Branches of accounting	Min	Max	Mean	Standard deviation
Financial accounting transactions	4	5	4.571	0.535
Cost accounting transactions	3	5	4.143	0.690
Management accounting transactions	3	5	4.000	0.816
Taxation transactions	3	5	4.286	0.756
Fund accounting transactions	1	4	2.429	0.976
Auditing transactions	3	5	3.857	0.690

Source: Researcher, 2019

Table 4.7 above showed that financial accounting transactions, cost accounting transactions, management accounting transactions, taxation transactions, fund accounting transactions, and auditing transactions had a mean of 4.571, 4.143, 4.0, 4.286, 2.429, and 3.857 respectively with standard deviation of 0.535, 0.690, 0.816, 0.756, 0.976, and 0.690 respectively.

The most computerized branch of accounting based on the transactions was financial accounting with a mean of 4.571 and standard deviation of 0.535 while the least was fund accounting with a mean of 2.429 and standard deviation of 0.976. The findings agree with Fowzia & Nasrin, 2015 that information generated by accounting information systems (AIS) increases effectiveness of operation processes, management reports, budgeting and controls.

4.3.4 Consolidated Financial Reporting Transactions

The study sort to know the integrated computerized accounting practices (ICAP adopted by the supermarkets in Kisii County, Kenya toto consolidate financial reporting transactions of the related entities. The findings are shown by table 4.8 below.

Table 4.8 : Consolidated financial reporting transactions

Related Entities	Min	Max	Mean	Standard Deviation
Subsidiaries transactions i.e. entities where the supermarket owns more than 50% of equity shares	2	5	4.143	0.976
Associates transactions i.e. entities where the supermarket is majors shareholder and owns 20-50% of equity shares	2	5	3.143	1.069
Financial assets transactions i.e. investment assets such as shares, debentures bonds etc. held by the supermarket	2	4	3.429	0.787
Joint controlled operation transactions i.e. operation controlled in partnership with other supermarkets.	1	4	2.429	0.976
Joint controlled assets transactions i.e. assets held in partnership with other organizations.	1	3	2.000	0.816
Joint controlled entities transactions i.e. entities controlled jointly in partnership with other organizations	1	4	2.429	0.976
Investment Property transactions i.e. assets held for renting/ leasing and for appreciations	3	5	3.571	0.690

Source: Researcher, 2019

From table 4.8 above subsidiaries transactions, associates transactions, financial assets transactions, joint controlled operations transactions, joint controlled assets transactions, joint controlled entities transactions, and investment property transactions had a mean of 4.143, 3.143, 3.429, 2.429, 2.0, 2.429, and 3.571 respectively with standard deviation of 0.976, 1.069, 0.787, 0.976, 0.816, 0.976, and 0.690 respectively.

The accounting softwares used by supermarkets in Kisii County, Kenya adopted the practices of mostly consolidating financial reporting transactions for subsidiaries transactions with a mean of 4.143 and standard deviation of 0.976. They were also least used in the practice of consolidating financial reporting transaction for jointly controlled assets transactions with a mean of 2.000 and standard deviation of 0.816. This implied that most ICAP used by the supermarkets in Kisii county adhere to the requirements of international financial reporting standards (IFRS) specifically IFRS 10, IFRS 11 and IFRS 12 which requires an entity to consolidate her financial transactions with the transactions of all her related entities.

4.3.5 Internal Control Procedures

To determine the strength of the internal controls procedures of the supermarkets in Kisii county, the researcher sort to know how the respondents ranked the internal control procedures used by the integrated computerized accounting systems adopted by the supermarkets in Kisii County, Kenya. The ranks were shown on a scale of 1, 2, 3, 4, and 5 representing very low, low, moderate, high and very high, respectively. The findings obtained are shown by table 4.9 below.

Table 4.9 : Internal Controls Procedures

Internal Control Procedures	Min	Max	Mean	Standard Deviation
Organization plan chart	2	5	2.714	1.069
Segregation of duties by assignment of user rights and roles	2	5	3.571	0.96
Employees job rotation	3	4	3.571	0.535
Access to data and records through password and encryptions	4	5	4.857	0.378
Authorization and approval by responsible persons	3	5	4.143	0.690
Arithmetic accuracy of the transactions	4	5	4.857	0.378
Assess the competence and integrity of personnel	3	5	3.714	0.756
Supervision and monitoring personnel	3	5	3.857	0.690
Budgetary compliance	3	5	4.571	0.787
Surprise checks for errors and frauds	1	4	2.429	0.976
Transactional audit trail	1	4	3.714	1.215

Source: Researcher, 2019

Table 4.9 showed that organisation plan chart, segregation of duties by assignment of user rights and roles, employees job rotation, access to data and records through password and encryptions, authorization and approval by responsible persons, arithmetic accuracy of transactions,, assess the competence and integrity of personnel, supervision and monitoring of personnel, budgetary compliance, surprise checks for errors and frauds, and transactional audit trail had a mean of 2.714, 3.571, 3.571, 4.857, 4.143, 4.857, 3.714, 3.857, 4.571, 2429, and 3.714 respectively with standard deviation of 1.069, 0.96, 0.535, 0.378, 0.690, 0.378, 0.756, 0.690, 0.787, 0.976, and 1.215 respectively.

The most used internal control procedure was access to data and records through password and encryptions and arithmetic accuracy of transaction with a mean of 4.857 and a standard deviation of 0.378 while the least used internal control procedure was surprise check with a mean of 2.429 and standard deviation of 0.976. This showed that most of the ICAS used by the supermarket uses password and encryptions to authorize users.

The findings agreed with Abu-Musa (2016) that some of the perceived threat of a computerized accounting information system was accidental and intentional entry of wrong data or accidental destruction of data by employees through unauthorized access and sharing of passwords.

4.4 Correlations Analysis

Pearson product moment correlation was used to measure the correlation of the variables and the computed 'r' values cross-tabulated. Pearson product moment correlation is a measure of linear correlation among dependent and independent variables (Kothari 2015, Mugenda 2013). The dependent variables was the internal control procedures shown as ICP while the independent variables were integrated financial operations, operating segment information, computerized integrated accounting, and consolidated financial reporting transactions shown on table 4.10 as IFO, OSI, CIA, and CFRT respectively

Table 4.10 : Inter Item Correlation matrix

		IFO	OSI	CIA	CFRT	ICP
IFO	Pearson Correlation	1	.293	.910**	.122	.967**
	Sig. (2-tailed)		.523	.004	.794	.000
	N	21	21	21	21	21
OSI	Pearson Correlation	.293	1	.295	-.385	.219
	Sig. (2-tailed)	.523		.520	.394	.637
	N	21	21	21	21	21
CIA	Pearson Correlation	.910**	.295	1	.244	.895**
	Sig. (2-tailed)	.004	.520		.598	.006
	N	21	21	21	21	21
CFRT	Pearson Correlation	.122	-.385	.244	1	-.033
	Sig. (2-tailed)	.794	.394	.598		.945
	N	21	21	21	21	21
ICP	Pearson Correlation	.967**	.219	.895**	-.033	1
	Sig. (2-tailed)	.000	.637	.006	.945	
	N	21	21	21	21	21

** . Correlation was significant at the 0.01 level (2-tailed). Pearson correlation

* . Correlation was significant at the 0.05 level (2-tailed). Pearson correlation

Source: Researcher, 2019

Table 4.10 above showed Pearson's product moment correlation of all the variables at confidence level of 95%. The correlation 'r' between IFO, OSI, CIA, and CFRT against ICP was 0.967, 0.219, 0.895, and -0.033 respectively. It showed that correlation was statistically significant at the 0.05 level (2-tailed) for of IFO and CIA against ICP. This is because there

high correlation between IFO and CIA on ICP of 0.967 and 0.895 respectively and a very low correlation between OSI and CFRT on ICP of 0.219 and -0.033 respectively.

4.5 Diagnostic Tests

4.5.1 Tests of Normality

The researcher used Shapiro-Wilk tests of normality. Shapiro-Wilk test assumed the null hypothesis that the data has a normal distribution and alternate hypothesis that data does not have a normal distribution. The criteria applied was that if observed p-values was less than chosen alpha level of 0.05 then the null hypothesis was to be rejected in favor of alternate hypothesis since there was evidence that the data tested was not from a normal distributed data.

Table 4.11 Shapiro-Wilk test of normality

Model	**Shapiro-Wilk**	**(P-values >0.05)**	
Variables	**Statistic**	**Df**	**Sig.**
Integrated Financial Operations (IFO)	.949	21	.717
Operating Segment Information (OSI)	.910	21	.394
Computerized Integrated Accounting (CIA)	.898	21	.317
Consolidated Financial Reporting Transactions (CFRT)	.864	21	.163
Internal Controls Procedures (ICP)	.951	21	.735

Source: Researcher, 2019

From table 4.14 above IFO, OSI, CIA, CFRT, and ICP had observed p-values of 0.717, 0.394, 0.317, 0.163 and 0.735 respectively. This implied that the null hypothesis that the data has a normal distribution cannot be rejected in favor of alternate hypothesis that the data does not have a normal distribution since there was evidence that observed p-values were greater than chosen alpha value of 0.05. This could also be observed from the Q-Q plots of the variables hence the researcher concluded that the data used was normally distributed.

4.5.2 Collinearity Test

Variance inflation factor (VIF) was used to test multi-collinearity among the independent variables. VIF was to tests the severity of multi-collinearity in an ordinary least square regression analysis. Multi-collinearity increases standard errors of the coefficients implying that coefficients for some independent variables may be found not to be significantly different from zero. The smaller the value of VIF implied the absence of multi-collinearity. In VIF, the rule of thumb is a VIF of one (1) means no correlation, VIF greater than one and less than five ($1 < VIF < 5$) means moderately correlated, and greater or equal to than five (>5) means highly correlated. A VIF greater than 10 indicates very high correlation and should be a great concern hence not acceptable.

Table 4.12: Collinearity analysis

Model	**Collinearity Statistics**	
Dependent Variable: ICP	**Tolerance**	**VIF**
Integrated Financial Operations (IFO)	.161	6.211
Operating Segment Information (OSI)	.688	1.454
Computerized Integrated Accounting (CIA)	.145	6.913
Consolidated Financial Reporting Transactions (CFRT)	.668	1.497

Source: Researcher, 2019

From table 4.15 the observed variance inflation factors (VIF) for IFO, OSI, CIA, and CFRT are 6.211, 1.454, 6.913 and 1.497 respectively while tolerance level of 0.161, 0.688, 0.145 and 0.668 respectively which showed moderate collinearity among the independent variable hence affecting the significance levels negatively. IFO and CIA had VIF greater than 5 which showed high correlation. The VIF was acceptable since it was less than 10. All the independent variables had tolerance level greater than 0.1 which is acceptable.

4.5.3 Autocorrelation Test

To check for autocorrelation of the data Durbin-Watson test was used. The Durbin-Watson values ranges from 0 to 4 where 2 indicates no autocorrelation, >2 - 4 indicates negative autocorrelation, and 0 - <2 indicates positive autocorrelation. The rule of thumb in Durbin-Watson test is that a value between 1.5 and 2.5 is relatively normal and acceptable. The researcher observed a Durbin-Watson value of 2.234 which implies a very small negative autocorrection. The Durbin-Watson test value of 2.234 was accepted since it was within the acceptable limit.

4.6 Multiple Regression Analysis

Ordinary least square (OLS) regression was applied because it is a technique that is applied to single or multiple explanatory variables and also used categorical explanatory variables that have been appropriately coded. The research had four independent (integrated financial operation, operating segment information, computerized integrated accounting, and consolidated financial reporting transactions)variable that has an affect the dependent variable (internal control procedure).

4.6.1 Multiple Regression Model Summary

Regression analysis was conducted to determine the coefficient of determination adjusted 'r^2' square. It ranges from -1 to +1 where -1 implied a perfect negative relationship , 0 implied no relationship while +1 implied perfect positive relationship between dependent and independent variables (Kothari 2015).

Table 4.13 : Multiple Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.999[a]	0.998	0.995	0.04292	2.234

a. Predictors: (Constant), IFO, OSI, CIA, CFRT

b. Dependent Variable: ICP

Source: Researcher, 2019

From table 4.11 above the model reveals a correlation 'r' of 0.999 and coefficient of determination adjusted 'r^2'of 0.995. It denotes that 99.5% of variations of internal controls procedures (ICP) was determined by IFO, OSI, CIA and CFRT with a standard error of estimate of .04292. This show positive significant relationship since adjusted 'r^2' was greater than 0.7. This could also be observed from the Q-Q plots of the variables that showed that data was spread along the curve. The model has Durbin-Watson of 2.234 which imply a very small negative autocorrelation.

4.6.2 Analysis of Variance (ANOVA)

To test the significance of the regression equation Analysis of Variance (ANOVA) was conducted using SPSS 21. If the observed value of F was greater than critical value for the degrees of freedom at 95% level of confidence then the model was statistically fit. The results obtained was as shown on table 4.12 below;

Table 4.14 : ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	2.321	4	.580	314.982	.003[b]
Residual	0.004	16	.002		
Total	2.324	20			

a. Dependent Variable: ICP

b. Predictors: (Constant), IFO, OSI, CIA, CFRT

Source: Researcher, 2019

From table 4.12, the obtained F-value of 314.982 was greater than critical value of F with (4,16) as degrees of freedom of 19.25 for the regression equations hence it was highly significant at the 95% level of confidence thereby confirming the validity of the estimated regression models. The model has a significance of 0.003 which was lower than 0.05 hence a linear statistical relationship exist between dependent variable ICP and predictors IFO, OSI, CIA and CFRT.

4.6.3 Regression Coefficients

The following regression model was used to show the relationship.

$$\mathbf{Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon}$$

Where dependent variable Y was the internal controls procedures (ICP) , independent variables, X_1 , X_2, X_3 and X_4 were, integrated financial operations (IFO), operating segments information (OSI), computerized integrated accounting (CIA), and Consolidated Financial Reporting Transactions (CFRT) respectively. α was Constant, β_1, β_2, β_3, and β_4 are Slopes, while ε was the Margin of error/Disturbance term.

Table 4.15 :Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta
(Constant)	-5.98	0.898	-
Integrated Financial Operations (IFO)	0.051	0.005	0.749
Operating Segments Information (OSI)	-0.011	0.002	-0.216
Computerized Integrated Accounting (CIA)	0.106	0.023	0.349
Consolidated Financial Reporting Transactions (CFRT)	-0.021	0.003	-0.292

Source: Researcher, 2019

Table 4.13 above showed that the model had a constant (α) of -5.980 with a standard error of 0.898 and slopes β_1, β_2, β_3, and β_4 for IFO, OSI, CIA, and CFRT of 0.051, -0.011, 0.106 and -0.021. The values are replaced in the model to form the following equation.

$$\mathbf{y = -5.980 + 0.051\ X_1 - 0.011\ X_2 + 0.106\ X_3 - 0.021 X_4}\ .$$

The model implies that 1 value of ICP represented in the model by 'y' is determined by a constant of -5.980 and the variables as 0.051 of IFO, -0.011 of OSI, 0.106 of CIA, and -0.021 of CFRT represented in the model by X_1, X_2, X_3 and X_4 respectively.

4.7 Hypothesis Testing

To test the significance of individual regression coefficients in the multiple linear regression model two tailed t-tests were applied at 95% level of confidence for all the hypothesis. It's important to note that a significant variable makes the model effective while unimportant variable worsen the model. The tests measured the contribution of a variable while the remaining variables are in the model failed to reject the null hypothesis if the test statistics was

in the acceptance region. The acceptance region was $-t_{\alpha, df} < t_o < t_{\alpha, df}$ where α was probability alpha, t_o was the critical value of t, and df was the degrees of freedom .

Table 4.16 : t -test critical values and significance

Model	t	Sig.
(Constant)	-6.658	0.022
Integrated Financial Operations (IFO)	10.676	0.009
Operating Segment Information (OSI)	-6.374	0.024
Computerized Integrated Accounting (CIA)	4.711	0.042
Consolidated Financial Reporting Transactions (CFRT)	-8.486	0.014

Source: Researcher, 2019

Table 4.16 above showed a summary of observed t-test critical values and significant at 95% degrees of confidence. The observed t- values for Constant, IFO, OSI, CIA, and CFRT was -6.658, 10.676, -6.374, 4.711 and -8.46 respectively while the significance level was 0.022, 0.009, 0.024, 0.042 and 0.014 respectively.

This means that the chances of finding difference large than the one in the study given that the null hypothesis is true for p-values for IFO, OSI, CIA, and CFRT was 0.9%, 2.4%, 4.2% and 1.4% respectively. This is less the acceptable alpha, α of 0.05 (5%) hence the null hypothesis lies on the rejection region.

4.7.1 Effects of Integrated Financial Operations on the Internal controls.

The null hypothesis (H_o1) was that integrated financial operations have no significant effect on the internal controls of the supermarkets in Kisii County while the alternate hypothesis (H_a1) was integrated financial operations have significant effects on the internal controls of the supermarkets in Kisii County. The t-test was carried out at confidence level of 95%. Integrated

financial operation was measured by level of integration of financial activities of the operations while the internal controls was measured by ranking the internal control procedures.

Considering β_1 a coefficient of IFO, it was observed that $(t_o)_{\beta 1} = 10.676$ does not lie in the acceptance region of $-t_{0.025, 21} < t_o < t_{0.025, 21}$ i.e. ±2.080. The null hypothesis (H_o1) was rejected in favor of alternate hypothesis (H_a1) and it was concluded that β_1 was positively significant at probability alpha $\alpha = 0.05$. This conclusion was also arrived by using *p* value noting that the hypothesis was two sided. The *p* values corresponding to the test statistic $(t_o)_{\beta 1} = 10.676$ based on the t distribution with 21 degrees of freedom was 0.009. Since the p value was less than significance, $\alpha = 0.05$, it was concluded that β_1 was positively significant.

The findings agreed with Hadler (2014) on the component of the integrated financial operation and also agreed with the systems theory in that there were several component working together to form a single unitary system.

4.7.2 Effects of Operating Segments Information on the Internal Controls

The null hypothesis (H_o2) was that operating segments information have no significant effects on the internal controls of the supermarkets in Kisii County while the alternate hypothesis (H_a2) was that operating segments information have significant effect on the internal controls of supermarkets in Kisii County. The t-test was carried out at confidence level of 95%. Operating segments information was measured by level of various categories and classification of operating segments information generated by ICAS such as geographical, product line,

customer line, service delivery, regulatory environment, departments, and/or suppliers line. On the other hand, the internal controls was measured by ranking the internal control procedures.

Considering β_2 a coefficient of operating segment information, it was observed that $(t_o)_{\beta 2} = -6.374$ does not lie in the acceptance region of $-t_{0.025,\,21} < t_o < t_{0.025,\,21}$ i.e. ± 2.080. The null hypothesis (H_o2) was rejected and it was concluded that β_2 was negatively significant at probability alpha $\alpha = 0.05$. This conclusion was also arrived by using *p* value noting that the hypothesis was two sided. The *p* values corresponding to the test statistic $(t_o)_{\beta 2} = -6.374$ based on the t distribution with 21 degrees of freedom was 0.024. Since the p value was less than significance, $\alpha = 0.05$, it was concluded that β_2 was negatively significant.

The finding agreed with Hope, Thomas, & Winter Botham (2013) on that disclosure of geographical segment earnings and trading volume affects public information hence affecting the decision making on the acceptable internal control system.

4.7.3 Computerized Integrated Accounting on the Internal Controls.

The null hypothesis (H_o3) computerized integrated accounting have no significant effect on the internal controls of the supermarkets in Kisii County while the alternate hypothesis (H_a3) computerized integrated accounting have significant effects on the internal controls of the supermarkets in Kisii County. The t-test was carried out at confidence level of 95%. Computerized integrated accounting was measured by the level of integration of transactions relating to branches of accounting are integrated together while the internal controls was measured by ranking the internal control procedures.

Considering β_3 a coefficient of computerized integrated accounting, it was observed that $(t_o)_{\beta 3}$ = 4.711 does not lie in the acceptance region of $-t_{0.025,\,21} < t_o < t_{0.025,\,21}$ i.e. ±2.080. The null hypothesis (H_o3) was rejected and it was concluded that β_3 was positively significant at probability alpha $\alpha = 0.05$. This conclusion was also arrived by using *p* value noting that the hypothesis was two sided. The *p* values corresponding to the test statistic $(t_o)_{\beta 3} = 4.711$ based on the t distribution with 21 degrees of freedom was 0.042. Since the p value was less than significance, $\alpha = 0.05$, it was concluded that β_3 was positively significant.

The findings agree with Fowzia & Nasrin (2015) that information generated by accounting information systems increases effectiveness of computerized integrated accounting by integrating operation processes, management reports, budgeting and controls.

4.7.4 Consolidated Financial Reporting Transactions on the Internal Controls.

The null hypothesis (H_o4) consolidated financial reporting transactions have no significant effect on the internal controls of the supermarkets in Kisii County. The alternate hypothesis (H_a4) was consolidated financial reporting transactions have significant effect on the internal controls of the supermarkets in Kisii County. The t-test was carried out at confidence level of 95%. Consolidated financial reporting transaction was measured by the level of integration and consolidation of transactions relating to a group of related entities while the ICP was measured by ranking the internal control procedures.

Considering β_4 a coefficient of consolidated financial reporting transaction, it was observed that $(t_o)_{\beta 4} = -8.486$ does not lie in the acceptance region of $-t_{0.025,\,21} < t_o < t_{0.025,\,21}$ i.e. ±2.080. The null hypothesis (H_o4) was rejected and it was concluded that β_4 was negatively significant at probability alpha $\alpha = 0.05$. This conclusion was also arrived by using *p* value noting that the

hypothesis was two sided. The *p* values corresponding to the test statistic $(t_o)_{\beta 3} = -8.486$ based on the t distribution with 21 degrees of freedom was 0.014. Since the p value was less than significance, $\alpha = 0.05$, it was concluded that β_4 was negatively significant.

The findings agreed with the agency theory in that there were related entities which acted as the agent of the supermarket. It also agreed with the requirement of international financial reporting standards on disclosure of interest in related entities and preparation consolidated financial statements as well as positive accounting theory is applied while consolidating the financial reports transaction to affect profit.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of findings

The study sought to determine the effect of integrated financial operations on the internal controls of the supermarkets in Kisii County. The supermarkets had several financial operations that were integrated using the computerized accounting systems. The highest integrated financial operation was cash management with a mean of 4.857 and standard deviation of 0.378 while the lowest level of integration was on baking of cakes and breads with a mean of 2.571 and standard deviation of 0.976. The study observed there was high Pearson product moment correlation 'r' between integrated financial operation and the internal controls procedures of 0.967 at 95% level of confidence and coefficient β_1 of +0.051 was positively significant at probability alpha $\alpha = 0.05$. It was observed that $(t_o)_{\beta 1} = 10.676$ does not lie in the acceptance region of $-t_{0.025, 21} < t_o < t_{0.025, 21}$ i.e. ±2.080. Therefore, the null hypothesis (H_o1: integrating financial operations have no significant effect on the internal control procedures of the supermarkets) was rejected in favor of alternate hypothesis (H_a1: integrating financial operations have significant effect on the internal control procedures of the supermarkets).

The study sought to determine the effect of operating segments information on the internal controls of the supermarkets in Kisii County. The supermarkets had segmented their operating sections based on geographical, market, product & services, customer, and mode of service delivery. The operation segment information transaction and reporting was largely integrated in their computerized accounting systems. The highest level of segmentation was by products and services with a mean of 4.571 and standard deviation of 0.535 while the lowest was mode of service delivery with 3.571 and standard deviation 0.976. At 95% level of confidence, the

study observed that there was low correlation 'r' between the internal controls procedures and operating segments information of 0.219. It was also, observed that $(t_o)_{\beta 2} = -6.374$ does not lie in the acceptance region of $-t_{0.025,\ 21} < t_o < t_{0.025,\ 21}$ i.e. ±2.080. The null hypothesis (H_o2: operating segments information have no significant effect on the internal control procedures of the supermarkets) was rejected in favor of the alternate hypothesis (H_a2: operating segments information have significant effect on the internal control procedures of the supermarkets). Coefficient β_2 of -0.011 was negatively significant at probability alpha $\alpha = 0.05$.

The study sought to determine the effect of computerized integrated accounting on the internal controls of the supermarkets. The computerized accounting systems used by the supermarkets in Kisii County had integrated transactions related to various branches of accounting such as financial accounting, cost accounting, management accounting, taxation, auditing and fund accounting. Financial accounting was the most integrated branch of accounting with a mean of 4.571 and standard deviation of 0.535 while the least integrated branch of accounting was fund accounting with a mean of 2.429 and standard deviation of 0.976. The study observed that there was high Pearson product moment correlation 'r' between computerized integrated accounting systems and the internal controls procedures was 0.895 at 95% level of confidence. It was observed that $(t_o)_{\beta 3} = 4.711$ does not lie in the acceptance region of $-t_{0.025,\ 21} < t_o < t_{0.025,\ 21}$ i.e. ±2.080. The null hypothesis (H_o3: computerized integrated accounting have no significant effect on the internal control procedures of the supermarkets) was rejected in favor of the alternate hypothesis (H_a3: computerized integrated accounting have significant effect on the internal control procedures of the supermarkets). Coefficient β_3 of +0.106 was positively significant at probability alpha $\alpha = 0.05$.

The study also, sought to determine the effect of consolidated financial reporting transactions on the internal controls of the supermarkets in Kisii County. The researcher observed that most of supermarkets in Kisii County had multiple subsidiaries (entities where the supermarket owns more than half of equity shares) operating under the same roof and the supermarket operated as non-operating holding group. There were very few joint arrangements (assets, entities and/or operations that held or controlled jointly in partnership with other organizations) among the supermarkets in Kisii County. The most consolidate the financial reports by the integrated computerized accounting practices were for subsidiaries with a mean of 4.143 and standard deviation of 0.976. Jointly controlled assets was least consolidated with a mean of 2.000 and standard deviation of 0.816. At 95% level of confidence, the study observed that there was low correlation 'r' between the internal control procedures and consolidated financial reporting transactions of -0.033. It was observed that $(t_o)_{\beta 4} = -8.486$ does not lie in the acceptance region of $-t_{0.025,\ 21} < t_o < t_{0.025,\ 21}$ i.e. ±2.080. Therefore, the null hypothesis (H_o4: consolidating financial reporting transactions have no significant effect on the internal control procedures of the supermarkets) was rejected in favor of alternate hypothesis (H_a4: consolidating financial reporting transactions have no significant effect on the internal control procedures of the supermarkets). Coefficients β_4 of -0.021 was negatively significant at probability alpha $\alpha = 0.05$.

5.2 Conclusion

On the effect of integrated financial operations on the internal controls of the supermarkets in Kisii County, the study concludes that cash management was the most integrated financial operation by the integrated computerized accounting practices used by the supermarkets in Kisii county. This could be because most of the supermarket make cash sales. The study

concluded that integrated financial operations had a positive significant effect on the internal controls of the supermarkets in Kisii County.

On the effect of segments information on the internal controls of the supermarkets in Kisii County, categorization of products and services was the most used method of segmentation by the supermarkets in Kisii. The supermarket stocks various categories of products ranging from food stuff, clothing's, furniture, electronics e.tc. The study therefore concluded that segments information had negatively significant effect on the internal controls of the supermarkets in Kisii County.

On the effect of computerized integrated accounting on the internal controls of the supermarkets in Kisii County, financial accounting transactions were the most computerized branch of accounting by the integrated computerized accounting practices used by the supermarkets in Kisii county. This is because most of the transactions of financial accounting such as preparation of financial statement were mandatory requirements by law. The study therefore concluded that computerized integrated accounting had a positive significant effect on the internal controls of the supermarkets in Kisii County.

On the effect of consolidated financial reporting transactions on the internal controls of the supermarkets in Kisii County, the most consolidated financial reporting transactions were for the subsidiaries. This was done by use of integrated computerized accounting system in the financial reporting. This resulted to a negative and significant effect on the internal controls of supermarkets in Kisii County. The study therefore concluded that consolidated financial

reporting transactions had a negatively significant effect the internal controls of the supermarkets.

5.3 Recommendations of the Study

On the effect of integrated financial operations on the internal controls of the supermarkets in Kisii County, the researcher recommended the supermarkets in Kisii county to integrate baking of cakes and breads on integrated computerized accounting systems. Though there is minimal baking of cakes in some supermarkets it is important that those supermarket that bake cakes and breads integrated the baking by the integrated computerized accounting system to increase the internal controls .

On the effect of operating segments information on the internal controls of the supermarkets in Kisii County, the mode of service delivery such as card sales, online sales was the least segmentation by integrated computerized accounting systems. The researcher recommended that the supermarkets in Kisii county to improve the segmentation of the information based on the mode of service delivery. It would be important for supermarket to distinguish between card sales and cash sale and any other mode of study.

On the effect of computerized integrated accounting on the internal controls of the supermarkets in Kisii County, the least computerized branch of accounting by integrated computerized accounting practices used by supermarkets in Kisii county was fund accounting. The researcher recommended that the supermarkets should integrate fund accounting transactions in their computerized accounting systems.

On the effect of consolidated financial reporting transactions on the internal controls of the supermarkets in Kisii County, there was low consolidation of financial reports information for jointly controlled assets i.e. assets that are held jointly in partnership with other organizations by integrate computerized accounting systems used by supermarkets in Kisii county. The researcher recommended the supermarkets to consider automating accounting for any assets held in partnership with other organization using the ICAS.

5.4 Suggestion for Further Research

The researcher suggested that more research to be conducted on the effectiveness of integrated computerized accounting practices on the internal controls of; first, the supermarkets in other parts of Kenya, secondly, other type of organizations such as universities, manufacturing companies, financial institutions etc. and thirdly, government and government agencies. The researcher also recommended further research on effectiveness of ICAS on productivity as well as on service delivery.

REFERENCES

Abu-Musa, A. A. (2016). Investigating the Perceived Threats of Computerized Accounting Information Systems in Developing Countries: An Empirical Study on Saudi Organizations. *Journal of King Saud University - Computer and Information Sciences, 18*, 1-30. doi: http://dx.doi.org/10.1016/S1319-1578(06)80001-7

Accounting Theory. (2014). Directorate of Distance Education. Maharshi Dayanand University. New Delhi.

Achary, S. (2016). *www.yourarticlelibray.com/cost-accounting*. Retrieved from www.yourarticlelibray.com: www.yourarticlelibray.com/cost-accounting/integrated-accounts-meaning-and-points-to-be-considered/58452

Al-Mamary, Y. H., Shamsuddin, A., & Aziati, N. (2014). The Meaning of Management Information Systems and its Role in Telecommunication Companies in Yemen. *American Journal of Software Engineering, 2*(2), 22-25.

Alexander, J. R. (2013). History of Accounting A. o. C. A. i. t. U. States (Ed.) Retrieved from https://s3.amazonaws.com/ClubExpressClubFiles/825456/documents/History-of-Accounting.pdf

Alrawi, H. A., & Thomas, S. S. (2014). Application of contingency theory of accounting information to the UAE banking sector. *Asian Academy of Management Journal, 12*(2), 33-55.

Ansari, S. (2014). Teaching note: Systems theory and management control. *Retrieved January, 20*, 2014.

Appiah, K. O., Agyemang, F., Agyei, Y. F. R., Nketiah, S., & Mensah, B. J. (2013). Computerized Accounting Information Systems: Lessons in State-Owned Enterprise in

Developing Economies. *Journal of Finance and Management in Public Services, Vol. 12*(1).

Ayagre, P., Gyamerah, I. A., & Nartey, J. (2014). The effectiveness of internal control systems of banks: the case of Ghanaian banks. *International Journal of Accounting and Financial Reporting*, Vol 4(2) 377 - 389.

Boban, M., & Šušak, T. (2016). Accounting Information Systems and their use in Regional and Local Governments sector: Quality, Efficiency, Security and Control procedures as (present) Challenges. *Ekonomski pregled, 57*(7-8), 519.

Boland, L. A., & Gordon, I. M. (2013). Criticizing positive accounting theory. *Wiley Online Library*.

Bryman, A. (2013). *Social research methods*: Oxford university press.

Carasu, N. D. (2015). Monitor and Cotrol in cmpanies: an agency theory approach. *Journal of Public Administration, Finance and Law*, 46-60

. Components of a Computerized Accounting System. (2015), from http://www.resgroup.com/accounting-software-components-computerized-accounting-system

Cordoş, A. M., Andreica, H. T., & Rof, L. M. (2014). Controversies On Integrated Accounting System.

Center for Audit Quality. (2013). *Guide to Internal Control over Financial Reporting.* Retrieved from Center for Audit Quality: www.thecaq.org/guide-internal-control-over-financial-reporting

Dent, E. B., & Umpleby, S. A. (2013). Underying assumptions of several tradations in systems theory and cybernetics. *Cybernetics and Systems* (pp. 513-518). Vienna: Robert Trappl (ed).

Edwards, J. R. (2013). *A History of Financial Accounting (RLE Accounting)* (Vol. 29): Routledge.

Equity Group Holding Limited. (2017). *2016 Integrated report and financial statement.* Nairobi: Equity Group Holding Limited.

Fisher, J. (2015). Contingency-based research on management control systems: categorization by level of complexity. *Journal of accounting literature, 14*, 24.

Fleischmann, J., Zanetti, A., & Beier, C. (2014). Intenal Control Systems Group Financial reporting, from http://www.zanettipartners.ch/files/en/IKS_e.pdf

Fowzia, R., & Nasrin, M. (2015). Appreciation of Computerized Accounting System in Financial Institutions in Bangladesh. *World Review of Business Research, Vol. 1*(2).

George, D., & Mallery, P. (2013). *SPSS for Windows step by step: A simple guide and reference.* Allyn & Bacon. Boston.

Gichama, D. C., Nyakundi, W. A., & Mogwambo, V. (2016). effect of internal control on profitability in Kenyan supermarket a case of supermarkets in Kisii Town, Kenya. *International Journal of Social Sciences and Information Technology*, Vol 2 Issue3.

Gliem, J. A., & Gliem, R. R. (2013). *Calculating, Interpreting, and Reporting Cronbach's Alpha Reliability Coefficient for Likert-Type Scales*. Paper presented at the 2013 Midwest Research to Practice Conference in Adult, Continuing, and Community Education, The Ohio State University, Columbus.

Gupta, A. (2014, April 25). *Contingent Leadership*. Retrieved from Practical Management: www.practical-management.com/Leadership-Development/Contingent-Leadership.html

Hadler, G. (2014). Advantages of Using Computerised accounting Softwares from http://www.itseducation.asia/computerized-accounting.htm

Hayale, T. H., Abu, K., & Husam, A. (2013). Investigating Perceived Security Threats of Computerized Accounting Information Systems An Empirical Research applied on Jordanian banking sector. *Journal of Economic and Administrative Sciences, 24*(1), 41-67.

Heylighen, F., & Joslyn, C. (2013). What was Systems Theory? , from http://pespmc1.vub.ac.be/SYSTHEOR.html

Hoffjan, A., Weide, G., & Trapp, R. (2014). Impactof an integrated accounting system on managerial information provision- An emprical analysis. *Research Gate (BFuP), 66*(2). Retrieved from Researchgate.ne

Hsiung, H.-H., & Wang, J.-L. (2014). Factors of Affecting Internal Control Benefits under ERP System An Empirical Study in Taiwan. *International Business Research, 7*(4), p31.

International Accounting Standard Board. (2013a). IAS 31 Accounting for Joint Ventures. New York: International Accounting Standards Board.

International Accounting Standard Board. (2013b). IAS 40 Investment Property. New York: International Accounting Standards Board.

International Accounting Standard Board. (2013c). IFRS 8 Operating Segments. New York: International Accounting Standards Board.

International Accounting Standard Board. (2014a). IFRS 9 Financial Instruments. New York: International Accounting Standards Board.

International Accounting Standard Board. (2014b). IFRS 10 Consolidated Financial Statements. New York: International Accounting Standards Board.

International Accounting Standard Board. (2014c). IFRS 11 Joint Arrangements. New York: International Accounting Standards Board.

International Accounting Standard Board. (2014d). IFRS 12 Disclosure of Interest in Other Entities. New York: International Accounting Standards Board.

Irungu, B. K., & Wanjau, K. L. (2015). effectiveness of vendor managed inventory systems in retail supermarkets in Kenya. *International Journal of Business and Public Management*, Vol 1(1) 85-89.

Karanja, J. G., & Nganga, E. N. (2014). Factors Influencing Implementation of Intergrated Financial Management Information System in Kenya Government Ministries. *Research journal of finance and accounting, 5*(7).

Kaur, S. (2015). *Introduction to Computerised Accounting*. Notes. Department of Computer Application.

Kitheka, S. S. (2013). *Inventory Management automation and the performance of supermarkets in western Kenya.* Nairobi: University of Nairobi.

Kothari, C. R. (2015). *Research methodology: methods and techniques*: New Age International.

Kuloba, P. E., & Wesonga, J. N. (2015). Factors that influence consumer ranking of retail outlets in Kenya (A case of supermarkets in Kisii Town). *Research on Humanities and Social Sciences*, Vol 5 (5) 173 - 183.

Levant, Y., & Nikitin, M. (2013). Can cost and financial accounting be fully re-integrated? The role of the French state in the separation of accounting systems and the failed attempt of the système croisé to re-integrate them. *Accounting History, 17*(3-4), 437-461.

Lim, F. P. C. (2013). Impact of Information Technology on Accounting Systems.

Magloff, L. (2014). Advantages & Disadvantages of Computerized Accounting, from http://smallbusiness.chron.com/advantages-disadvantages-computerized-accounting-4911.html

Mhango, C., Kasawala, C., Khonje, V., & Nsiju, G. (2015). How can systems theory help improve quality of health care in Malawi. *State of Malawi Health care.* University of Malawi.

. Management Information Systems. (2014), from http://www.tutorialspoint.com/management_information_system/mis_tutorial.pdf

Michira, M. (2016). Uchumi sends 253 more workers home after closing several outlets *Daily Nation* Retrieved from http://www.standardmedia.co.ke/business/article/2000195710/uchumi-sends-253-more-workers-home-after-closing-several-outlets

Milne, M. J. (2013). Positive accounting theory, political costs and social disclosure analyses: A critical look. *Critical perspectives on accounting, 13*(3), 369-395.

Mitchell, T. R., Biglan, A., Oncken, G. R., & Fieldler, F. E. (2017). The Contingency Model: Criticism and suggestins. *Academy of Mnagement Journal, 13*(3).

Morris J. J (*2015*) The Impact of Enterprise Resource Planning (ERP) Systems on the Effectiveness of Internal Controls over Financial Reporting. Journal of Information Systems: Spring 2015, Vol. 25, No. 1, pp. 129-157

Mndzebele, N. (2013). The Usage Of Accounting Information Systems For Effective Internal Controls In The Hotels. *International Journal Of Advanced Computer Technology*.

Mugenda, O. (2013). Research methods Quantitative and Qualitative Approaches. *Nairobi: ACTS.*

Muhindo, A., Mzuza, M. K., & Zhou, J. (2014). Impact of Accounting Information Systems on Profitability of Small Scale Businesses: A Case of Kampala City in Uganda.

Mwangi, J. K., & Muturi, W. (2018). Influence of Internal control mechanism on financial performance of supermarkets in kenya. *International Journal of Social Sciences and Information Technology*, Vol 4 (5) 272 - 288.

Namazi, M. (2013). Role of the agency theory in implementing management controls. *Journal of accounting and taxation*, Vol 5(2) pg 38-47.

Nyakundi, D. O. a. a., Nyamita, M. O., & Tinega, T. M. (2014). Effect of Internal Control Systems on Financial Performance of Small and Medium Scale Business Enterprises in Kisumu City, Kenya. *International Journal of Social Sciences and Entrepreneurship, 1*(11).

Okoth, E. (2016). Uchumi Supermarkets seeks 200 franchise mini shops in recovery strategy, *Daily Nation* Retrieved from http://www.nation.co.ke/business/Uchumi-Supermarket-plans-200-franchise-mini-shops/-/996/3041684/-/n4gv3yz/-/index.html

Otieno, P. J., & Orina, D. (2013). Effects of Computerised Accounting Systems on Audit Risk Management in Public Enterprises: A Case of kisumu County. *International Journal of Education and Research, Vol 1*(5).

Panda , B., & Leepsa, N. M. (2017). Agency theory: Review of theory and evidence on problems and perspectives. *Indian Journal of Corportae Governance*, Vol 10 (1) pg 74-95

Patel, S. (2013). *Five Key Components to an Efficient Accounting System*. Analytix Solutions. Retrieved from http://www.aixsol.com/pdf/newsletters/AixNewsletterOctober2013.pdf

Pendse, P. (2015). Integrated Accounting Systems: An Overview, from http://www.caclubindia.com/articles/integrated-accounting-system-an-overview-14072.asp

Pouvreau, D. (2014). On the history of Ludwig von Bertalanffy's "general systemology' and on its relationship to cybernetics. *International Journal of General Systems, 43*(2), 172-245.

. Positive Accounting Theory 2015, from http://www.accountingscholar.com/positive-accounting-theory.html

Ramadhan, S., Joshi, P. L., & Hameed, S. A. (2015). Accountants' Perceptions Of Internal Control Problems Associated With The Use Of Computerized Accounting Systems: Evidence From Bahrain. *Review of Business Information Systems (RBIS), 7*(1), 59-72.

Rudzioniene, K. (2013). Postive Accounting Theory : Advantages and Disadvantages. *Social and Studies of Accounting and Finance: Problems and Perspectives, 8*(1), 214 - 220.

Rogers, C. (2014). History of Double Entry Bookkeeping, from http://www.canhamrogers.com/HDEB.htm

Saharia, A., Koch, B., & Tucker, R. (2013). ERP systems and internal audit. was*sues in Information Systems, 9*(2), 578-589.

Schneider, B. (2015). Accounting Basics: Branches Of Accounting

Schofield, T. (2014). What was a Computerized Accounting System? - Types, Advantages & Disadvantages, from http://study.com/academy/lesson/what-is-a-computerized-accounting-system-types-advantages-disadvantages.html

Selfano, O. F., Peninah, A., & Sarah, C. (2014). Integrated Financial Management Information System and Its Effect on Cash Management in Eldoret West District Treasury, Kenya. *International Journal of Business and Social Science, 5*(8).

Shanker, S. (2014). Differences Between Manual & Computerized Accounting Systems, from http://smallbusiness.chron.com/differences-between-manual-computerized-accounting-systems-3764.html

Smith, J. A. (2014). *Qualitative psychology: A practical guide to research methods*: Sage.

Soudani, S. N. (2013). The usefulness of an accounting information system for effective organizational performance. *International Journal of Economics and Finance, 4*(5), p136.

Stolowy, H., & Touron, P. (2013). *The integration of financial accounting, management accounting and cash flow accounting: the users' opinion.* Paper presented at the a Workshop Organized by the Amos Tuck School at Dartmouth College, Hanover, New Hampshire. Recuperado em.

Strauss, D. F. (2013). The scope and limitations of Von Bertalanffy's systems theory. *South African Journal of Philosophy, V2*(I3), pp 163-179.

Tanis, V. N. (2013). Historical Development of Cost and Management Accounting in Europe and US, from http://www.ilkerbulat.com/Icerik/File/Veyis%20N.%20Tanis%20%28YAY6%29.pdf

University of Nairobi. (2016). *2015-2016 Annual Report.* Nairobi: University of Nairobi.

Watts, R. L., & Zimmerman, J. L. (2013). Positive accounting theory: a ten year perspective. *Accounting review*, 131-156.

Weibenberger, B. E., & Angelkort, H. (2014). *Intergration of financial and management accounting systems: the mediating influence of a unified financial language on controllership effectiveness.* Justus Liebig University Giessen.

Wiley, C. (2013). The History of Accounting from http://www.accountingedu.org/history-of-accounting.html

Worsham, J., Eisner, M. A., & Ringquist, E. J. (2015). Assessing the assumption: a critical analysis of agency theory. *Sage Journals*.

Wright, R. M. (2014). *Internal Audit, Internal Control and Organisation Culture.* Doctor of Philosophy Victoria University.

APPENDICES

APPENDIX I : INTRODUCTORY LETTER

Paul Gaitho Kimani,

P.O Box 408 -40200 Kisii

CBM12/10585/14

To,

The Manager

_____

_____

Dear Sir/Madam

RE : RESEARCH INTRODUCTION LETTER

I am **Paul Gaitho Kimani** a Master's in Business Administration (Accounting Option) Student at Kisii University registration number – CBM12/10585/14 conducting a research on the topic **"THE EFFECTS OF INTEGRATED COMPUTERIZED ACCOUNTING PRACTICES ON ENSURING EFFECTIVE FINANCIAL CONTROLS OF SUPERMARKETS IN KISII COUNTY, KENYA".** I am seeking for your honest and candid responses on this topic through this questionnaire. Your response and the findings of the research shall be used for academic purposes only be treated confidential. Kindly respond accordingly and tick appropriately.

I am looking forward to a positive response.

Yours Sincerely

Paul Gaitho Kimani,
Researcher.

APPENDIX II : QUESTIONNAIRE

Section A: General Information

Kindly respond accordingly and tick appropriately.

1. What was your age?

    [ ] 18-24 years

    [ ] 25-35 years

    [ ] 36-50 years

    [ ] 50-60 years

    [ ] Over 60 years

2. Select your gender

    ( ) Male ( ) Female

3. What was your highest level of your academic qualification?

    [ ] Diploma or professional

    [ ] Bachelor's degree

    [ ] Master's degree

    [ ] Doctorate degree

4. How long have you worked in the supermarkets?

    [ ] Less than one year

    [ ] 1 – 5 years

    [ ] 6 – 10 years

    [ ] Over 10 years

Section B: Integrated Financial Operations

How can you rank the level of integration of the financial operations by the integrated computerized accounting system used by yours supermarket?

Integrated financial operations	**Not at all (1)**	**Small extent (2)**	**Moderately integrated (3)**	**Great extent (4)**	**Fully integrated (5)**
Cash management					
Inventory management					
Supply chain management					
Accounts payable management					
Accounts receivable management					
Revenue management					
Customer relationship management					
Baking of cakes and breads					
Project management					
Non-current asset management					
Payroll management					
General ledger management					
Debt management					
Budgeting and budgetary compliance					
Taxation					

Section C: Operating Segments Information

How often does your supermarket use ICAS to classify and categorize the financial transactions and information in the following segments?

Segments Information	**Never (1)**	**Rarely (2)**	**Sometimes (3)**	**Most of the Times (4)**	**Always (5)**
Geographical information *(consolidation and reporting of various branches of the supermarket)*					
Product segmentation *(Categorization of products & services)*					
Customer segmentation *(classification of customers)*					
Market segmentation *(Categorization and classification of markets served by the supermarket)*					
Service delivery segmentation *(mode of service to customers such as cash sale, card sale, online sale etc.)*					

Section D: Computerized Integrated Accounting

How do you rank the level of integration of the transactions relating to the following branches of accounting by the ICAS used your supermarket.

Accounting Transactions	**Not at all (1)**	**Small extent (2)**	**Moderately integrated (3)**	**Great extent (4)**	**Fully integrated (5)**
Financial accounting transactions *(source records, journal entries, ledgers, trial balance, financial statement & reports and financial ratio analysis)*					
Cost accounting transactions *(Cost ascertainment, cost estimation, cost management and budgeting)*					
Management accounting transactions *(financial forecasting, transfer pricing and inventory management)*					
Tax accounting transactions *(Income tax, monthly VAT, Exercise duty, customs, fees and levies)*					
Fund accounting transactions *(project finances, reserve funds, staff gratuities, customer containers deposits etc.)*					
Auditing *(System generated audit trail)*					

Section E: Consolidated financial reporting transactions

How often does the supermarket use integrated computerized accounting system generate Consolidated Financial Reporting Transactions of the following related entities?

Related Entities	**Never** **(1)**	**Rarely** **(2)**	**Sometimes** **(3)**	**Most of the Times** **(4)**	**Always** **(5)**
Subsidiaries transactions *(Where company owns more than 50% of the equity shares)*					
Associates transactions *(Where company owns 20% -50% of the equity shares and was the major shareholder)*					
Financial / Investment assets *Assets held by the company such as shares, debentures, fixed deposits and treasury bills and bonds.*					
Joint controlled operation *Operations controlled jointly in partnership with other organization(s)*					
Joint controlled assets *Assets held jointly in partnership with other organization(s)*					
Joint controlled entities *Entities owned jointly in partnership with other organization(s)*					
Investment Property transactions *Assets held for renting and leasing, and/or for capital appreciation purpose*					

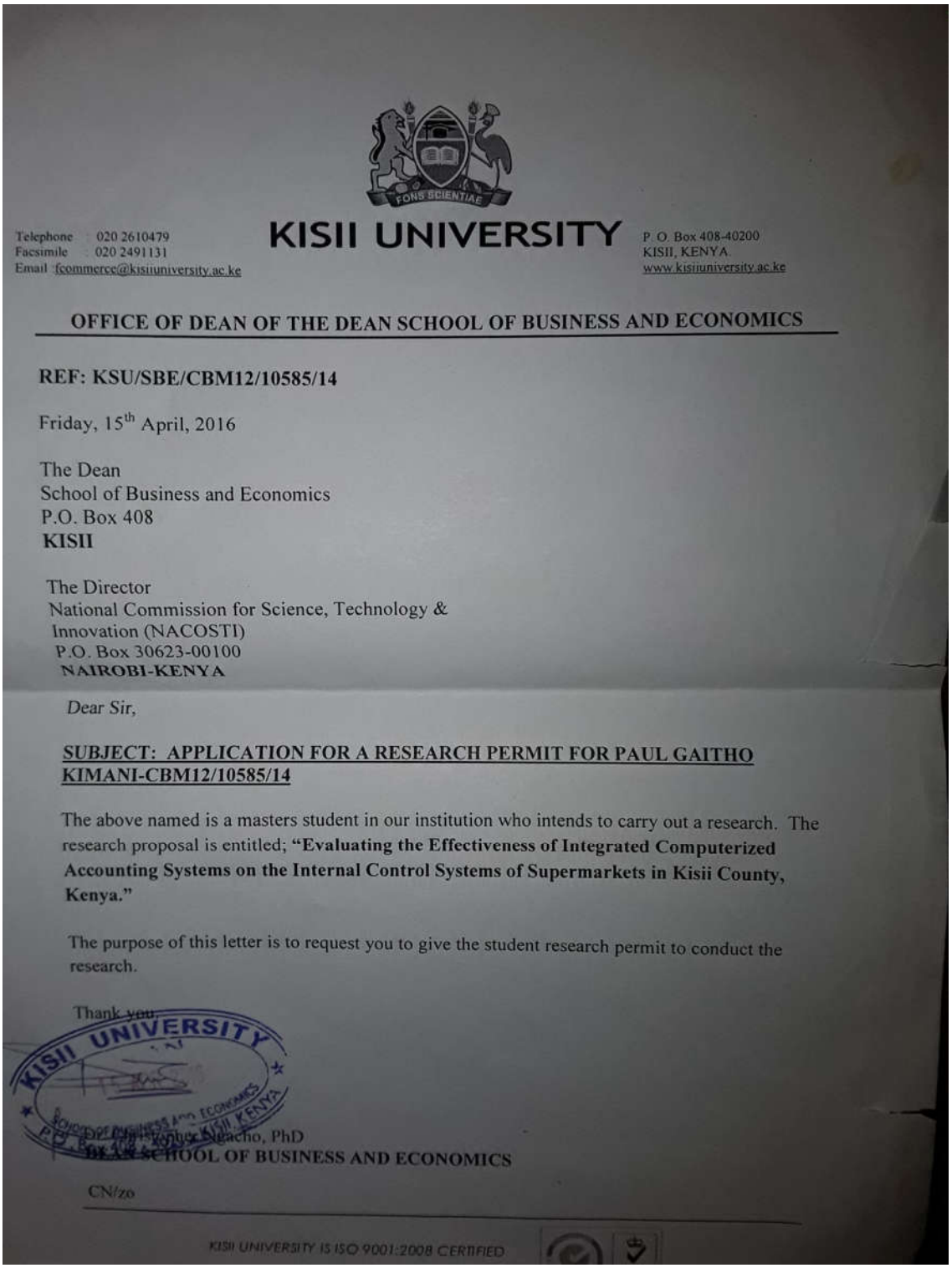
Section F: The Internal Controls Procedures

How would you rank the following internal control procedures as applied by the ICAS in your supermarket?

Internal Control Procedures	**Very Low (1)**	**Low (2)**	**Moderate (3)**	**High (4)**	**Very High (5)**
Organization plan chart					
Segregation of duties by assignment of user rights and roles					
Employees job rotation					
Access to data and records through password and encryptions					
Authorization and approval by responsible persons					
Arithmetic accuracy of the transactions					
Improved integrity and ethical conduct of the staff					
Enhanced supervision and monitoring the personnel					
Budgetary compliance					
Surprise checks for errors and frauds					
Transactional audit trail					

Thank you for your candid response and time

APPENDIX III : KISII UNIVERSITY AUTHORITY LETTER



KISII UNIVERSITY

Telephone : 020 2610479
Facsimile : 020 2491131
Email :fcommerce@kisiiuniversity.ac.ke

P. O. Box 408-40200
KISII, KENYA.
www.kisiiuniversity.ac.ke

OFFICE OF DEAN OF THE DEAN SCHOOL OF BUSINESS AND ECONOMICS

REF: KSU/SBE/CBM12/10585/14

Friday, 15th April, 2016

The Dean
School of Business and Economics
P.O. Box 408
KISII

The Director
National Commission for Science, Technology &
Innovation (NACOSTI)
P.O. Box 30623-00100
NAIROBI-KENYA

Dear Sir,

SUBJECT: APPLICATION FOR A RESEARCH PERMIT FOR PAUL GAITHO KIMANI-CBM12/10585/14

The above named is a masters student in our institution who intends to carry out a research. The research proposal is entitled; **"Evaluating the Effectiveness of Integrated Computerized Accounting Systems on the Internal Control Systems of Supermarkets in Kisii County, Kenya."**

The purpose of this letter is to request you to give the student research permit to conduct the research.

Thank you.

KISII UNIVERSITY
P.O. Box 408 - 40200 KISII KENYA

Dr. Charles Nyacho, PhD
DEAN SCHOOL OF BUSINESS AND ECONOMICS

CN/zo

KISII UNIVERSITY IS ISO 9001:2008 CERTIFIED

APPENDIX IV : NACOSTI RESEARCH PERMIT

CONDITIONS

1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit
2. Government Officers will not be interviewed without prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2) hard copies and one(1) soft copy of your final report.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice

REPUBLIC OF KENYA

National Commission for Science, Technology and Innovation

RESEARCH CLEARANCE PERMIT

Serial No. A 10033

CONDITIONS: see back page

THIS IS TO CERTIFY THAT:
MR. PAUL GAITHO KIMANI
of KISII UNIVERSITY, 1350-40200 KISII,has been permitted to conduct research in *Kisii County*

on the topic: *EVALUATING THE EFFECTIVENESS OF INTEGRATED COMPUTERIZED ACCOUNTING SYSTEMS ON THE INTERNAL CONTROL SYSTEMS OF SUPERMARKETS IN KISII COUNTY, KENYA*

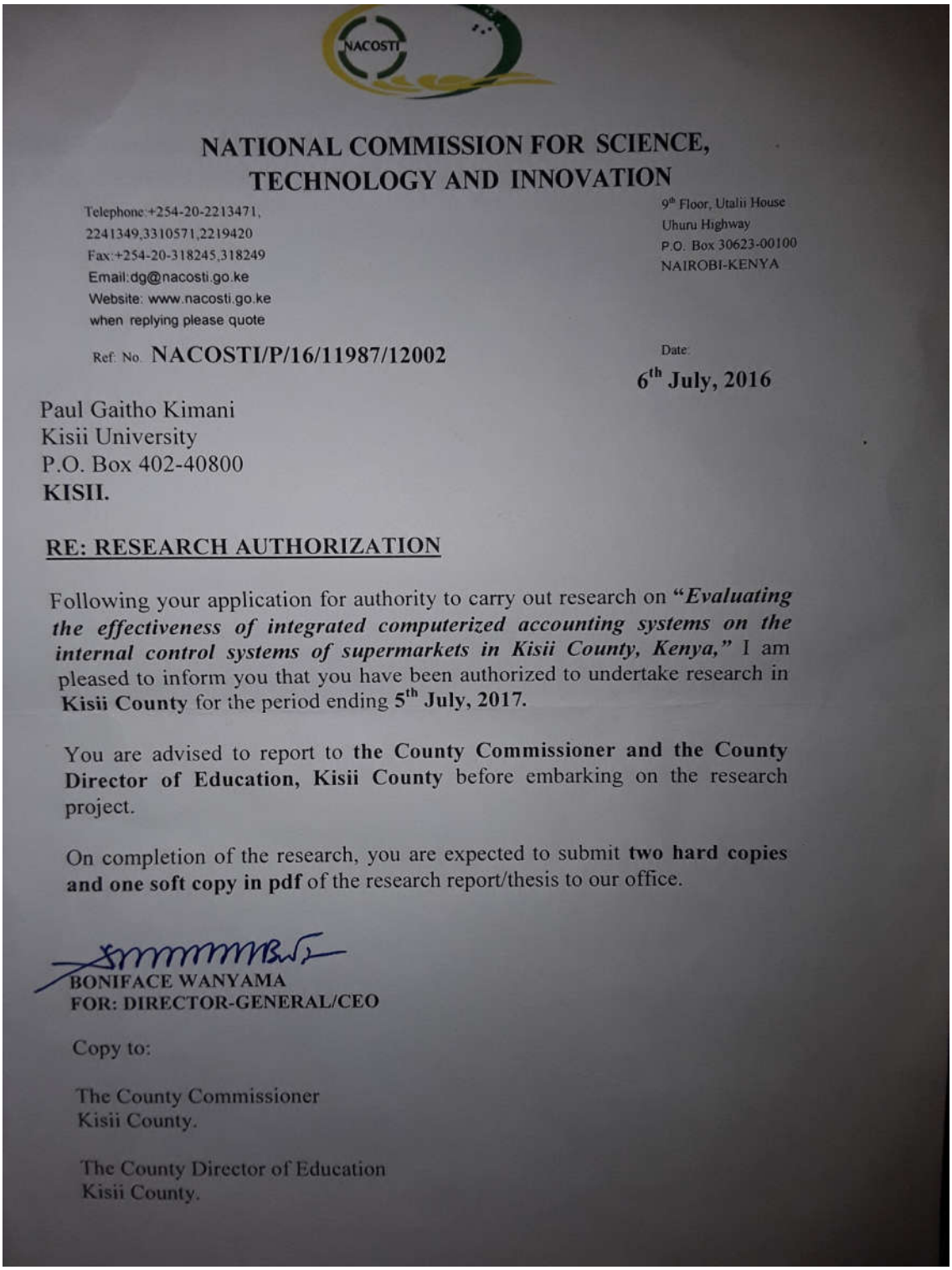
for the period ending:
5th July,2017

Permit No : NACOSTI/P/16/11987/12002
Date Of Issue : 6th July,2016
Fee Recieved :Ksh 1000

.....
Applicant's Signature

.....
Director General
National Commission for Science, Technology & Innovation

APPENDIX V : NACOSTI AUTHORIZATION LETTER



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone:+254-20-2213471,
2241349,3310571,2219420
Fax:+254-20-318245,318249
Email:dg@nacosti.go.ke
Website: www.nacosti.go.ke
when replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/16/11987/12002**

Date:
6th July, 2016

Paul Gaitho Kimani
Kisii University
P.O. Box 402-40800
KISII.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Evaluating the effectiveness of integrated computerized accounting systems on the internal control systems of supermarkets in Kisii County, Kenya,"*** I am pleased to inform you that you have been authorized to undertake research in **Kisii County** for the period ending **5th July, 2017.**

You are advised to report to **the County Commissioner and the County Director of Education, Kisii County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Kisii County.

The County Director of Education
Kisii County.

APPENDIX VI : SUMMARY OF ANTI-PLAGIARISM REPORT