

**EFFECT OF ACTIVITY BASED BUDGETING ON RESOURCE BASED
PERFORMANCE IN UNIVERSITIES IN WESTERN KENYA**

BY

CAROLYNE AKINYI OCHIENG

**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS
ADMINISTRATION IN FINANCE**

SCHOOL OF BUSINESS AND ECONOMICS

MASENO UNIVERSITY

© 2019

DECLARATION

This project is my original work and has not been presented in any other institution in its present form and manner for the fulfillment of the requirement for the award of a degree.

Signature: **Date**

Carolyne Akinyi Ochieng
MBA/BE/00025/2017

Declaration by the Supervisor:

This project has been submitted for presentation with my approval as the student's supervisor.

Signature **Date**

Dr. Benjamin Owuor Ombok
Department of Accounting and Finance
School of Business and Economics
Maseno University

ACKNOWLEDGEMENT

First, I acknowledge that it is not by my own wisdom and strength that I was able to complete this work but by the grace of God the Almighty in whom I had faith and hope to finish this work: by His strength I had encourage to carry on.

I acknowledge with profound thanks the tireless efforts of my supervisor: Dr. Benjamin Owuor Ombok, who was ever their when need be.

My gratitude goes to my Husband: Daniel Kisinyo for financial and moral support throughout the study period and finally to my little daughters, Tracy Josephine, Tammy Joy and Talia Jill, thank you for your understanding.

In addition, I wish to thank all the respondents involved in this study for the valuable data on which the findings of the study are based. Without their support this project would have been certainly less informed.

DEDICATION

This study is dedicated to my family for their constant encouragement and for being patient enough to see me go through my academic struggle thus realizing my long cherished dream.

ABSTRACT

Resource Based Performance (RBP) is an innovative construct of an organisation, encompassing strategy, formal structure, and customer to supplier relationships; including innovation and technological capabilities; on which performance is tested. Firm success is not necessarily associated with market power or industry structure, but rather the result of innovation and new technologies which are critical in influencing the dynamics of external environment and competition. In essence, the resource-based theory explores the origins of competitive advantage and superior performance. Activity based budgeting has been recognized for lending this to performance. Previous studies on ABB have focused the context of business organization whereas; it is evident that there is increased information requiring attention on Resource Based performance analysis. Effect of activity based budgeting on resource based performance in universities, although important has not been given adequate attention. Available literature show minimum effort in establishing the relationship. Despite the value of activity based budgeting and its implementation by universities, there is evidence of fluctuating performance of the universities resources. The purpose of this study was therefore to analyze the effect of activity based budgeting on resource based performance in Universities in Western Kenya. Specific objectives of the study were to; establish effect of activity based budgeting on budget goal reallocation, determine contribution of activity based budgeting on implementation timelines, determine effect of activity based budgeting on effective budget resource application and analyze effect of activity based budgeting on value of the firm. The study adopted correlation research design. The null hypotheses were that; activity based budgeting measured in terms Cost-Revenue measurement, activity time measurement and activity to activity relationship do not significantly affect resource based performance in the universities. The study was guided by goal setting theory, cognitive evaluation and the accounting tool of balance scorecard. The study was conducted in Western Kenya on 21 Universities with a target population of 36 finance management officers; comprising of Finance Officers and Senior Internal Auditors where $N=32$ and 4 was used for piloting. A census survey was conducted on the entire target population. Primary data consisting of respondent opinion and secondary data was collected by use of structured questionnaires and secondary data schedules. Means, standard deviation, correlation, and regression were used to analyse data. Validity test revealed respondents' knowledge of the tools, while cronbach's Alpha reliability coefficient was 0.7, meaning scale items were 70% reliable. The result of the study has potential of contributing knowledge to be used by scholars and researcher as reference material and it was also be useful to policy makers to lay strategies on how to reduce cost and maximize profit. Regression results reveal R^2 of 0.637 to budget goal reallocation, 0.724 for implementation timelines, 0.698 to effective budget resource application and 0.627 to Value to the firm, implying that ABB account for 63.7% of budget goal reallocation, 72.4% of implementation timelines, 69.8% to effective budget resource application and 62.7% of Value to the firm, all significant at $p<0.05$. Hence $H_{0(1-5)}$: $r=0$ are rejected and $H_{1(1-5)}$: $r\neq 0$ are accepted. In conclusion, the findings show that activity-based budget has effects on the resource based performance of the university as indicated by the positive coefficients of the independent variables. It is recommended that, all the universities should adopt activity-based budgeting strategy in order to prudently make use of financial resources.

TABLE OF CONTENTS

DECLARATION	ii
ACKNOWLEDGEMENT	iii
DEDICATION	iv
ABSTRACT.....	v
TABLE OF CONTENTS.....	vi
LIST OF ACRONYMS AND ABBREVIATIONS	ix
OPERATIONAL DEFINITIONS OF TERMS	x
LIST OF TABLES	xii
LIST OF FIGURES	xiii
CHAPTER ONE: INTRODUCTION.....	1
1.1 Background of the Study	1
1.2 Statement of the Problem.....	8
1.3 Objectives of the Study.....	9
1.3.1 Purpose of the Study	9
1.3.2 Specific Objectives	9
1.4 Hypotheses of the Study	9
1.5 Significance of the Study	10
1.6 Scope of the Study	10
1.7 Conceptual Framework.....	11
CHAPTER TWO: LITERATURE REVIEW.....	12
2.1 Introduction.....	12
2.2 Theoretical Literature.....	12
2.2.1 Goal Setting Theory	12
2.2.2 Cognitive Evaluation Theory.....	13
2.2.3 Balanced score card	14
2.3 Empirical Review.....	15
CHAPTER THREE: METHODOLOGY	19
3.1 Introduction.....	19
3.2 Research Design.....	19

3.3 Study Area	19
3.4 Target Population.....	19
3.4.1 Sample Size.....	20
3.4.2 Sampling Procedure	20
3.5 Data Collection Instruments	21
3.5.1 Pilot Testing.....	21
3.5.2 Validity of Instrument.....	21
3.5.3 Reliability of the Instrument	22
3.6 Data Analysis Techniques.....	22
3.6.1 Model Specification	22
3.7 Ethical Consideration.....	23
CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION.....	24
4.1 Introduction.....	24
4.2 Questionnaire Response Rate	24
4.3 Demographic information of the respondents.....	25
4.3.1 Distribution of respondents by gender	25
4.3.2 Distribution of respondents by age	25
4.3.3 Distribution of respondents by education level	26
4.4 Descriptive statistics	27
4.4.1 Descriptive statistics on activity-based budget on budget goal reallocation	27
4.4.2 Descriptive statics on effect of activity-based budget on implementation timelines	29
4.4.3 Descriptive statics on the effect of activity-based budget on effective budget resource application.....	30
4.4.4 Descriptive statics on effect of activity-based budget on value of the firm.....	32
4.5 Correlations Analysis.....	33
4.6 Regression Analysis.....	36
CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.	48
5.1 Introduction.....	48
5.2 Summary of the Findings.....	48
5.3 Conclusions.....	52
5.4 Recommendations.....	53
5.5 Limitations of the Study.....	54

5.6 Areas for Further Research	54
REFERENCES.....	55
APPENDICES	59
Appendix I: Letter of Introduction.....	59
Appendix II: Questionnaire.....	60

LIST OF ACRONYMS AND ABBREVIATIONS

AAR	Activity to Activity Relationship
ABB:	Activity Based Budgeting
ABC:	Activity Based Costing
ABM:	Activity Based Management
ANOVA:	Analysis of Variance
ATM:	Activity Time Measurement
BGR:	Budget Goal Reallocation
BSC:	Balance Scorecard
CRM:	Cost Revenue Measurements
GOG:	Government of Ghana
GOK:	Government of Kenya
IGA:	Income Generating Activity
ImPT:	Implementation Timelines
OECD:	Organization of Economic Commission Development
RBF:	Resource Based Performance
RBP:	Resource Based Performance
RBT:	Resource Based Theory
RBV:	Resource Based View
ROA:	Return on Asset
SPSS:	Statistical Package for Social Science
UWEO:	University of Washington Education Outreach

OPERATIONAL DEFINITIONS OF TERMS

Activity based Budgeting: It therefore provides direction for capacity utilization, breakdown of functions into detailed activities, and the determination of resources needed with significant increase the management's understanding of, and control over, those service functions; thereby increasing value to the firm.

Resource based performance: is an innovative construct of an organisation, which are strategy, formal structure, and customer to supplier relationships; including innovation culture, and technological capabilities, on which innovation performance are tested.

Personal Supplies: Personal supply describes the willingness of an individual firm to provide a specific quantity of a good or service to the market over a given period of time. It depends on a number of different factors, such as the price of the product, cost of production, government policies and regulation, etc. (for more information see also factors that cause a shift in the supply curve). In most cases (i.e. for normal goods) supply increases as the price of a good or service rises.

Procurement Practices: Procurement practices can be described as activities which involve procurement planning, procurement controls, procurement monitoring and training workforce. Procurement procedures could be guided by three main principles: all parties interested have an equal opportunity to submit tenders, all enquiries must receive equal treatment in order to eliminate discrimination on the grounds of the nationality of the contractor or the origin of the goods/services, and all tendering and award procedures must involve the application of objective criteria. With these combinations, proper application of procurement practices give rise to a number of benefits to an organization and to the strategic plans of organizations that could lead to acceleration and flow of important information between the buyer and supplier, and also helps to respond quickly to highly competitive new market entrants.

Growth of Market Activities: Marketing activities are all measures taken by a company to achieve its marketing goals. This includes: advertising, direct mail, telemarketing, participation in events and trade fairs, brochures, customer magazines, newsletters, websites, press relations, and social communities. Marketing serves to support sales and to stimulate demand e.g. to generate concrete leads or to locate customers with purchase intentions.

Emerging potential players: Emerging markets, also known as emerging economies or developing countries, are nations that are investing in more productive capacity. They are moving away from their traditional economies that have relied on agriculture and the export

of raw materials. Leaders of developing countries want to create a better quality of life for their people. They are rapidly industrializing and adopting a free market or mixed economy.

Demographic Factor: Socioeconomic characteristics of a population expressed statistically, such as age, sex, education level, income level, marital status, occupation, religion, birthrate, death rate, average size of a family, average age at marriage. A census is a collection of the demographic factors associated with every member of a population.

Socio-Economic Factor: Social economics also referred to as socioeconomics, is concerned with the relationship between social and economic factors within society. These factors influence how a particular group or socioeconomic class behaves within society, including their actions as consumers. Different socioeconomic classes may have different priorities regarding how they direct their funds.

Budget Goal Reallocation: Goal Reallocation is considered a critical treatment or mitigation of fiscal stress in a recession arising from upward pressure on expenditure, stemming from increasing unemployment benefits and other means-tested entitlement programmes on the one hand and slow growth of tax revenues on the other in an economy.

Implementation Timelines: Budget Implementation is therefore a phase where the budget becomes a practical management tool that guides on how to achieve program and activity performance indicator targets.

Effective Budget Resource Allocation: A budget allocation is the amount of funding designated to each expenditure line. It designates the maximum amount of funding an organization willing to spend on a given item or program, and it is a limit that is not to be exceeded by the employee authorized to charge expenses to a particular budget line.

Value to the Firm: Value to the firm is a sum of claims of all claimants such as creditors (secured and unsecured) and equity holders (preferred and common). They further state that firm value is one of the fundamental metrics used in business valuation, financial modeling, accounting and even portfolio analysis. It is viewed from several approaches such as balance sheet approaches, which see firm value in view of its assets.

LIST OF TABLES

Table 3.1: Table 1.1: Target Population	20
Table 4.1: Questionnaire Response Rate	24
Table 4.2: Descriptive statistics on activity-based budget on budget goal reallocation	28
Table 4.3: Descriptive statics on effect of activity-based budget on implementation timelines	29
Table 4.4: Descriptive statics on the effect of activity-based budget on effective budget resource application	31
Table 4.5: Descriptive statics on effect of activity-based budget on value of the firm	32
Table 4.6: correlation analysis results showing the relationship between independent and dependent variables.....	33
Table 4.7: Activity Based Budgeting on Budget Goal Reallocation.	36
Table 4.7.1: ANOVA.....	37
Table 4.8: Activity Based Budgeting on Implementation Timelines	39
Table 4.8.1: ANOVA.....	40
Table 4.8.2 Coefficients of Activity Based Budgeting on Implementation Timelines.....	41
Table 4.9: Activity Based Budgeting on Effective budget resource allocation.....	42
Table 4.9.1: ANOVA.....	43
Table 4.9.2 Coefficients of Activity Based Budgeting and Effective budget resource allocation.....	43
Table 4.10: Activity Based Budgeting on Value to the firm.	44
Table 4.10.1: ANOVA.....	46
Table 4.10.2: Coefficients of Activity Based Budgeting on Value to the Firm.....	46

LIST OF FIGURES

Figure 1.1: Conceptual framework for the Study	11
Figure 4.2: Respondents Gender.....	25
Figure 4.3: Distribution of Respondents' by age	26
Figure 4.4: Distribution of respondents by education level.....	27

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Resource Based Performance (RBP) is an innovative construct of an organisation, which are strategy, formal structure, and customer to supplier relationships; including innovation culture, and technological capabilities, on which innovation performance are tested (Kamasak 2015). For Schumpeter (1934), firm success is not necessarily associated with market power or industry structure, but rather the result of innovation and new technologies which are critical in influencing the dynamics of external environment and competition. In essence, the resource-based theory explores the origins of competitive advantage and superior performance (Amit & Schoemaker, 1993; Michalisin et al., 1997; Barney et al., 2011). These scholars consider “intangible resources as significant in examining the factors that account for performance variation” (Galbreath & Galvin, 2006). Resource Based View (RBV) explains the performance differences among firms in relation to internal or firm-level factors, and the effects of innovation as a firm-specific resource on firm performance were frequently examined in strategy literature (Wernerfelt, 1984). However, Lippman and Rumelt (2003) suggest that “because business strategy focuses creation, manipulation, administration, and deployment of specialized resource combinations”, many RBV studies should be conducted in different settings and countries to provide valuable insights regarding the factors that influence innovation performance of firms. Resource based Performance therefore takes an ‘inside-out’ view or firm-specific perspective thereby explaining why some organisations succeed while others fail in the market platform.

The resource-based view of performance postulates a situation where the firm attributes superior financial performance to organisational resources and capabilities (Bharadwaj, 2000). It posits that firms compete on the basis of “unique” corporate resources that are valuable, rare, difficult to imitate, and non-substitutable by other resources (Barney 1991; Conner 1991; Schulze 1992). It adopts a multivariate approach in which several organisational resources and capabilities are examined simultaneously for their influence on several measures of performance of firms. The most critical of such resources and capabilities depict organisational reputation, managerial skills of the firm’s top management, institutional culture and communication. According to Reed and DeFilippo, (1990), Barney (1991), Amit and Schoemaker (1993), Peteraf (1993) RBP differs in profiles among firms account for variations, competitive position and their performance

The Resource-Based Theory (RBT) operates under the assumptions that organisations need to conceive, choose, and implement strategies that are heterogeneously distributed across firms; and that the firm differences remain stable over time (Barney 1991). Resources tend to survive competitive imitation when protected by isolating mechanisms such as time compression diseconomies, historical uniqueness, embeddedness and causal ambiguity. Although proponents of the resource-based performance such as Grant (1991) tend to broadly define resources to include assets, knowledge, capabilities, and organizational processes, it distinguishes between resources and capabilities and provides a classification of resources into tangible, intangible, and personnel-based resources; where tangible resources include the financial capital and the physical assets of the firm such as plant, equipment, and stocks of raw materials. Intangible resources encompass assets such as reputation, brand image, and product quality, while personnel-based resources include technical know-how and other knowledge assets including dimensions such as organizational culture, employee training and loyalty.

Reallocation is a process of readjustment of expenditures compared to existing estimates. Budget Goal Reallocation (BGR) is therefore a function of economic fluctuations; given recessions, growth and other uncertainties (OECD, 2015). Goal Reallocation is considered a critical treatment or mitigation of fiscal stress in a recession arising from upward pressure on expenditure, stemming from increasing unemployment benefits and other means-tested entitlement programmes on the one hand and slow growth of tax revenues on the other in an economy. BGR enables an organisation to transfer of resources from idle assignments or non-priority projects to immediate benefit raising programmes (Fozzard, 2001). The common factors that affect Budget Goal Reallocation revolve around the changing dynamics in the budget operating environment (Sandeep and Sami, 2016). Such elements as revenue measurement and comparison, activity time determination and activity-to-activity relation (synergistic relation between the activities) would affect not only the framework under which budgetary lines are modified, but also the budget goal reallocation through rationalization and operationalising of budgets (Green, Ali, Naeem & Ross 2000). Relevant to University settings, fiscal issues evolving around are; one, reduced government capitation to meet all the budget lines, reduced revenue from income generating activities (IGA) by Universities and reduced revenue based from potential self-sponsored fees, arising from the expanded admission capacity where students are placed in both public and private Universities (Fisseha, 2012). Subsequently, increased cost of providing requisite services where the

University unit capitation rate has been based on historical data, running 20 years backwards; hence not taking into consideration the current market rate for providing services (Rodrigues, Wainaina, and Mwangi (2014). Furthermore, environmental dynamics and increased need for security in higher institutions of learning with threat from terrorism, drugs and rather social vices have generally complicated issues, requiring more focused attention.

Evidence from the existing literature reveal that whereas Activity Based Budgeting (ABB) practices affect Resource Based performance, a majority of information is non-focused, to the education sector; and are not also related to the Universities locally or abroad. OECD (2015), while examining the core issues influencing Resource Based performance, identified on a global perspective, fiscal stress during recession, failing integration of new immigrants, which has caused segregation in various domains of social participation, growing international tensions have increased the threat of terrorism and ageing populations as some of the challenges affecting its success. According to Pascua, (2005), budget is fundamental in describing government's fiscal year's expectations in single most important document. This is because, budget management enforces fiscal discipline, fosters macroeconomic stability, improves the portfolio of programmes by rewarding effective and efficient programmes as well as builds a culture of performance and accountability within the government and its spending units. Silva & Jayamaha (2012), however states that budget is used as performance evaluation tools. Budgets are therefore merely a collection of plans and forecasts. Sharma (2012), indicates that budget as a benchmark tool for management is used as a task control and provides a comparison of the actual results with the budgeted plans and to take corrective action if necessary; some of which is fulfilled through fund transfer from dormant to active votes for optimal budget performance. Whereas budget goal re-allocation is a fundamental practice for budget performance and optimal resource placement, there is no information linking the same with operations of the higher institutions of learning especially in the advent of funding crises or challenges.

Budget Implementation timeline refers to the actual execution of the budget and application of funds to the planned activities (Shard & David, 2010). In budget implementation process, the proposals made in the estimates are effected, where all programs are undertaken and effectively implemented. For institutional performance of effective budget implementation the identified activities takes place throughout the financial year, in which its impact is envisioned in a public expenditure policy and the manner in which the public expenditure is

being managed (Kirira 2007). Budget Implementation is therefore a phase where the budget becomes a practical management tool that guides on how to achieve program and activity performance indicator targets (Margah, 2005). It is the budget cycle phase that probably matters most to the public, being that essential services are delivered through its functional estimates (Government of Ghana,). According to (GOK, 2015), summary of the Public Procurement Regulation (2006), Public Finance Management Act (2012) and Public Finance Management Regulation (2015), the main objectives for implementation of the Budget is to maximize economy, promote competition, improve financial prudence, promote integrity and responsibility of public finance, enhance transparency and accountability, restore confidence in the procurement process and facilitate the promotion of the local industry and spur economic development.

Budget implementation process faces many challenges such as insufficient funds, institutional weakness, unsatisfactory fund allocation, lack of staff capacity, poor participation, poor governance, inadequate investments in various systems and structures, inappropriate use of financial regulations, lack of proper prioritization of expenditure, lack of proper mechanisms and channels to collect revenue hence not achieving the organisational targets and leading stakeholders not to realise value for their money (Kiringai, 2002). Budget implementation timeline are all the divisions for actualization of specific estimate activities during the entire budget period (Pierce, 2004). It deals with assignment of resources on a priority basis to effectively achieve budget phases (Hanninen, (2013). Management of budget implementation timeline has been difficult to achieve considering the fact that resources are not always available for timely allocation and achievement and budget output (Wangithi, 2013). Failure to observe and achieve the set timelines may subsequently result into inconsistent and unproductive implementation pocket/facets which do not draw from the strength of previous timely implementation into a successive process Silva & Jayamaha (2012). In the University set up experience, budget implementation timeline is still a challenge despite the budget line activities like cost-revenue measurement (personal supplies and procurement practices), activity time measurement (growth of market activities and emerging potential players) and activity to activity relationship (demographic factor and social economic factors), happening.

A budget is a financial plan used to estimate revenues and expenditures for a specific period of time. It is a management and planning tool, not just an accounting document. It assists in

the allocation of resources Libby and Marray (2007). A budget allocation is the amount of funding designated to each expenditure line. It designates the maximum amount of funding an organization willing to spend on a given item or program, and it is a limit that is not to be exceeded by the employee authorized to charge expenses to a particular budget line. (<https://searchcio.techtarget.com...>), defines resource allocation as the process of assigning and managing assets in a manner that supports an organization's strategic goals. Resource allocation includes managing tangible assets such as hardware to make the best use of softer assets such as human capital. Resource allocation involves balancing competing needs and priorities and determining the most effective course of action in order to maximize the effective use of limited resources and gain the best return on investment. In practicing resource allocation, organizations must first establish their desired end goal, such as increased revenue, improved productivity or better brand recognition. Churchman (2004) asserts that the decision-making function is the responsibility of management in an organization. For an organization's management to execute its responsibility, it will require information about the resource availability and their relative effectiveness for achieving the organization's purpose. Resources are acquired, allocated, motivated and manipulated under the manager's control. They include people, materials, plant and equipment, money, and information. Fine (2000) further describes a firm's core competitive advantage as the ability to judiciously organize its resources in the value chain where new product development process, for example, managers have to determine the new product portfolio before competitors take up the market. Cooper and Kleinschmidt (1987) posits that, the product portfolio decision is usually made under great time pressure, and is determined based on estimations of the required resources and potential benefits of a new product line, such as projected production costs, market share, and profitability, among others. Srinivasan and Bhagwati (1978) on the other hand says that, from the general market theory in economics, complete and distortion-free market information should automatically guide resources to their optimal allocation.

According to TJ Hacker (2011), resource allocation is very important since it is flexible for all sizes of organizations once allocating resources is done well, then there should not be any problem. Effective resource allocation leads to no waste of money. It lets you know the performance of team members in a project. Hence it can be easier for you to assign tasks to the resource according to their skills (Lind and Tyler 1988, Cohen-Charash and Spector 2001). They assert that resource allocation also boosts productivity once a task has been completed before the deadline without compromising the quality .Furthermore proper

allocation of resources improves time management since it sets the actual estimate hours to complete the tasks. Notably, allocating resources wisely improves employee morale where the managers can identify who is doing what, lagging or leading (Graves and Ringuest (2003).

The first function of resource allocation is to resolve the problem of what to produce and in what quantities which involves allocation of scarce resources in relation to the composition of total output in the economy. The next task of resource allocation is to determine the technique to be used for the production of article (Athanasopoulos,1998). Another function of resource allocation is to determine the distribution of income where in a free enterprise economy product- distribution and income-distribution are interdependent and it is a system of mutual exchange where the producers and consumers are largely the same people (Arnold, Nicoletti, and Scarpetta, 2012). The resource allocation mechanism also helps in the full utilisation of the resources of an economy. Full utilisation of resources implies their full employment. This requires increase in income through large investments, and ultimately to the equality of saving and investment. Lastly, resource allocations are an important factor in providing for economic growth. The impetus for improvement, innovation and development comes through the resource allocation mechanism. Higher resource allocation and profits encourage large industrial concerns to spend huge sums on research and experimentation to improve and develop better techniques (Friebel and Raith, 2006). From the foregoing information it is evident that equitable allocation of resources always requires integrity, trust in providence, and a willingness to manage the operation risks. However the challenge of scarce resources affect allocation on a budget line activity- to - time measurement; with growth of market activities and emerging potential players taking place in the University set up.

Firm value is an economic measure reflecting the market value of a whole business as described by Kurshev and Strebulaev (2005). According to Ehrhard and Bringham (2003) value to the firm is a sum of claims of all claimants such as creditors (secured and unsecured) and equity holders (preferred and common).They further state that firm value is one of the fundamental metrics used in business valuation, financial modeling, accounting and even portfolio analysis. It is viewed from several approaches such as balance sheet approaches, which see firm value in view of its assets. This approach determines firm value based on income statement, through analysis of sales, earnings or other indicators. Subsequently goodwill approach determines firm value by calculating book value of assets plus goodwill,

as a function of future cash flows and level of return. Brigham (1999) defines company value as the value given to management of financial markets and corporate organizations as Firm continues to grow. This value is determined by market perceptions of companies' performance sustainability that represent market value of shares outstanding. According to Yermack (1996) and Siallagan (2006) posits that, some researchers use different measurement as proxy and Tobin's Q for Firm value where Tobin's Q is defined as the ratio of book value of debt plus the market value of equity divided by book value of equity. Brigham (1999), and Wahyudi and Prawesti (2006) uses a proxy ratio of market value to book value. This ratio is defined as the market value of equity divided by book value of equity. According to the shareholder theory, the primary purpose of a firm is usually defined as value maximization (for shareholders). By this we refer to maximization of a firm's equity, which is in fact the present value of expected benefits (cash flows) that shareholders can expect from the firm. According to this definition, a firm's value can be maximized only when expected benefits are maximized in the long-run. By this we should keep in mind that value maximization (of equity) is not equivalent to profit maximization. Expected profits can only to a certain extent explain the market value of the equity. According to Jensen (2001), value maximization objective is more than just creation of a firm value. Sole value maximization does not boost energy and enthusiasm of workers and managers to create value; it serves only as a criterion for evaluating the firm's performance. Hence, the value maximization as a business objective has to be supported with the vision of a firm, strategy and tactics, which pull all firm's driving forces (i.e., managers and workers) in their eagerness for domination at the competitive market. Several studies show that Firm value as linked with the firm performance where high firm performance increases the company stock market price thus the increase in firm value. It is also evident that the award of stock options to motivate management to take action to improve the company's stock price will in turn; maximize shareholder value or the value of the company. Return on Asset (ROA) is also seen to have positive and significant effect on firm value. Therefore such factors that increases the firm value is not seen in the current University Set up.

Moustafa (2005) established that Activity based budgeting providing deeper insights to their capacity utilization and resource allocation. Activity based budgeting has capacity for Connecting the operational budget to the strategic goals of the organization, thereby enhancing productivity of a firm. It therefore provides direction for capacity utilization, breakdown of functions into detailed activities, and the determination of resources needed

with significant increase the management's understanding of, and control over, those service functions; thereby increasing value to the firm. Robert, Muras and Paschall (2000) explain that Current approaches for capturing and allocating overhead to products disguises a series of complex factors that affect a firm's cost structure. The calculation and aggregate reporting of overhead by traditional cost accounting systems has hindered management's understanding of these cost implications. Product-cost reports should assist managers in identifying opportunities to eliminate waste hence improving value to the firm.

Implied state of the Universities currently is reeling under a financial crisis of unprecedented proportion, raising questions about its long term sustainability. Universities are unable to cover basic operating expenses like payment of salaries, utilities, and statutory contributions including income tax and pension funds simply because of the, Public University system debt standing at US\$110 million, with the debt of the premier public university at over US\$10 million. The prevailing financial crisis is the result of interplay of two forces which is macro-level policy reforms with system-wide ramifications, and micro-level institutional governance malpractice. System growth, inequities in enrollment growth, quality enhancement strategies, the failure of the market model, and decreased state support, while the latter includes weak institutional systems of financial governance has led to reduction of tuition revenue owing to increased pressure on the state budget. No university in Kenya has developed a robust market-based revenue generation system besides tuition fees to support the bulk of its operations. Anticipated revenues from research grants, consultancy, industrial partnerships, and sale of goods, among others, have failed to materialize, as Universities lack the capacities to tap into these resources hence leading to a deficit budget.

1.2 Statement of the Problem

Evidence from the existing literature reveal that whereas Activity Based Budgeting (ABB) practices affect Resource Based performance, a majority of information is non-focused, to the education sector; and are not also related to the Universities locally or abroad. Whereas budget goal re-allocation is a fundamental practice for budget performance and optimal resource placement, there is no information linking the same with operations of the higher institutions of learning especially in the advent of funding crises or challenges. In the University set up experience, budget implementation timeline is still a challenge despite the budget line activities like cost-revenue measurement (personal supplies and procurement practices), activity time measurement (growth of market activities and emerging potential

players) and activity to activity relationship(demographic factor and social economic factors), happening. From the foregoing information it is evident that equitable allocation of resources always requires integrity, trust in providence, and a willingness to manage the operation risks. However the challenge of scarce resources affect allocation on a budget line activity- to - time measurement; with growth of market activities and emerging potential players taking place in the University set up. Several studies show that Firm value as linked with the firm performance where high firm performance increases the company stock market price thus the increase in firm value. It is also evident that the award of stock options to motivate management to take action to improve the company's stock price will in turn; maximize shareholder value or the value of the company. Return on Asset (ROA) is also seen to have positive and significant effect on firm value. The calculation and aggregate reporting of overhead by traditional cost accounting systems has hindered management's understanding of these cost implications. Product-cost reports should assist managers in identifying opportunities to eliminate waste hence improving value to the firm. Therefore such factors that increases the firm value is not seen in the current University Set up. However the gap remains in establishing the effect of Activity based budgeting on resource based performance in universities in Western Kenya. This proposed study therefore ought to fill this gap.

1.3 Objectives of the Study

1.3.1 Purpose of the Study

General objective: To determine the effect of Activity-Based Budgeting on Resource-based performance in universities in western Kenya, Kenya.

1.3.2 Specific Objectives

- i.** To establish effect of Activity based budget on Budget goal reallocation
- ii.** To determine effect of activity-based budget on implementation timelines
- iii.** To determine effect of activity-based budget on effective budget resource application
- iv.** To analyze effect of activity-based budget on value of the firm.

1.4 Hypotheses of the Study

H₀₁: There is no significant effect of activity-based budgeting on budget goal reallocation in universities in western Kenya

H₀₂: There is no significant effect of activity-based budgeting on implementation timelines in universities in western Kenya

H₀₃: There is no significant effect of activity based budgeting on effective budget resource application in universities in western Kenya

H₀₄: There is no significant effect on activity based budgeting on value of the firm in universities in western Kenya

1.5 Significance of the Study

Resource Based Performance (RBP) is an innovative construct of an organisation, which are strategy, formal structure, and customer to supplier relationships; including innovation culture, and technological capabilities, on which innovation performance are tested, firm success is not necessarily associated with market power or industry structure, but rather the result of innovation and new technologies which are critical in influencing the dynamics of external environment and competition. In essence, the resource-based theory explores the origins of competitive advantage and superior performance. These scholars consider “intangible resources as significant in examining the factors that account for performance variation”. Resource Based View (RBV) explains the performance differences among firms in relation to internal or firm-level factors, and the effects of innovation as a firm-specific resource on firm performance were frequently examined in strategy literature suggest that “because business strategy focuses creation, manipulation, administration, and deployment of specialized resource combinations”, many RBV studies should be conducted in different settings and countries to provide valuable insights regarding the factors that influence innovation performance of firms. Resource based Performance therefore takes an ‘inside-out’ view or firm-specific perspective thereby explaining why some organisations succeed while others fail in the market platform. The study findings may therefore be beneficial in guiding financing policy framework suitable for higher learning Institutions. On the knowledge frontier, the findings may provide a basis for further research.

1.6 Scope of the Study

This study sought to examine the effect of activity based budgeting on resourced based performance in universities in western Kenya, research conducted among Finance Officers and Senior Internal Auditors. The study was carried out within a period of four months. The research was intended to establish correlation between Activity Based Budgeting and Resource Based Performance in universities in western Kenya with the aim of helping management to maximize profit and reduce costs.

1.7 Conceptual Framework

This research looks at the relationship between Activity Based Budget in selected Universities in Western Kenya and the Resource Based performance. The independent variable is the Activity Based Budget and Dependent variable is Resource Based Performance.

Independent Variables

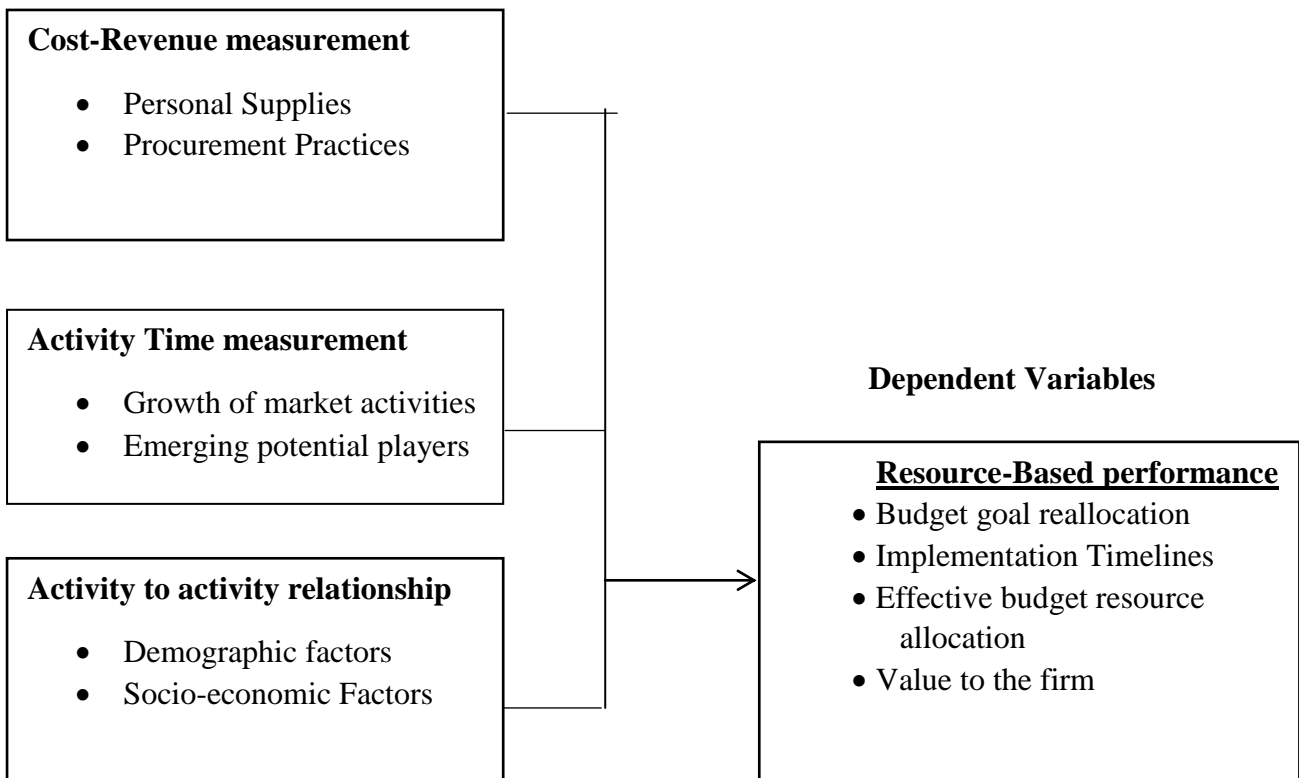


Figure 1.1: Conceptual framework for the Study

Source: Researcher 2019

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews relevant existing literature from other researchers who have carried out their research in the same field of study. Specific emphasis will be put on issues pertaining to effect of activity based budgeting on resource based performance in Universities in Western Kenya.

2.2 Theoretical Literature

2.2.1 Goal Setting Theory

Goal setting theory according to Locke (1990) and Latham (2002) postulate that Goal Based Theory deals with the personal or institutional drive to realise the intended benefits. They therefore presuppose that budgeting process is action determination and assignment process that sets the standards against which actual achievements are compared. Having been developed inductively within industrial organization psychology for over 25 years period based on 400 laboratory and field studies, these studies showed that specific high (harder) goals lead to a higher level of task performance than do easy goals or vague abstract goals such as the exhortation to “do ones best”. A budget is therefore a way of setting an organization at goals for a specific period of time. The prime axiom of goals lead to higher performance than when people strive to simple “do their best” the performance benefits of challenging specific goals have been demonstrated in hundreds of laboratory and field studies. Such goals positively affect the performance of individuals, groups, organization units as well as entire organizations and over periods long as twenty five years (Heslin, Vande Walle, & Carson, 2009).By providing direction and a standard organ which progress can be monitored, challenging goals can enable people to guide and refine their performance. It is well documented in the scholarly and practitioner literatures that specific goal can boost motivation and performance by leading people to focus their attention and specific objectives increase their effort to exclusive objective that persist in the face of setbacks and develop new strategies to goal attainment. Through such motivational processes, challenging goals often lead to valuable rewards such as recognition, promotions and /or increases income from one work.

Budgets should be set in a way that staff members recognise that their target achievements are challenging. Even through setting high goals, set the bar higher to obtain self-satisfaction,

attaining goals creates a heightened sense of efficiency (personal effectiveness), self-satisfaction positive effect and sense of well-being especially when the goals conquered were considered challenging. By providing self-satisfaction, achievement of goals often contribute to increase in organizational commitment which in turn positively affects the organizational citizenship behavior, negatively affects turnover and increases the strength of the relationship between difficult goals and performance.

A budget not only contains the plans to be achieved and the nominal. Activity-based budgeting is an outgrowth of activity-based costing (ABC), which is similar to zero-based budgeting. This budget type accounts for how staff members allocate their effort among activities. Once the full cost of each activity has been calculated, drivers can be established that link support activities to the primary activities of the organization in a law enforcement environment the primary activities are the direct costs of program delivery (Maddox, 1999). By developing a comprehensive activity-based budget executives are able to create a clear nexus between workload and costs. Once developed, executives and managers can exercise control in several ways; assigning personnel based on demonstrated need, expanding or contracting personnel proportionately as the need changes, uncovering waste and hidden costs, determining activities in terms of most and least expensive, thereby subjecting them to review, assessing full efficiency of the organization, identifying places to cut costs, establishing cost baseline that may be influenced through process or technology changes that reduce effort requirements for the activity, and arguing issues from an informed, objective position in favor of the organization's budget.

2.2.2 Cognitive Evaluation Theory.

This theory suggests that when looking at task, we evaluate it in terms of how well it meets over needs to feel competent and in control. If we think we will be able to complete the task, we will be intrinsically motivated to complete the task requiring no further external motivation, where a person has a stronger internal locus of control; they will feel they are in control of how they behave. Where they have a stronger external locus of control, they will believe the environment or others have a greater influence over what they do. Budgets create a sense of responsibility over the manager in charge of a department or section. The feeling of being in control of the outcome of the results of a department due to accomplishment of budget targets can be a source of motivation and thus improvement of performance. People may see external rewards as achieving some degree of control over them or may see the

reward as informational such as where they reinforce feelings of competence and self-determination. When people see the reward as the control, they will be motivated by gaining the reward but not by enhancing the requested behavior. This theory suggests that there are actually two motivation systems, intrinsic and extrinsic that corresponds to two kinds of motivators, intrinsic motivator includes achievements responsibility and come from the actual performance and the task or job.

Extrinsic motivators include pay, promotion, feedback, working conditions. These motivators are things that come from a person's environment and are controlled by others. Intrinsically motivated individuals perform for their own achievement and satisfaction. If they are doing some job because of the pay or the working conditions or some other extrinsic reason they begin to lose motivation. Budget achievement is thus a powerful intrinsic motivator as it creates a sense of personal achievements and responsibility meeting a budget target leads to personal satisfaction and will thus be a boost to managerial performance (Deci, Cascio and Krusell, 1995). Cognitive evaluation theory therefore explains that Activity Based budgeting serves to create a clear link between workload and costs; thereby forming a basis for relevant reward for actual measurably productive activities of the budget plan.

2.2.3 Balanced score card

The Balanced Scorecard (BSC) is a performance management tool for measuring whether the smaller-scale operational activities of an organization are aligned with its larger-scale objectives in terms of vision and strategy. Kaplan and Norton developed the BSC in 1992 by comparing performance measures. Kaplan and Norton believed that evaluating the performance of a company using only financial measures has a negative influence on the enterprise value; thus, an alternative evaluation tool for evaluating performance must be developed. Hence, the Balanced Scorecard was developed. Kaplan and Norton BSC are used to measure financial performances that drive future performance improvement. It also links the performance indicators with corporate strategies. BSC creates a new performance management structure and completes a full cycle derived from corporate vision and strategies through financial perspective, customer perspective, internal business perspective, learning and growth perspective and back to the corporate vision. These multi forces construct an organizational strategy with clear and rigorous concept and form specific goals and measurements. The BSC takes the future growth of a company into consideration while pursuing sales growth. In general, the BSC is an operating measurement system and a strategic

management system used for long-term strategic planning. It was publicized by Kaplan and Norton in 1992 through a series of journal articles and finally published in a book in 1996. According to Drury (2008), it integrates financial and non-financial measures of performance and identifies key performance measures that link measurement to strategy. It is a recent contribution to strategic management that seeks to encourage behavior that is consistent with the organizations strategy. It comprises of an integrated framework of performance measurements that aim to clarify, communicate and manage strategy implementation.

By focusing not only on financial outcomes but also on the operational, marketing and developmental inputs to these, the Balanced Scorecard helps provide a more comprehensive view of a business, which in turn helps organizations act in their best long-term interests. This tool is also being used to address business response to climate change and greenhouse gas emissions. The underlying rationale is that organizations cannot directly influence financial outcomes, as these are "lag" measures, and that the use of financial measures alone to inform the strategic control of the firm is unwise. Organizations should instead also measure those areas where direct management intervention is possible.

The Activity-Based Budgeting (ABB) system was developed to overcome the shortcomings by combining the activities and the budget. Budgeting based on actual demand can help an organization control cost and raise its performance level effectively. ABB system works hand in hand with the BSC, in order to improve the operation efficiency and upgrade the management performance strategy. The combination of Balanced Scorecard (BSC) and Activity-Based Budgeting (ABB) follows the organization's need to budget. It can help the firm reach the performance target that BSC sets. In order to evaluate the overall performance of an Organization, designation to evaluate a system that integrates BSC with ABB in order to control cost and examine the achievement rate of targeted performance.

2.3 Empirical Review

Madjid (2013) analyzed the implementation of performance based budgeting in Education and Training Finance Agency. Based on the study carried out it can be concluded that: agencies has met the performance-based budget documents, but agency strategy in the long-term plan cannot be directly implemented in the activities of the institution. Institutions have implemented elements of performance-based budgeting but still there is a difference between the performance indicators in planning documents with performance indicators on work plans

and action plans. The new standard charge output fraction can be applied in the institutions, and performance evaluation cannot be implemented optimally. Successful implementation of performance based budgeting in organizations affected by the completeness of the rules, understanding, consistency and evaluation. There are differences in perception related to the success of implementation of performance based budgeting in organizations between actors or executor of planning and budgeting which concluded that the agency has successfully implemented the performance-based budgeting, while according to experts of planning and budgeting and service recipient institutions are not yet fully succeeded in implementing performance-based budgeting.

In the study of beyond budgeting practices and applicability, it is examined in various fields and industries as follows; Hope & Fraser (2003) in his study of adopting beyond budgeting, presented the case of Scandinavian Bank: Mitchell (2005) presented the experience of six leading North American financial services Organization: Rickard (2006) presented a report about a well-known companies (Unilever –health hygiene; German Railway, IT services, petrochemical manufacturers) being in various stages of successful integration of beyond budgeting: Ostergren & Stensaker (2011) examined beyond budgeting in practice in a large multi division Oil and energy Company Therefore from this study of Beyond Budgeting, it is evident that budgeting stands at a cross-roads. Every organization has unique requirements for their financial budgeting. It is not a simple choice to choose between traditional or alternative budgeting methods. Each budgeting model produces its own direct or indirect effects throughout the organization. According to Hansen (2011) it generates a set of complex interactions.

According to Sorinel Căpușnean, Ileana Sorina, Cristian-Marian, Letiția Maria and Dan Topor (2013) in their study of implementation of activity-based budgeting method in the economic entities from mining industry of Romania shows that the activity-based budgeting should influence the employees' behavior, by financial or non-financial measures, thus exceeding the functional limits arising from the division of the entity on functional bases, and attracting the attention to the value areas resulting from the coherence of the operations, regardless of functions. One of the most evident advantages of the ABB implementation reflects in the way to calculate the cost and costs analysis. In the case of each process, the accurate determination of planned costs up to the level of each activity can be noted, helping to establish the customers' demands and the work volume necessary for satisfying their

demands at internal level within the entity, but also to establish the differences at the end of the management period by comparing the effective costs with the planned costs. The comparison between the necessary and available resources, as well as the determination of the usage level shall take place at a functional level (departments) and at process level, thus offering a management with a clear perspective on the deficient areas. Thus, the necessary resources for each activity may be determined and the excess can be used or redirected towards the deficient activities. Each process may be assigned a so-called “process manager” who can ensure the success of the management of his activities and who can constitute the guarantor of an efficient management. With a successfully implemented Activity-Based Budgeting system, the management accountants can use the obtained information and data for analyzing the trends, for estimating and modeling according to scenarios “What if...?”. By estimating the quantities and volumes on a defined management period, information regarding all cost objects, cost inductors, necessary amounts and the level of resources costs can be obtained. Practically, the Activity-Based Budgeting is a flexible budgeting, using more factors than the estimated production units or work volume, offering a clearer forecast regarding the current costs and the resources necessary for the entity.

In the study of activity based budgeting in higher Education by David P. Szatmary, (2011) of University of Washington reveals that University of Washington Educational Outreach (UWEO) uses an activity based approach. UWEO budgets and accounts for each class individually, and when appropriate, clusters courses in a certificate, degree, or other type of program. In each course, the UWEO tracks the actual revenue of a class section. It then posts direct expenses to the course, including instructional and material costs. A workload analysis is used to attribute the averaged costs of infrastructure staff and program-management expenses to each course. The budget also includes a risk-opportunity fee as a percentage of gross revenues to pay for program shortfalls and a university overhead that has been calculated by the UW for generic costs such as facilities, the president/provost offices, police, etc. Using this system, an administrator can assess the health of a program on a course level by comparing the actual revenue against expenses. This analysis enables the administrator to make decisions about instructional salaries, pricing, enrollment targets, marketing strategies, and other issues that affect the financial viability of the class or a program. It also allows the manager to make informed decisions about establishing or eliminating a course or program. Developing this model has not been easy or quick but has been extremely valuable.

Expanded to a University-wide level, such an activity-based model can provide administrators at all levels with useful information about the financial performance of their courses, research projects, and clinical efforts. Compared to other approaches, activity-based costing and budgeting, when expanded to revenue and direct costs as well as indirect expenses, enhances decision making by providing information that is accurate and meaningful. Management teams at all levels can assess the cross-subsidies and financial pressure points within their units. A university with a multitude of services, an adequate enterprise-wide fiscal system, the leadership commitment, and a management team with the necessary financial skills will find an activity based approach extremely beneficial. In these times of financial uncertainty, focused financial analysis through an expanded activity-based budgeting model will help a university achieve its goals and ambitions.

According to Tandung Huynh, Guangming Gong, Huyhanh Huynh (2013) in their study of Integration of activity-based budgeting and activity-based management shows that an attempt has been made to present the background of ABC/ABM and other management accounting methods integration in order to overcome shortcomings of ABC/ABM and foster their advantages to support each other for achieving the organization' goals in the best results. The integration of ABB and ABM focuses on both actual results and results-based budgeting. It gives managers a comprehensive view of the organization's results. Under ABB integrating with ABM, top managers can accurately assess the responsibility of all levels of management. Integration of ABB and ABM provide needed information for management to make right decisions is very important in today's global competitive environment. It helps managers not only to solve the matters realize value-added activities and non-value-activities but also to know the activities fall significantly outside results-based budgeting. Managers are alerted that there must be problems requiring attention. Previous studies on ABB have focused the context of business organization whereas; it is evident that there is increased information requiring attention on Resource Based performance analysis. Effect of activity based budgeting on resource based performance in Universities, although important has not been given adequate attention. Available literature show minimum effort in establishing the relationship thus the study seeks to analyze effect of Activity Based Budgeting on Resource Based performance in Universities.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

Research methodology is a general approach to studying a research topic. It is the framework underlying the strategy of a research. This section presents the methodology, which will be used to carry out the study. It describes the type and source of data, the target population and sampling methods and the techniques that should be used to select the sample size. It also describes how data will be collected and analyzed. The suitable methodology in this study gives the guidelines for information gathering and processing.

3.2 Research Design

This study adopted correlational research design. According to Simon and Goes (2011), Correlational research design is a non-experimental research design technique which helps researchers to establish a relationship between two closely connected variables. Correlation studies are also known as ex post facto studies. This literally means, from after the fact. The term is used to identify that the research has been conducted after the phenomenon of interest has occurred naturally. The main purpose of a correlation study is to determine relationships between variables, and if a relationship exists, to determine a regression equation that could be used to make predictions to a population. In correlational studies, the relationship between two variables is measured. Through statistical analysis, the relationship will be given a degree and a direction. The degree of relationship determined how closely the variables are related. This is usually expressed as a number between -1 and +1, and is known as the correlation coefficient. A zero correlation indicates no relationship. As the correlation coefficient moves toward either -1 or +1, the relationship gets stronger until there is a perfect correlation at the end points.

3.3 Study Area

This study was conducted on universities in Western Kenya.

3.4 Target Population

The study is limited to the Universities with the main emphasis being Western Kenya. The target population was 36 consisting of Finance Officers and Senior Internal Auditors in twenty one Universities where N=32 and 4 was used for piloting during the time of the research as tabled below;

Table 3.1: Table 1.1: Target Population

No	Names of the Universities	Finance Officers	Senior Internal Auditors	Total
1	Rongo	1	1	2
2	Maseno	1	1	2
3	Kisii	1	1	2
4	Maasai Mara	1	1	2
5	Tom Mboya	1	1	2
6	Kabianga	1	1	2
7	Jaramogi Oginga Odinga	1	1	2
8	Great Lakes	1	1	2
9	Kibabi	1	1	2
10	Alupe	1	1	2
11	Masinde Muliro	1	1	2
12	Kaimosi Friends	1	1	2
13	Eldoret	1	1	2
14	Moi	1	1	2
15	Uzima	1	1	2
16	Egerton	1	1	2
17	Laikipia	1	1	2
18	Turkana	1	1	2
19	Kabarak	1	1	2
20	Baraton	1	1	2
21	Kenya Highlands Evangelical	1	1	2
Total		18	18	36

Source: Field Data 2019

3.4.1 Sample Size

Sampling refers to the systematic selection of a limited number of elements out of a theoretically specified population of elements. The rationale is to draw conclusions about the entire population. According to Orodho (2003), the ultimate test of a sample design is how well it represents the characteristics of the population it purports to. The reason for sampling in this study was to focus on knowledgeable persons, and accessibility of study population and the greater speed of data collection. According to Kothari (2004), a sample is a subset of the study population

3.4.2 Sampling Procedure

A sampling strategy is used to obtain the research participants. Since the subsection of the phenomenon was planned to be chosen, it is necessary to have a method in which the

subsection of the phenomenon will be selected. There are several ways that can be used: non-probability sampling and probability sampling Salganik & Heckathorn (2004). The probability methods select the participants by using methods that ensure that each participant has an equal chance of participating in the study. They are time consuming but considered to be the most scientific since the most representative sample is selected. In non-probability methods, preference is given to a subsection or a sub-group or sub-process of the phenomenon over others (Pickard 2007). It is used when it is necessary to select some parts of the group that are the most representative and when there is a time limitation to offer all the participants equal chances. For the study, the entire population was taken owing a number of data points available in that population thus census survey sampling

3.5 Data Collection Instruments

This study used primary data consisting of respondent opinion and secondary data. Data were collected by use of structured questionnaires and secondary data schedules. The questionnaires were self-administered where I gave the 30 questionnaires to the respondents, gave them two weeks to fill in the questionnaire and collect after two week for data analysis.

3.5.1 Pilot Testing

A pilot test was done on some staff to guarantee the legitimacy of the information. The examination instruments were pre-tried to affirm that they filled the expected need before they were utilized completely to gather information. Corrections to the poll were made where vital.

3.5.2 Validity of Instrument

According to Mugenda and Mugenda (1999), validity is the accuracy and meaningfulness of inferences, which are based on the research result. It is the degree to which results obtained from the analysis of the data actually represent the variables of the study. The reliability will be tested using the Cronbach's alpha whereby for the judgment for instrument was deemed reliable since the constructs attained alpha greater than 0.7($\alpha \geq 0.7$). Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items are as a group. It is considered to be a measure of scale reliability. A "high" value for alpha does not imply that the measure is unidimensional. If, in addition to measuring internal consistency, you wish to provide evidence that the scale in question is unidimensional and additional analyses can be performed. Exploratory factor analysis is one method of checking dimensionality.

Technically speaking, Cronbach's alpha is not a statistical test - it is a coefficient of reliability (or consistency). Cronbach's alpha is the most common measure of internal consistency ("reliability"). It is most commonly used when you have multiple Likert questions in a survey/questionnaire that form a scale and you wish to determine if the scale is reliable. If you are concerned with inter-rater reliability.

3.5.3 Reliability of the Instrument

Reliability is defined as the measure of degree to which a research instrument yields consistent and coefficient results on data in another given similar situation (Mugenda and Mugenda, 2003). The reliability was done to insure that there were consistency across all given variables. Instrument reliability were realized through expert analysis

3.6 Data Analysis Techniques

To analyze data, tabulated means and frequencies as well as the tables of the outcomes were used. The data obtained from the questionnaires were analyzed using Statistical Package for Social Science (SPSS) software to evaluate the data and identify the correlation between Activity based budgeting variables and Resource based performance. Analysis of variance (ANOVA) was used as mathematical statistics method, leading to an analysis, whether there are any correlations between the analyzed (experimental) data groups (or variables) by comparing the differences between their means. ANOVA provides a statistical test of whether the means of some variables are equal, and therefore is useful for comparing three or more means for statistical significance. The regression analysis were used to determine the relationship between the independent variable (Activity based budgeting) and the dependent variables (Resource based performance).

3.6.1 Model Specification

To test the relationship between variables activity based budgeting, independent variables and the resource based performance, the dependent variables, the study adopted multi regression model as follows;

Resource based performance is a function of Activity based budgeting factor.

$$Y = F(a+bx\dots\dots)$$

Hence

$$Y_1 = a_1 + b_1x_1 + b_1x_2 + b_1x_3 + \dots\dots\dots \varepsilon_1$$

$$Y_2 = a_2 + b_2x_1 + b_2x_2 + b_2x_3 + \dots\dots\dots \varepsilon_2$$

$$Y_3 = a_3 + b_3x_1 + b_3x_2 + b_3x_3 + \dots\dots\dots \varepsilon_3$$

$$Y_4 = a_4 + b_4x_1 + b_4x_2 + b_4x_3 + \dots\dots\dots \varepsilon_4$$

Where:

Y_1 = Establish effect Activity based budgeting on budget goal reallocation

Y_2 = Determine effect of Activity based budgeting on Implementation Timelines

Y_3 = Determine effect of Activity based budgeting on effective budget resource allocation

Y_4 = Analyse effect of activity based budgeting on value to the firm

a = Constant

ε = Error Term

b_1x_1 = Rate of change of cost to revenue analysis

b_1x_2 = Rate of change of Activity time analysis

b_1x_3 = Rate of change of activity to activity relationship

3.7 Ethical Consideration

The research was for academic purpose. All information provided will be treated with utmost confidentiality.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.1 Introduction

This chapter presents the results of the research that was conducted to test both the conceptual model and research hypotheses. First, it presents the response rate and describes the general background information of the respondents and descriptive analysis of the study variables. Secondly, the section describes the results of statistical analysis to test the hypotheses and finally, it presents the discussions of the results.

4.2 Questionnaire Response Rate

Orodho (2003) posits that response rate is the extent to which the final data sets include all the sampled members and is calculated as the number of respondents with whom interviews are completed and divided by the total number of respondents of the entire sample including none respondents. The target population was 36 consisting of Finance Officers and Senior Internal Auditors in twenty one Universities where N=32 and 4 was used for piloting

Table 4.1: Questionnaire Response Rate

Sample size	Respondents reached	Percentage
32	32	100%

Source: Field data (2019)

The researcher distributed 32 questionnaires and 32 were returned providing a response rate of 100%. This was due to the fact that the approach used to distribute the questionnaires was the drop-and-pick method where the researcher issued the questionnaires and waited for the respondents to complete filling it and then went back with the duly filled questionnaires. Kothari (2004) presupposes that a response rate of 50% is seen to be average; 60-70% is seen as being adequate while anything above 70% is considered to be an excellent response rate. This response rate was therefore considered an excellent representative of the respondents to provide information for analysis and generate valid conclusions.

4.3 Demographic information of the respondents

4.3.1 Distribution of respondents by gender

The respondents were asked to indicate their gender. The study aimed at establishing the distribution of finance officers and internal auditors by age. The findings were as presented in Figure 4.2.

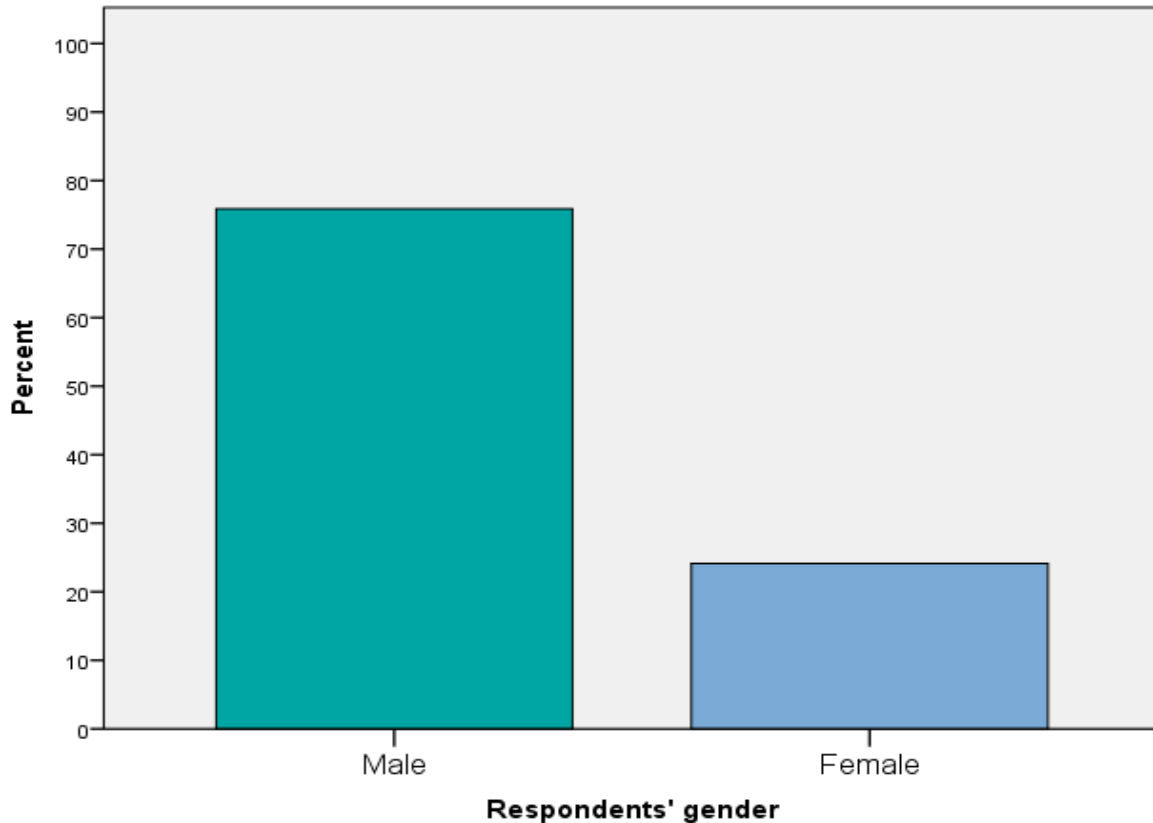


Figure 4.2: Respondents Gender

Source: Researcher (2019)

The findings in figure 4.2 indicated that 79.5 percent of the respondents were male and 24.1 percent were female. The findings revealed that majority of the finance officers and internal auditors were male in public universities hence there was gender bias.

4.3.2 Distribution of respondents by age

Age was considered important in the study and the respondents were required to indicate the age bracket. The results were presented in Figure

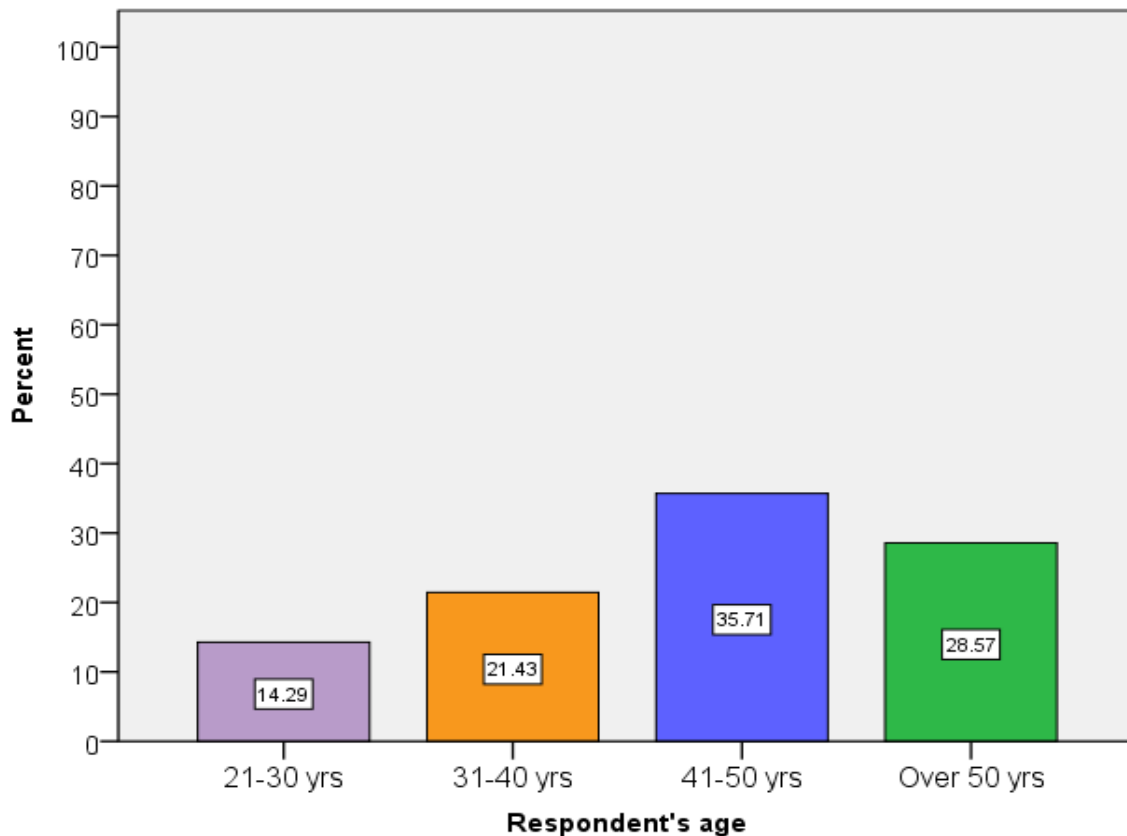


Figure 4.3: Distribution of Respondents' by age

Source: Field data (2019)

Figure 4.3 shows that 35.71 percent of the respondents were aged 41-50 years, 28.57 percent were aged over 50 years, 21.43 percent were aged 31-40 years and 14.29 percent were aged 21-30 years. The findings implied that most of the finance officers and internal auditors were over 40 years and therefore had enough experience, thus provided in-depth information concerning the effect of activity based budgeting on resource based performance in universities.

4.3.3 Distribution of respondents by education level

Education level of the respondents was also considered crucial in the study and the respondents were required to indicate their highest level of education. The results were as indicated in Figure 4.4.

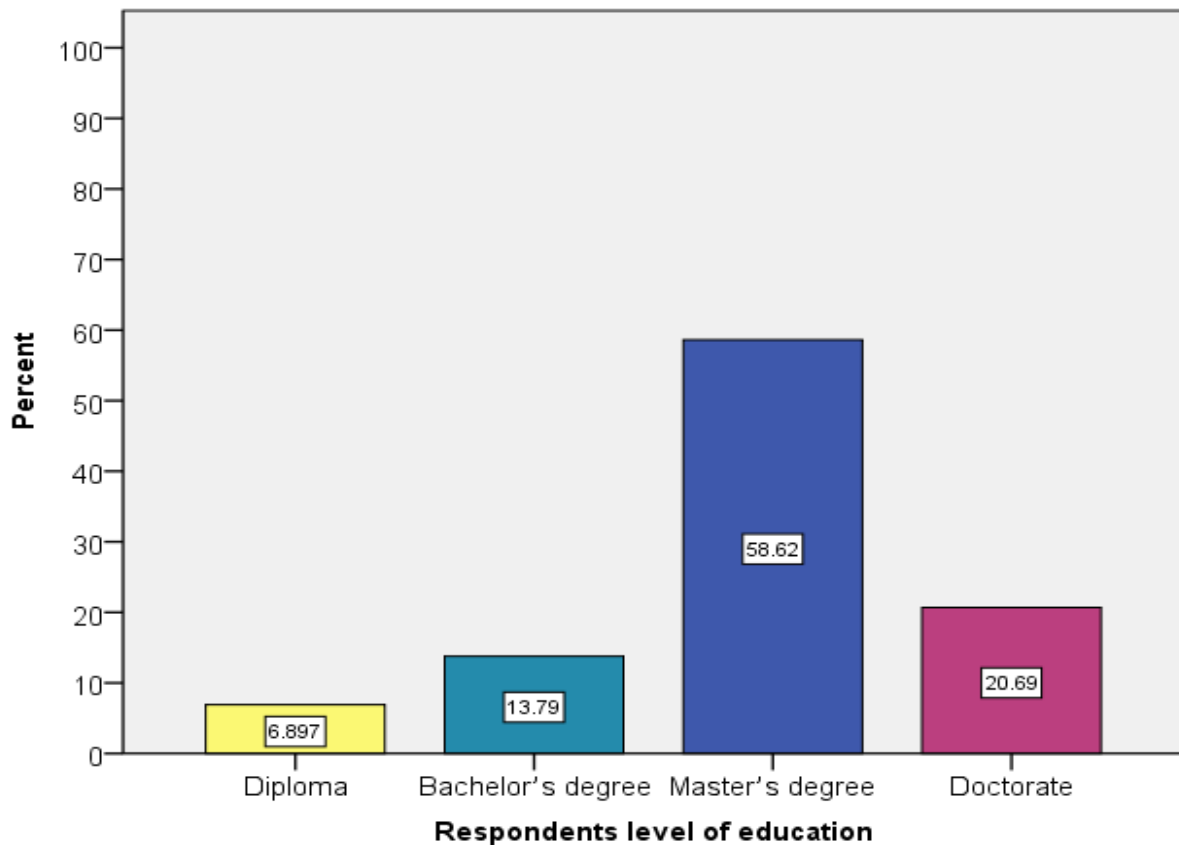


Figure 4.4: Distribution of respondents by education level

Source: Researcher (2019)

The results of the study indicated that 58.62 percent of the respondents had attained Masters as their highest level of education while 20.69 percent had attained Doctor of Philosophy level. Those who had Bachelors degree were 13.79 percent and 6.89 percent had diploma as their highest level of education. The findings implied that majority of the finance officers and internal auditors had acquired the minimum academic qualification requirements in the selected universities. This is attributed to the fact that government strictly required qualified personnel to manage the public resources invested in the universities.

4.4 Descriptive statistics

Descriptive statistics was carried out in all the four objectives of the study and followed by discussions of the findings.

4.4.1 Descriptive statistics on activity-based budget on budget goal reallocation

The first objective was captured using various indicators and the findings were as presented in Table 4.2.

Table 4.2: Descriptive statistics on activity-based budget on budget goal reallocation

Statement	5	4	3	2	1	Mean	Standard deviation
1. Budget allocation is done in line with the goal of the institution	16.7	46.7	6.7	16.7	13.3	3.367	1.326
2. The amount of resources allocated to a particular project is dependent on perceived outcome	46.7	23.3	6.7	13.3	10.0	3.833	1.4162
3. Procurement processes has a positive effect on activity based budgeting	33.3	36.7	10.0	6.7	13.3	3.700	1.3829
4. There is transparency in budget allocation to different sectors in the university	23.3	43.3	3.3	16.7	13.3	4.100	1.2415
5. Budget goal reallocation is the best strategy for making prudent use of resources in institutions of higher learning	53.3	22.3	10.7	6.0	6.7	3.500	1.4323
6. Budget goal allocation has affected revenue generation in the institution	30.7	33.3	6.0	16.7	13.3	3.200	1.3746
7. Budget goal reallocation affect the performance of university	27.6	48.3	3.4	13.8	6.9	3.758	1.2146

The findings shows 46.7 percent of the respondents agree that budget allocation was done in line with the goal of the institution. This was represented by a 3.367 and a standard deviation of 1.326. The results also shows that 46.7 percent of the respondents strongly agree that the amount of resources allocated to a particular project is dependent on perceived outcome representing a mean of 3.833 and a standard deviation of 1.4162.

It was also found out that 36.7 percent of the respondents agree that procurement processes has a positive effect on activity based budgeting. This was represented by a mean of 3.700 and a standard deviation of 1.3829. Furthermore, the results indicated that 43.3 percent of the respondents agree that there was transparency in budget allocation to different sectors in the university representing a mean of 4.100 and standard deviation of 1.2415.

The findings also revealed that 53.3 of the respondents strongly agree that budget goal reallocation is the best strategy for making prudent use of resources in institutions of higher learning with a mean of 3.500 and a standard deviation of 1.4323. it was also indicated by the findings that 33.3 of the respondents agree that budget goal allocation has affected revenue

generation in the institution with a mean of 3.200 and a standard deviation of 1.3746. Finally the results showed that 48.3 percent of the respondents agree that budget goal reallocation affect the performance of university representing a mean of 3.758 and standard deviation of 1.2146. The study concluded that activity based budget resource reallocation had an effect on the resource performance of the selected universities.

4.4.2 Descriptive statics on effect of activity-based budget on implementation timelines

The second objective was captured using various indicators and the results of the study were as presented in Table 4.3.

Table 4.3: Descriptive statics on effect of activity-based budget on implementation timelines

Statement	5	4	3	2	1	Mean	Standard deviation
1. Activity based budget saves time in the institution	16.7	46.0	7.4	20.0	10.0	3.600	1.27577
2. When the university used activity based budget, there is improves speed on executing institution's activities	20.0	53.3	13.3	13.3	0.0	3.5333	1.33218
3. Majority of projects done on activity based budgets have met the set timelines	36.7	40.0	0.0	23.3	0.0	3.7000	1.15520
4. Activity based budgets have enabled the institution makes quick and informed decision on resource spending	16.0	60.7	3.3	13.3	6.7	3.6667	1.12444
5. The institution have improved efficiency after implementing activity based budgeting technique	32.7	30.7	10.7	10.0	6.7	3.5000	1.27982
6. Activity based budgeting is effective in institutions of higher learning	16.7	53.3	0.0	20.0	10.0	3.4667	1.27937
7. Activity based budgets affect resources performance of the institution	26.7	33.3	13.3	10.0	16.7	3.6333	1.43078

The findings of the study showed that 46.0 percent of the respondents agree that activity based budget saves time in the institution of higher learning representing a mean of 3.600 and standard deviation of 1.27577. The results further indicated that 53.3 percent of the respondents agree that when the university used activity based budget, there is improves speed on executing institution's activities with a mean of 3.5333 and a standard deviation of 1.33218

The study findings also showed that 40.0 percent of the respondents agree that majority of projects done on activity based budgets has met the set timelines representing a mean of 3.7000 and a standard deviation of 1.15520. It was further revealed that 60.7 percent of the respondents agree that activity based budgets have enabled the institution makes quick and informed decision on resource spending with a mean of 3.6667 and standard deviation of 1.12444.

Based on the findings of the study, 32.7 percent of the respondents strongly agree that the institution have improved efficiency after implementing activity based budgeting technique representing a mean of 3.5000 and standard deviation of 1.27982. Furthermore, 53.3 percent of the respondents agree that activity based budgeting is effective in institutions of higher learning with a mean of 3.4667 and standard deviation of 1.27937.

Finally, the study found out that 33.3 percent of the respondents agree that activity based budgets affect resources performance of the institution with a mean of 3.6333 and standard deviation of 1.43078. It was deduced from the findings that activity based budget had a positive effect on implementation of timelines and thus affect the resource performance of the selected universities.

4.4.3 Descriptive statics on the effect of activity-based budget on effective budget resource application

The third objective was capture using several statements and the results of the study were as shown in Table 4.4.

Table 4.4: Descriptive statics on the effect of activity-based budget on effective budget resource application

Statement	5	4	3	2	1	Mean	Standard deviation
1. Activity based budgets have made easy application of funds to finance the budget	43.3	30.0	3.3	16.7	6.7	3.8667	1.33218
2. Accountability in terms of resource application has been achieved in the institution	16.7	66.7	0.0	10.0	6.7	3.7667	1.07265
3. Credibility of activity based budgeting has been enhance during resource application processes	40.0	23.3	6.7	16.7	13.3	3.6000	1.49943
4. Approval of resource application has been fast as a results of activity based budgeting	16.7	50.0	10.0	13.3	10.0	3.5000	1.22474
5. Proper use of resources has been witnessed in activity based budgeting	23.3	36.7	13.3	20.0	6.7	3.6236	1.15231
6. Flexibility of activity based budgets is key in resource application process in the institution	26.3	53.3	3.3	6.7	10.3	3.6667	1.29544
7. Resource application affect the performance of university	53.3	16.7	6.7	16.0	7.4	3.9333	1.38796

From the results in table 4.4, it was revealed that 43.3 percent of the respondents strongly agree that activity based budgets have made easy application of funds to finance the budget with a mean of 3.8667 and standard deviation of 1.33218. Furthermore, 66.7 percent of the respondents agree that accountability in terms of resource application has been achieved in the institution with a mean of 1.07265 and standard deviation 3.7667.

Then results of the study shows that 40.0 percent of the respondents strongly agree that credibility of activity based budgeting has been enhance during resource application processes with a mean of 3.6000 and deviation 1.49943. It was also revealed that 50.0 percent of the respondents agree that approval of resource application has been fast as results of activity based budgeting representing a mean of 3.5000 and standard deviation 1.22474.

The findings of the study also revealed that 36.7 percent of the respondents agree that proper use of resources has been witnessed in activity based budgeting with a mean of 3.6236 and

standard deviation of 1.15231. the findings also indicated that 53.3 percent of the respondents agree that flexibility of activity based budgets is key in resource application process in the institution with a mean of 3.6667 and standard deviation of 1.29544. Finally, 53.3 percent of respondents agree that resource application affect the performance of university with a mean of 3.9333 and standard deviation 1.38796. It was concluded from the findings that activity-based budget had effect on resource application.

4.4.4 Descriptive statics on effect of activity-based budget on value of the firm

The fourth objective was captured using several indicators and the findings were as shown in Table 4.5.

Table 4.5: Descriptive statics on effect of activity-based budget on value of the firm

Statement	5	4	3	2	1	Mean	Standard deviation
1. There is optimal use of financial resources as a result of activity based budgets in the institution	20.0	40.0	13.3	16.0	10.7	3.4333	1.27802
2. Proper allocation of resources has been achieved in the university	36.7	23.3	3.3	16.3	20.3	3.2667	1.57422
3. Activity based has been cost effective in the university	33.3	22.7	10.7	23.3	10.0	3.6433	1.31242
4. Fiscal discipline has been enhanced as a results of application of activity based budgeting	36.3	40.3	3.0	10.3	10.0	3.7428	1.30148
5. Activity based budgets has facilitated auditing processes in the university	33.3	43.3	3.0	10.0	10.3	3.8000	1.29721
6. Prudent utilization of resources has been witnessed in the university	30.0	35.0	5.0	10.0	20.0	3.51381	1.34801
7. The value of activity based budget affect the performance of university	26.6	36.7	3.3	20.0	13.3	4.01241	1.08210

The findings of the study indicated that 40.0 percent of the respondents agree that there is optimal use of financial resources as a result of activity based budgets in the institution representing a mean of 3.4333 and standard deviation of 1.27802. The results also indicated that 36.7 percent of the respondents strongly agree that proper allocation of resources has been achieved in the university with a mean of 3.2667 and a standard deviation of 1.57422.

I was also revealed from the findings that 33.3 percent of the respondents strongly agree that activity based has been cost effective in the university with a mean of 3.6433 and a standard deviation of 1.31242. Further, 40.3 percent of the respondents agree that fiscal discipline has been enhanced as a result of application of activity based budgeting with a mean of 3.7428 and a standard deviation of 1.30148.

From the findings of the study 43.3 percent of the respondents agree that activity based budgets has facilitated auditing processes in the university with a mean of 3.8000 and a standard deviation of 1.29721. In addition the results showed that 35.0 percent of the respondents agree that prudent utilization of resources has been witnessed in the university with a mean of 3.5138 and standard deviation of 1.34801. Finally, the findings revealed that 36.7 percent of the respondents agree that the value of activity based budget affect the performance of university representing a mean of 4.0124 and a standard deviation of 1.08210.

4.5 Correlations Analysis

The field data were subjected to correlation analysis and the findings were as presented in table

Table 4.6: correlation analysis results showing the relationship between independent and dependent variables

		Correlations						
		CRM	ATM	AAR	BGR	ImT	EBR	VTF
CRM	Pearson Correlation	1.000						
	Sig. (2-tailed)							
ATM	Pearson Correlation	.406**	1.000					
	Sig. (2-tailed)	.000						
AAR	Pearson Correlation	.879	.170	1.000				
	Sig. (2-tailed)	.019	.156					
BGR	Pearson Correlation	.764**	-.231	.619**	1.000			
	Sig. (2-tailed)	.000	.053	.000				
ImT	Pearson Correlation	.875*	-.191	.545**	.316**	1.000		
	Sig. (2-tailed)	.027	.111	.000	.007			
EBRA	Pearson Correlation	.371**	.394*	.623**	.561**	.373**	1.000	
	Sig. (2-tailed)	.004	.023	.000	.000	.001		
VTF	Pearson Correlation	.279**	.654*	.447**	.642**	.649**	.592**	1.000
	Sig. (2-tailed)	.010	.023	.040	.009	.006	.005	.043

N = 30

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Note: The p values are in parenthesis. ** Significant at 1% i.e. $\alpha = 0.01$ N=30

Source: Research Data 2019

Table 4.6 presents the correlation results for the study variables in the period under review. Correlation coefficient is important in determining the strength of the association which is indicated by the correlation coefficient but is actually measured by the coefficient of determination; R^2 . The significance of the relationship is expressed in probability levels; p. Correlation coefficient derived by rescaling the covariance provides a dimensionless quantity which is thus unaffected by unit measurement. It therefore measures the strength or degree of linear association between variables, and falls between -1 and +1. The coefficient determines whether the correlation is positive or negative. The P-value which refers to the two-tailed correlation test of hypothesis is the observed significance level of the test; which if less than the chosen significance level (α), then the researcher should reject the null hypothesis in favor of the alternative. Otherwise, there is not enough evidence to reject the null hypothesis. Therefore, null hypothesis; $H_0: r = 0$ explains no significant correlation while the alternative is: $H_1: r \neq 0$ defines a significant correlation. The P- values in the correlation matrix in Table 4.7, for all variables are 0.0000. Because the $P < 0.01$ level of significance, the Null hypothesis $H_0: r = 0$ is rejected and the alternative hypothesis $H_1: r \neq 0$ is accepted. Therefore Activity Based Budgeting significantly influence the resource based performance in universities in western Kenya.

From the correlation results, there are moderate significant positive correlations between Cost Revenue Measurement (CRM) and activity time measurement (ATM) at $r = 0.406$, $p = 0.0000$. Cost revenue measurement (CRM) and Activity Time Relationship (AAR) have a strong significant positive correlation of $r = 0.879$, $p = 0.019$. Cost revenue measurement (CRM) and Budget Goal Reallocation (BGR) have strong positive and significant correlation at $r = 0.764$, $p = 0.0000$. Cost revenue measurement (CRM) and Implementation Time Line (ImT) have strong positive and significant correlation at $r = 0.875$, $p = 0.027$. Cost Revenue Measurement (CRM) has weak but significant correlation with Effective Budget Resource Allocation (EBRA) with $r = 0.371$, $p = 0.004$. Cost Revenue Measurement (CRM) has weak but significant correlation with Value to the Firm (VTF) with $r = 0.279$, $p = 0.010$. Activity Time Measurement (ATM) and Activity to Activity relationship (AAR) have weak but significant correlation at $r = 0.170$, $p = 0.156$. Activity Time Measurement (ATM) and Budget Goal Reallocation (BGR) has weak negative significant correlation at $r = -0.231$, $p = 0.053$. Activity Time Measurement (ATM) and Implementation Timelines (ImP) has weak negative significant correlation at $r = -0.191$, $p = 0.111$. Activity Time Measurement (ATM) and Effective Budget Resource Allocation (EBRA) has weak significant correlation at $r =$

0.394, $p = 0.023$. Activity Time Measurement (ATM) and Value to the Firm (VTF) has strong positive and significant correlation at $r = 0.654$, $p = 0.023$. Activity to Activity Relationship (AAR) and Budget Goal Reallocation (BGR) have very strong positive and significant correlation at $r = 0.619$, $p = 0.0000$. Implementation Timelines (ImP) has moderate significant correlation with Activity to Activity Relationship (AAR) with $r = 0.545$, $p = 0.0000$. Effective Budget Resource Allocation (EBRA) has a significant positive correlation with Activity to Activity Relationship (AAR) with $r = 0.623$, $p = 0.0000$. Value to the Firm (VTF) have a weak significant correlation with Activity to Activity Relationship (AAR) at $r = 0.447$, $p = 0.040$.

This implies that as cost revenue measurement has moderate significant and positive association with Activity time measurement, strong significant and positive association with Budget Goal Reallocation, Implementation Timeline, weak but positive significant correlation with Effective Budget Resource Allocation and Value to the Firm also increase. Activity Time Measurement has weak significant and negative association with Budget Goal Reallocation, Implementation Timelines, and weak positive and significant association with Effective Budget Resource Allocation and has strong significant and positive association with Value to the Firm increase. Activity to Activity Relationship has strong, positive and significant association with Budget Goal Reallocation, Implementation Timeline, Effective Budget Resource Allocation and Value to the Firm. Subsequently, the correlation results of the independent variables with dependent variables were as follows: Cost Revenue Measurement (CRM) has strong positive and significant correlation with Budget Goal Reallocation (BGR) ($r = 0.764$, $p = 0.0000$), have strong positive and significant correlation with Implementation Time Line (ImT) with ($r = 0.875$, $p = 0.027$), has weak but significant correlation with Effective Budget Resource Allocation (EBRA) with ($r = 0.371$, $p = 0.004$), and has weak but significant correlation with Value to the Firm (VTF) with ($r = 0.279$, $p = 0.010$). Activity Time Measurement (ATM) has weak negative significant correlation with Budget Goal Reallocation (BGR) with ($r = -0.231$, $p = 0.053$), has weak negative significant correlation with Implementation Timelines (ImP) with ($r = -0.191$, $p = 0.111$), has weak significant correlation with Effective Budget Resource Allocation (EBRA) with ($r = 0.394$, $p = 0.023$) and has strong positive and significant correlation with Value to the Firm (VTF) with ($r = 0.654$, $p = 0.023$). Activity to Activity Relationship (AAR) and Budget Goal Reallocation (BGR) have very strong positive and significant correlation at ($r = 0.619$, $p = 0.0000$), has moderate significant correlation with Implementation Timelines (ImP) with ($r =$

0.545, $p = 0.0000$), has a significant positive correlation with Effective Budget Resource Allocation (EBRA) with ($r = 0.623$, $p = 0.0000$) and lastly have a weak significant correlation with Value to the Firm (VTF) with ($r = 0.447$, $p = 0.040$).

These findings are generally consistent with the findings of David P. Szatmary, (2011) of University of Washington reveals that University of Washington Educational Outreach (UWEO) uses an activity based approach. UWEO budgets and accounts for each class individually, and when appropriate, clusters courses in a certificate, degree, or other type of program. In each course, the UWEO tracks the actual revenue of a class section. It then posts direct expenses to the course, including instructional and material costs. A workload analysis is used to attribute the averaged costs of infrastructure staff and program-management expenses to each course. The budget also includes a risk-opportunity fee as a percentage of gross revenues to pay for program shortfalls and a university overhead that has been calculated by the UW for generic costs such as facilities, the president/provost offices, police, etc. Using this system, an administrator can assess the health of a program on a course level by comparing the actual revenue against expenses. This analysis enables the administrator to make decisions about instructional salaries, pricing, enrollment targets, marketing strategies, and other issues that affect the financial viability of the class or a program. It also allows the manager to make informed decisions about establishing or eliminating a course or program. Developing this model has not been easy or quick but has been extremely valuable. It was concluded from the findings that all the independent variables a positive relationship with the dependent variable.

4.6 Regression Analysis

Objective One

Table 4.7: Activity Based Budgeting on Budget Goal Reallocation.

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	Sig. F Change
1	.798 ^a	.637	.609	.10339	.637	22.836	.000

a. Predictors: (Constant), CRM, ATM and AAR

Source: Field data, 2019

R square is the coefficient of determination which illustrates the variation in the dependent variable is due to changes in the independent variable. From the findings in table 4.7 above

the value of R square was 0.637P <0.05 an indication that there was variation of 63.7% on resource based performance which is explained by budget goal reallocation and 36.3% explained by other factors not covered by the study. The common factors that affect Budget Goal Reallocation revolve around the changing dynamics in the budget operating environment (Sandeep and Sami, 2016). Such elements as revenue measurement and comparison, activity time determination and activity-to-activity relation (synergistic relation between the activities) would affect not only the framework under which budgetary lines are modified, but also the budget goal reallocation through rationalization and operationalising of budgets (Green, Ali, Naeem & Ross 2000). This shows that 63.7% changes in budget goal reallocation could be accounted for changes in CRM, CTM and AAR. R is the correlation coefficient which shows the relationship between the study variables, from the findings shown in table above there was a positive relationship between the study variables as shown by 0.798, the null hypothesis which stated that “H0: There is no significant effect of activity based budgeting on budget goal reallocation in universities in western Kenya” was rejected. The findings concur with, (Fozzard, 2001) who said, BGR enables an organisation to transfer of resources from idle assignments or non-priority projects to immediate benefit raising programmes. It is therefore concluded that there is a statistically significant positive relationship between activity based budgeting (CRM, ATM and AAR) and budget goal reallocation.

Table 4.7.1: ANOVA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	53.556	2	13.389	22.836	.002 ^b
	Residual	5.944	30	.238		
	Total	59.5	32			

a. Predictors: (Constant), CRM, ATM and AAR

b. Dependent Variable: Budget Goal Reallocation

Source: Field data, 2019

The model gave ANOVA regression sum squares of 53.556 and residual sum square of 5.944. The processed data, which is the population parameters, had a significance level of 0.002 which shows that the data is ideal for making conclusions on the population's parameter as the value of significance (p-value) is less than 5%. The results indicated that the overall model was statistically significant. The results further imply that the independent

variables are good predictors of the dependent variable which was supported by an *F*-statistics value of 56.308 with a *p*-value of 0.002 which was less than the conventional probability of 0.05 significance level.

Table 4.7.2: Coefficients of Activity Based Budgeting on Budget Goal Reallocation

Model	Coefficients ^a					
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	.148	.477		.309	.758
	CRM	.231	.060	.362	3.844	.000
	ATM	.211	.043	.458	4.960	.000
	AAR	.166	.078	.291	2.132	.003

a. Dependent Variable: y-Budget Goal Reallocation

b. Predictors: (Constant), CRM, ATM and AAR

Source: Field data, 2019

From the results in Table 4.8.2 the following model equation can be determined.

$$BGR = 0.148 + 0.231CRM + 0.211ATM + 0.166AAR$$

The findings indicate that the model is valid since the *p* value $p = 0.0000 < \alpha$ – level of significance where ($\alpha = 0.0500$), and also confirmed by the *F*-statistics = 22.836. From the findings, all the independent variables are statistically significant both at 1% and 5%.

A unit increase in Cost Revenue Measurement (CRM) increases predicted Budget Goal Reallocation by 0.231 percentage points (i.e. 23.1%) at $p < 0.05$ significance level. This implies that Cost Revenue Measurement significantly contribute to Budget Goal Reallocation. It is observable that although Cost Revenue Measurements yields positive significant contribution to Budget Goal Reallocation, the magnitude is fairly low. A one percentage increase in Activity Time Measurements (ATM) increases predicted Budget Goal Reallocation by 0.211 percentage points (i.e. 21.1%) at $p < 0.05$ significance level. This implies that Activity Time Measurements contribution to Budget Goal Reallocation is significant though the magnitude is low. However a unit increase in Activity to Activity Relationship (AAR) results into increase of predicted Budget Goal Reallocation by 0.116 percentage points (i.e. 11.60%) at $p < 0.05$. This implies that Activity to Activity Relationship significantly contributes to Budget Goal Reallocation, but with a fairly low magnitude.. Therefore all the three independent variables (i.e. Cost Revenue Measurements, Activity

Timelines Measurements, and Activity to Activity Relationship) have a significant relationship with Budget Goal Reallocation. This is evidenced by the p values of the coefficients of the variables, all at 0.00; in which case, $p = 0.00 < \alpha = 0.05$.

Objective two.

Table 4.8: Activity Based Budgeting on Implementation Timelines

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics F Change	Sig. F Change
1	.851 ^a	.724	.504	2.967	.724	29.865	.000

a. Predictors: (Constant), CRM,ATM and AAR

Source: Field data, 2019

R square is the coefficient of determination which illustrates the variation in the dependent variable is due to changes in the independent variable. From the findings in table 4.8 above the value of R square was 0.724 $P < 0.05$ an indication that there was variation of 72.4% on resource based performance which is explained by implementation timelines and 27.6% explained by other factors not covered by the study. For institutional performance of effective budget implementation the identified activities takes place throughout the financial year, in which its impact is envisioned in a public expenditure policy and the manner in which the public expenditure is being managed (Kirira 2007). Budget Implementation is therefore a phase where the budget becomes a practical management tool that guides on how to achieve program and activity performance indicator targets (Margah, 2005). It is the budget cycle phase that probably matters most to the public, being that essential services are delivered through its functional estimates (Government of Ghana,). According to (GOK, 2015), summary of the Public Procurement Regulation (2006), Public Finance Management Act (2012) and Public Finance Management Regulation (2015), the main objectives for implementation of the Budget is to maximize economy, promote competition, improve financial prudence, promote integrity and responsibility of public finance, enhance transparency and accountability, restore confidence in the procurement process and facilitate the promotion of the local industry and spur economic development. This shows that 72.4% changes in Implementation timelines could be accounted for changes in activity based budgeting. R is the correlation coefficient which shows the relationship between the study variables, from the findings shown in table above there was a positive relationship between

the study variables as shown by 0.851, the null hypothesis which stated that “H0: There is no significant effect of activity based budgeting on implementation timelines in universities in western Kenya” was rejected. The findings concur with, Sorinel Căpușnean, Ileana Sorina, Cristian-Marian, Letiția Maria and Dan Topor (2013) in their study of implementation of activity-based budgeting method in the economic entities from mining industry of Romania showing that the activity-based budgeting should influence the employees’ behavior, by financial or non-financial measures, thus exceeding the functional limits arising from the division of the entity on functional bases, and attracting the attention to the value areas resulting from the coherence of the operations, regardless of functions. It is therefore concluded that there is a statistically significant positive relationship between activity based budgeting (CRM, ATM and AAR) and Implementation timelines.

Table 4.8.1: ANOVA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4143.984	2	1035.996	29.851	.000 ^b
	Residual	1214.285	30	34.694		
	Total	5358.269	32			

a. Dependent Variable: Implementation Timelines

b. Predictors: (Constant), CRM, ATM and AAR

Source: Field data, 2019

The model gave ANOVA regression sum squares of 4143.984 and residual sum square of 1214.285. The processed data, which is the population parameters, had a significance level of 0.000 which shows that the data is ideal for making conclusions on the population’s parameter as the value of significance (p-value) is less than 5%. The results indicated that the overall model was statistically significant. The results further imply that the independent variables are good predictors of the dependent variable which was supported by an *F*-statistics value of 29.851 with a *p*-value of 0.000 which was less than the conventional probability of 0.05 significance level.

Table 4.8.2 Coefficients of Activity Based Budgeting on Implementation Timelines

Model	Coefficients ^a					
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	25.513	5.362		4.758	.000
	CRM	.030	.028	.094	-1.090	.243
	ATM	-.129	.024	-1.090	-.446	.000
	AAR	-.041	.19	-.446	-.215	.037

a. Dependent Variable: Implementation timelines

c. Predictors: (Constant), CRM, ATM and AAR

Source: Field data, 2019

From the results in Table 4.8.2 the following model equation can be determined.

$$ImP = 25.513 + 0.030CRM + (0.129)ATM + (0.041)AAR$$

The findings indicate that the model is valid since the p value $p = 0.0000 < \alpha$ – level of significance where ($\alpha = 0.0500$), and also confirmed by the F-statistics = 29.851. From the findings, all the independent variables are statistically significant both at 1% and 5%.

A unit increase in Cost Revenue Measurement(CRM) increases predicted Implementation Timelines by 0.030 percentage points (i.e. 3.0%) at $p < 0.05$ significance level. This implies that Cost Revenue Measurement significantly contribute to Implementation Timelines. It is observable that although Cost Revenue Measurements yields positive significant contribution to Implementation Timelines, the magnitude is fairly low. A one percentage increase in Activity Time Measurements (ATM) decreases predicted Implementation Timelines by -0.129 percentage points (i.e. 12.9%) at $p < 0.05$ significance level. This implies that Activity Time Measurements contribution to Implementation Timelines is not significant and the magnitude is low. However a unit increase in Activity to Activity Relationship (AAR) results into decrease of predicted Implementation Timelines by -0.040 percentage points (i.e. 4.0%) at $p < 0.05$. This implies that Activity to Activity Relationship significantly does not contributes to Implementation Timelines, but with a fairly low magnitude.. Therefore all the three independent variables (i.e. Cost Revenue Measurements, Activity Timelines Measurements, and Activity to Activity Relationship) have insignificant relationship with Implementation Timelines. This is evidenced by the p values of the coefficients of the variables, all at 0.00; in which case, $p = 0.00 < \alpha = 0.05$.

Object Three.

Table 4.9: Activity Based Budgeting on Effective budget resource allocation.

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics F Change	Sig. F Change
1	.835 ^a	.698	.645	.4553	.698	2.505	.000

a. Predictors: (Constant), CRM, ATM and AAR

Source: Field data, 2019

R square is the coefficient of determination which illustrates the variation in the dependent variable is due to changes in the independent variable. From the findings in table 4.9 above the value of R square was 0.698 P <0.05 an indication that there was variation of 69.8% on resource based performance which is explained by Effective budget resource allocation and 30.2% explained by other factors not covered by the study. Effective resource allocation leads to no waste of money. It lets you know the performance of team members in a project. Hence it can be easier for you to assign tasks to the resource according to their skills (Lind and Tyler 1988, Cohen-Charash and Spector 2001). They assert that resource allocation also boosts productivity once a task has been completed before the deadline without compromising the quality .Furthermore proper allocation of resources improves time management since it sets the actual estimate hours to complete the tasks. Notably, allocating resources wisely improves employee morale where the managers can identify who is doing what, lagging or leading (Graves and Ringuest (2003). R is the correlation coefficient which shows the relationship between the study variables, from the findings shown in table above there was a positive relationship between the study variables as shown by 0.835, the null hypothesis which stated that “H0: There is no significant effect of activity based budgeting on effective budget resource allocation in universities in western Kenya” was rejected. The findings concur with, David P. Szatmary, (2011) of University of Washington who reveals that University of Washington Educational Outreach (UWEO) uses an activity based approach. UWEO budgets and accounts for each class individually, and when appropriate, clusters courses in a certificate, degree, or other type of program. In each course, the UWEO tracks the actual revenue of a class section. It then posts direct expenses to the course, including instructional and material costs. A workload analysis is used to attribute the averaged costs of infrastructure staff and program-management expenses to each course. It is

therefore concluded that there is a statistically significant positive relationship between activity based budgeting and effective budget resource allocation.

Table 4.9.1: ANOVA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.157	2	3.022	2.505	.000 ^b
	Residual	35.472	30	.589		
	Total	57.629	32			

a. Dependent Variable: Effective budget resource allocation

b. Predictors: (Constant), CRM, ATM and AAR

Source: Field data, 2019

The model gave ANOVA regression sum squares of 22.157 and residual sum square of 35.472. The processed data, which is the population parameters, had a significance level of 0.000 which shows that the data is ideal for making conclusions on the population's parameter as the value of significance (p-value) is less than 5%. The results indicated that the overall model was statistically significant. The results further imply that the independent variables are good predictors of the dependent variable which was supported by an *F*-statistics value of 2.505 with a *p*-value of 0.001 which was less than the conventional probability of 0.05 significance level.

Table 4.9.2 Coefficients of Activity Based Budgeting and Effective budget resource allocation

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.641	.122		5.013	.001
	CRM	.373	.241	.370	.132	.004
	ATM	.529	.212	.516	2.495	.003
	AAR	.316	.152	.311	2.079	.007

a. Dependent Variable: Effective Budget Resource Allocation

b. Predictors: (Constant), CRM, ATM and AAR

Source: Field data, 2019

From the results in Table 4.9.2 the following model equation can be determined.

$$EBRA = 0.641 + 0.373CRM + 0.529ATM + 0.316AAR$$

The findings indicate that the model is valid since the p value $p = 0.0000 < \alpha$ – level of significance where ($\alpha = 0.0500$), and also confirmed by the F-statistics = 2.505. From the findings, all the independent variables are statistically significant both at 1% and 5%.

A unit increase in Cost Revenue Measurement (CRM) increases predicted Effective Budget Resource Allocation by 0.373 percentage points (i.e. 37.3%) at $p < 0.05$ significance level. This implies that Cost Revenue Measurement significantly contribute to Effective Budget Resource Allocation. It is observable that although Cost Revenue Measurements yields positive significant contribution to Effective Budget Resource Allocation, the magnitude is fairly low. A one percentage increase in Activity Time Measurements (ATM) increases predicted Effective Budget Resource Allocation 0.529 percentage points (i.e. 52.9%) at $p < 0.05$ significance level. This implies that Activity Time Measurements contribution to Effective Budget Resource Allocation is significant and the magnitude is moderately high. However a unit increase in Activity to Activity Relationship (AAR) results into increase of predicted effective budget resource Allocation by 0.316 percentage points (i.e. 31.6%) at $p < 0.05$. This implies that Activity to Activity Relationship significantly contributes to Effective Budget Resource Allocation, but with a fairly low magnitude.. Therefore all the three independent variables (i.e. Cost Revenue Measurements, Activity Timelines Measurements, and Activity to Activity Relationship) have significant relationship with Effective Budget Resource Allocation. This is evidenced by the p values of the coefficients of the variables, all at 0.00; in which case, $p = 0.00 < \alpha = 0.05$.

Objective Four.

Table 4.10: Activity Based Budgeting on Value to the firm.

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	Sig. F Change
1	.792 ^a	.627	.624	.6245	.627	3.611	.000

a. Predictors: (Constant), activity based budgeting

Source: Field data, 2019

R square is the coefficient of determination which illustrates the variation in the dependent variable is due to changes in the independent variable. From the findings in table 4.10 above the value of R square was 0.627 $P < 0.05$ an indication that there was variation of 62.7% on resource based performance which is explained by value to the firm and 37.3% explained by other factors not covered by the study. Moustafa (2005) established that Activity based budgeting providing deeper insights to their capacity utilization and resource allocation. Activity based budgeting has capacity for Connecting the operational budget to the strategic goals of the organization, thereby enhancing productivity of a firm. It therefore provides direction for capacity utilization, breakdown of functions into detailed activities, and the determination of resources needed with significant increase the management's understanding of, and control over, those service functions; thereby increasing value to the firm. Robert, Muras and Paschall (2000) explain that Current approaches for capturing and allocating overhead to products disguises a series of complex factors that affect a firm's cost structure. This shows that 62.7% changes in value to the firm could be accounted for changes in activity based budgeting. R is the correlation coefficient which shows the relationship between the study variables, from the findings shown in table above there was a positive relationship between the study variables as shown by 0.792, the null hypothesis which stated that "H0: There is no significant effect of activity based budgeting on budget Value to the firm in universities in western Kenya" was rejected. The findings concur with, Tandung Huynh, Guangming Gong, Huyhanh Huynh (2013) in their study of Integration of activity-based budgeting and activity-based management showing that an attempt has been made to present the background of ABC/ABM and other management accounting methods integration in order to overcome shortcomings of ABC/ABM and foster their advantages to support each other for achieving the organization' goals in the best results. It is therefore concluded that there is a statistically significant positive relationship between activity based budgeting and budget Value to the firm.

Table 4.10.1: ANOVA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.263	2	2.834	3.611	.000 ^b
	Residual	36.741	30	.868		
	Total	59.049	34			

a. Dependent Variable: Value to the firm

b. Predictors: (Constant), CRM, ATM and AAR

Source: Field data, 2019

The model gave ANOVA regression sum squares of 19.263 and residual sum square of 36.741. The processed data, which is the population parameters, had a significance level of 0.000 which shows that the data is ideal for making conclusions on the population's parameter as the value of significance (p-value) is less than 5%. The results indicated that the overall model was statistically significant. The results further imply that the independent variables are good predictors of the dependent variable which was supported by an *F*-statistics value of 3.611 with a *p*-value of 0.000 which was less than the conventional probability of 0.05 significance level.

Table 4.10.2: Coefficients of Activity Based Budgeting on Value to the Firm

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	.485	.268		1.809	.010
	CRM	.244	.117	.241	2.085	.004
	ATM	.749	.307	.516	2.440	.009
	AAR	.204	.119	.311	1.714	.005

a. Dependent Variable: Value to the Firm

b. Predictors: (Constant), CRM, ATM and AAR

Source: Field data, 2019

From the results in Table 4.10.2 the following model equation can be determined.

$$VTF = 0.485 + 0.44CRM + 0.749ATM + 0.204AAR$$

The findings indicate that the model is valid since the p value $p = 0.0000 < \alpha$ – level of significance where ($\alpha = 0.0500$), and also confirmed by the F-statistics = 3.611. From the findings, all the independent variables are statistically significant both at 1% and 5%.

A unit increase in Cost Revenue Measurement (CRM) increases predicted Value to the Firm by 0.244 percentage points (i.e. 24.4%) at $p < 0.05$ significance level. This implies that Cost Revenue Measurement significantly contribute to Value to the Firm. It is observable that although Cost Revenue Measurements yields positive significant contribution to Value to the Firm, the magnitude is fairly low. A one percentage increase in Activity Time Measurements (ATM) increases predicted Value to the Firm by 0.749 percentage points (i.e. 74.9%) at $p < 0.05$ significance level. This implies that Activity Time Measurements contribution to Value to the Firm is significant and the magnitude is high. However a unit increase in Activity to Activity Relationship (AAR) results into increase of predicted Value to the firm by 0.204 percentage points (i.e. 20.4%) at $p < 0.05$. This implies that Activity to Activity Relationship significantly contributes to Value to the Firm, but with a fairly low magnitude.. Therefore all the three independent variables (i.e. Cost Revenue Measurements, Activity Timelines Measurements, and Activity to Activity Relationship) have significant relationship with Effective Budget Resource Allocation. This is evidenced by the p values of the coefficients of the variables, all at 0.00; in which case, $p = 0.00 < \alpha = 0.05$.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the research findings that were obtained from the study that was anchored on specific objectives. It also presents conclusions that were made, the recommendations that were drawn, and finally, the suggested areas for further research.

5.2 Summary of the Findings

The first objective of the study was to establish the effect of activity based budgeting on Budget Goal Reallocation in universities in western Kenya. From the findings in table 4.8 above the value of R square was $0.637P < 0.05$ an indication that there was variation of 63.7% on resource based performance which is explained by budget goal reallocation and 36.3% explained by other factors not covered by the study. This shows that 63.7% changes in budget goal reallocation could be accounted for changes in CRM, CTM and AAR. Coefficient of correlation R, which shows the relationship between the study variables, from the findings, there was a positive relationship between the study variables as shown by 0.798. From the ANOVA finding, the processed data, which is the population parameters, had a significance level of 0.000 which shows that the data is ideal for making conclusions on the population's parameter as the value of significance (p-value) is less than 5%. The findings indicate that the model is valid since the p value $p = 0.0000 < \alpha$ – level of significance where ($\alpha = 0.0500$), and also confirmed by the F-statistics = 22.836. From the findings of coefficient of Activity Based Budgeting on Budget Goal Reallocation, all the independent variables are statistically significant both at 1% and 5%.

A unit increase in Cost Revenue Measurement(CRM) increases predicted Budget Goal Reallocation by 0.231 percentage points (i.e. 23.1%) at $p < 0.05$ significance level. This implies that Cost Revenue Measurement significantly contribute to Budget Goal Reallocation. It is observable that although Cost Revenue Measurements yields positive significant contribution to Budget Goal Reallocation, the magnitude is fairly low. A one percentage increase in Activity Time Measurements (ATM) increases predicted Budget Goal Reallocation by 0.211 percentage points (i.e. 21.1%) at $p < 0.05$ significance level. This implies that Activity Time Measurements contribution to Budget Goal Reallocation is significant though the magnitude is low. However a unit increase in Activity to Activity

Relationship (AAR) results into increase of predicted Budget Goal Reallocation by 0.116 percentage points (i.e. 11.60%) at $p < 0.05$. This implies that Activity to Activity Relationship significantly contributes to Budget Goal Reallocation, but with a fairly low magnitude.. Therefore all the three independent variables (i.e. Cost Revenue Measurements, Activity Timelines Measurements, and Activity to Activity Relationship) have a significant relationship with Budget Goal Reallocation. This is evidenced by the p values of the coefficients of the variables, all at 0.00; in which case, $p = 0.00 < \alpha = 0.05$.

The second objective was to determine effect of activity based budget on implementation timelines in universities in western Kenya. From the findings in table 4.9 above the value of R square was 0.724 $P < 0.05$ an indication that there was variation of 72.4% on resource based performance which is explained by implementation timelines and 27.6% explained by other factors not covered by the study. This shows that 72.4% changes in Implementation timelines could be accounted for changes in activity based budgeting. Correlation coefficient R which is the relationship between the study variables, from the findings shows that there was a positive relationship between the study variables as shown by 0.851. From the ANOVA finding, the processed data, which is the population parameters, had a significance level of 0.000 which shows that the data is ideal for making conclusions on the population's parameter as the value of significance (p-value) is less than 5%. The results indicated that the overall model was statistically significant. The results further imply that the independent variables are good predictors of the dependent variable which was supported by an *F*-statistics value of 29.851 with a *p*-value of 0.000 which was less than the conventional probability of 0.05 significance level.

Coefficients of activity based budgeting of Implementation timelines, the findings indicate that the model is valid since the p value $p = 0.0000 < \alpha$ - level of significance where ($\alpha = 0.0500$), and also confirmed by the *F*-statistics = 29.851. From the findings, all the independent variables are statistically significant both at 1% and 5%.

A unit increase in Cost Revenue Measurement(CRM) increases predicted Implementation Timelines by 0.030 percentage points (i.e. 3.0%) at $p < 0.05$ significance level. This implies that Cost Revenue Measurement significantly contribute to Implementation Timelines. It is observable that although Cost Revenue Measurements yields positive significant contribution to Implementation Timelines, the magnitude is fairly low. A one percentage increase in

Activity Time Measurements (ATM) decreases predicted Implementation Timelines by -0.129 percentage points (i.e. 12.9%) at $p < 0.05$ significance level. This implies that Activity Time Measurements contribution to Implementation Timelines is not significant and the magnitude is low. However a unit increase in Activity to Activity Relationship (AAR) results into decrease of predicted Implementation Timelines by -0.040 percentage points (i.e. 4.0%) at $p < 0.05$. This implies that Activity to Activity Relationship significantly does not contribute to Implementation Timelines, but with a fairly low magnitude.. Therefore all the three independent variables (i.e. Cost Revenue Measurements, Activity Timelines Measurements, and Activity to Activity Relationship) have insignificant relationship with Implementation Timelines. This is evidenced by the p values of the coefficients of the variables, all at 0.00; in which case, $p = 0.00 < \alpha = 0.05$.

The third objective was to determine effect of activity based budget on effective budget resource application in universities in western Kenya. From the findings in table 4.10 above the value of R square was 0.698 $P < 0.05$ an indication that there was variation of 69.8% on resource based performance which is explained by Effective budget resource allocation and 30.2% explained by other factors not covered by the study. Correlation coefficient R which shows the relationship between the study variables, from the findings shown in table above there was a positive relationship between the study variables as shown by 0.835. The findings indicate that the model is valid since the p value $p = 0.0000 < \alpha$ – level of significance where ($\alpha = 0.0500$), and also confirmed by the F-statistics = 2.505. From the findings, all the independent variables are statistically significant both at 1% and 5%.

A unit increase in Cost Revenue Measurement (CRM) increases predicted Effective Budget Resource Allocation by 0.373 percentage points (i.e. 37.3%) at $p < 0.05$ significance level. This implies that Cost Revenue Measurement significantly contribute to Effective Budget Resource Allocation. It is observable that although Cost Revenue Measurements yields positive significant contribution to Effective Budget Resource Allocation, the magnitude is fairly low. A one percentage increase in Activity Time Measurements (ATM) increases predicted Effective Budget Resource Allocation 0.529 percentage points (i.e. 52.9%) at $p < 0.05$ significance level. This implies that Activity Time Measurements contribution to Effective Budget Resource Allocation is significant and the magnitude is moderately high. However a unit increase in Activity to Activity Relationship (AAR) results into increase of predicted effective budget resource Allocation by 0.316 percentage points (i.e. 31.6%) at $p <$

0.05. This implies that Activity to Activity Relationship significantly contributes to Effective Budget Resource Allocation, but with a fairly low magnitude. Therefore all the three independent variables (i.e. Cost Revenue Measurements, Activity Timelines Measurements, and Activity to Activity Relationship) have significant relationship with Effective Budget Resource Allocation. This is evidenced by the p values of the coefficients of the variables, all at 0.00; in which case, $p = 0.00 < \alpha = 0.05$.

The fourth objective was to determine effect of activity based budget on Value to the firm in universities in western Kenya. . From the findings in table 4.11 above the value of R square was 0.627 $P < 0.05$ an indication that there was variation of 62.7% on resource based performance which is explained by value to the firm and 37.3% explained by other factors not covered by the study. . This shows that 62.7% changes in value to the firm could be accounted for changes in activity based budgeting. Correlation coefficient R which shows the relationship between the study variables, from the findings, there was a positive relationship between the study variables as shown by 0.792. From the ANOVA finding, The processed data, which is the population parameters, had a significance level of 0.000 which shows that the data is ideal for making conclusions on the population's parameter as the value of significance (p-value) is less than 5%. The results indicated that the overall model was statistically significant. The results further imply that the independent variables are good predictors of the dependent variable which was supported by an *F*-statistics value of 3.611 with a *p*-value of 0.000 which was less than the conventional probability of 0.05 significance level. Coefficients of activity based budgeting on the Value of the Firm findings indicate that the model is valid since the p value $p = 0.0000 < \alpha$ - level of significance where ($\alpha = 0.0500$), and also confirmed by the *F*-statistics = 3.611. From the findings, all the independent variables are statistically significant both at 1% and 5%.

A unit increase in Cost Revenue Measurement (CRM) increases predicted Value to the Firm by 0.244 percentage points (i.e. 24.4%) at $p < 0.05$ significance level. This implies that Cost Revenue Measurement significantly contribute to Value to the Firm. It is observable that although Cost Revenue Measurements yields positive significant contribution to Value to the Firm, the magnitude is fairly low. A one percentage increase in Activity Time Measurements (ATM) increases predicted Value to the Firm by 0.749 percentage points (i.e. 74.9%) at $p < 0.05$ significance level. This implies that Activity Time Measurements contribution to Value to the Firm is significant and the magnitude is high. However a unit increase in Activity to

Activity Relationship (AAR) results into increase of predicted Value to the firm by 0.204 percentage points (i.e. 20.4%) at $p < 0.05$. This implies that Activity to Activity Relationship significantly contributes to Value to the Firm, but with a fairly low magnitude. Therefore all the three independent variables (i.e. Cost Revenue Measurements, Activity Timelines Measurements, and Activity to Activity Relationship) have significant relationship with Effective Budget Resource Allocation. This is evidenced by the p values of the coefficients of the variables, all at 0.00; in which case, $p = 0.00 < \alpha = 0.05$.

5.3 Conclusions

The first objective of the study which was to establish the effect of activity based budgeting on Budget Goal Reallocation in universities in western Kenya depict study results that Activity Based Budgeting (ABB) significantly contribute to Budget Goal Reallocation (BGR), with the independent variables explaining up to 63.7% of its variability when analysed over a single period, with a $p = 0.000 < 0.050$. However, examined over time an R^2 value of 0.637, adjusted to 0.609; implying that all the variables including Activity Based Budgeting on Budget Goal Reallocation itself explain up to 60.9% of changes on resource based performance which is explained by budget goal reallocation. With the coefficient of determination values increasing with time; $R^2 = 0.363$ to $R^2 = 0.609$, it is evident that the Activity Based Budgeting (CRM, ATM and AAR) significantly contribute to Budget Goal Reallocation over time as shown by the lagged coefficients.

The second objective of the study which was to establish the effect of activity based budgeting on Implementation Timelines in universities in western Kenya depict study results that Activity Based Budgeting (ABB) significantly contribute to Implementation Timelines (ImPT), with the independent variables explaining up to 72.4% of its variability when analysed over a single period, with a $p = 0.000 < 0.050$. However, examined over time an R^2 value of 0.724, adjusted to 0.504; implying that all the variables including Activity Based Budgeting on Implementation Timelines itself explain up to 50.4% of changes on resource based performance which is explained by Implementation Timelines. With the coefficient of determination values increasing with time; $R^2 = 0.276$ to $R^2 = 0.504$, it is evident that the Activity Based Budgeting (CRM, ATM and AAR) significantly contribute to Implementation Timelines over time as shown by the lagged coefficients.

For objective three which was to determine the effect of Activity Based Budgeting on Effective Budget Resource Allocation in universities in Western Kenya, it has been established, through this study, that Activity Based Budgeting (ABB) play an important role in determining the Effective Budget Resource Allocation in universities in Western Kenya with the independent variables explaining up to 69.8% of its variability when analysed over a single period, with a $p = 0.000 < 0.050$. However, examined over time an R^2 value of 0.698, adjusted to 0.645; implying that all the variables including Activity Based Budgeting on Effective Budget Resource Allocation (EBRA) itself explain up to 64.5% of changes on resource based performance which is explained by Effective Budget Resource Allocation (EBRA). With the coefficient of determination values increasing with time; $R^2 = 0.302$ to $R^2 = 0.645$, it is evident that the Activity Based Budgeting (CRM, ATM and AAR) significantly contribute to Effective Budget Resource Allocation over time as shown by the lagged coefficients.

Concerning objective Four which was to determine the effect of Activity Based Budgeting on Value To the Firm (VTF) in universities in Western Kenya, it has been established, through this study, that Activity Based Budgeting (ABB) play an important role in determining the Value To the Firm in universities in Western Kenya with the independent variables explaining up to 62.7% of its variability when analysed over a single period, with a $p = 0.000 < 0.050$. However, examined over time an R^2 value of 0.627, adjusted to 0.624; implying that all the variables including Activity Based Budgeting on Value To the Firm itself explain up to 62.4% of changes on resource based performance which is explained by Value To the Firm. With the coefficient of determination values increasing with time; $R^2 = 0.373$ to $R^2 = 0.624$, it is evident that the Activity Based Budgeting (CRM, ATM and AAR) significantly contribute to Value to the Firm over time as shown by the lagged coefficients.

5.4 Recommendations

The study makes recommendations to the universities, stakeholders and policy makers in line with the objectives, findings and conclusions of the study.

The first specific objective of the study was to establish effect of Activity based budget on Budget goal reallocation. It is recommended that all the university projects should be evaluated to determine their budgets for the purpose of resource allocation.

The second objective that guided the study was to determine effect of activity-based budget on implementation timelines. It is recommended that universities and stakeholders should align their budgets to their strategic priorities in order to enhance implementation timelines.

The third objective of the study was to determine effect of activity-based budget on effective budget resource application. From the findings of the study, it is recommended that resource application procedures should be improved and that staff capacity building should be carried out to enhance the resource application performance of universities in Kenya.

The fourth objective of the study was to analyze effect of activity-based budget on value of the firm. It is recommended that adoption of activity-based budgets should be ensured it yield the maximum results by allocating the departments of finance and audit adequate resources.

5.5 Limitations of the Study

The study was focused on Universities within Western Kenya only while we have many Universities in Kenya, therefore these findings may not be used for generalizations on all Universities in Kenya. It is therefore it is important for a study to be conducted using wider scope and coverage then, the findings can be compared and conclusions drawn.

5.6 Areas for Further Research

This research has thrown up many questions in need for further investigation. Although the indicators of resource performance of selected universities both financial and non-financial dimensions, there may be other financial and non-financial dimensions that measure the performance, but are not addressed in this study. Moreover, there may be some practices that influence the resource performance of private universities in Kenya that are not included in this study. It is recommended that further studies need to be undertaken in the following areas: corporate governance, natural resource endowment and cultural factors in relation to the resource performance of the universities.

REFERENCES

- Arnold, J. M., Nicoletti, G. and Scarpetta, S. (2012). Regulation, Resource Reallocation and Productivity Growth. *European Investment Bank Papers*, 16(1), 90-115.
- Athanassopoulos, A. D. 1995. Goal programming & data envelopment analysis (GoDEA) for target-based multi-level planning: Allocating central grants to the Greek local authorities. *Eur. J. Oper. Res.* 87(3)535–550.
- Barney JB. 1991. Firm resources and sustained competitive advantage. *Journal of management* 17: 19-120
- Bharadwaj, A. S. (2000). A Resource-Based Perspective on Information Technology Capability and Firm Performance: *An Empirical Investigation I, MIS Quarterly* 24 (1), 169-196
- Bharadwaj, A., Bharadwaj, S., and Konsynski, B. “Information Technology Effects on Firm Performance as Measured by Tobin’s q,” *Management Science* (45:7), 1999, pp. 1008-1024.
- Bharadwaj, S., Varadarajan, P. R., and Fahy, J. “Sustainable Competitive Advantage in Service Industries: A Conceptual Model and Research Propositions,” *Journal of Marketing* (57:10), 1993, pp. 83-99.
- Brigham, E.F and J.F Houston. 1999. *Majamenen Keuangan*. Jakarta: Erlangga.
- Brigham, EF and LC Gapenski. 2006. *Fundamental of financial management*. Jakarta: Salemba Empat.
- Cascio, W.F. (2006). *Managing Human Resource: Productivity, Quality of work life and profits*. Boston: McGraw-Hill/Irwin
- Cohen-Charash, Y., P. E. Spector. 2001. The role of justice in organizations: A meta-analysis. *Organ. Behav. Human Decision Processes* 86(2) 278–321.
- Conner, K. R. “A Historical Comparison of the Resource-Based Theory and Five Schools of Thought within Industrial Organization Economics: Do I Have a New Theory of the Firm,” *Journal of Management* (17:1), 1991, pp.121-54
- Cipta, H. (2011). Analysis of Performance-Based Budgeting Application of Local
- Cokins, G., (2002 a), "Activity-Based Cost Management: The Foundation for Shared Services", A SAS white Paper, SAS Institute Inc., USA.
- Colin Drury, (2008), *Management and Cost Accounting*, Book power, Italy,
- Gavrea, C., Ilies, L. and Stegorean, R. (2011). Determinants of Organisational Performance: The Case of Romania. *Management & Marketing challenges for the Knowledge society*, 6(2), 285-300

- Deci, E. L., Cascio, W. F and Krusell, J (1995). Cognitive Evaluation Theory and Some Comments on the Calder and Staw Critique. *Journal of Personality and Social Psychology*, 31(1), 81-85
- Friebel, G. and Raith, M. (2006). *Resource Allocation and Firm Scope*. Discussion Paper No. 2249
- Fisseha, M. G. (2012). Revenue Generation Strategies in Sub-Saharan African Universities. Center for Higher Education Policy Studies (CHEPS)
- Fozzard, A. (July 2001). The Basic Budgeting Problem Approaches to Resource Allocation in the Public Sector and their Implications for Pro-Poor Budgeting. Centre for Aid and Public Expenditure Working Paper 147 Overseas Development Institute London
- Graves, S. B., J. L. Ringuest. 2003. *Models & Methods for Project Selection: Concepts from Management Science, Finance and Information Technology*. Springer, Norwell, MA.
- Green, A. Ali, B., Naeem, A. & Ross, D. (2000). Resource allocation and budgetary mechanisms for decentralized health systems: experiences from Balochistan, Pakistan. *Bulletin of the World Health Organization*, 2000 Government (Explorative Study on Tanah Datar). Thesis at Andalas University Graduate Program. Padang
- Heslin, P. A., Carson, J. B., & VandeWalle, D. (2009). Practical applications of goal-setting theory to performance management. In J. W. Smither & M. London (Eds.), *The professional practice series. Performance management: Putting research into action* (pp. 89-114). San Francisco, CA, US: Jossey-Bass.
- Iuliana, I. and Maria, C. (2016). Organizational Performance – A Concept That Self- Seeks to Find Itself: University Of Craiova.
- Isti'anah. (2010). Adoption and Implementation of Performance Based Budget. *Journal Informasi, Perpajakan, Akuntansi, dan Keuangan Publik*. Vol.5, No.1, Januari, pp. 73-84
- Jenatabadi, H.S (2013). Introduction Latent Variables for Estimating Airline Assessment. *International Journal of Business and Management*, 8(18), 78.
- Kamasak, R. (2015). Determinants of innovation performance: a resource-based study. *World Conference on Technology, Innovation and Entrepreneurship. Social and Behavioral Sciences 195(2015)*, 1330 – 1337

- Kigochi J.M, (2008).A Survey of operational budgeting challenges the insurance industry in Kenya, unpublished MBA thesis, University of Nairobi, School of business
- Kurshev, Alexander. and Strebulaev, Ilya A. (2005). Firm Size and Capital Structure *Journal of Financial Economics*, 2006
- Kurrohman, T. (2012). Evaluation of Performance Based budgeting with Value for Money Concept. (Case Study at East Java Province). *Forum Bisnis dan Keuangan I*. pp. 14-29
- Lebans, M., Euske, K. (2006), “A conceptual and operational delineation of performance”, *Business Performance Measurement*, Cambridge University Press
- Libby, T and Murray, L. Beyond Budgeting or better budgeting? *Strategic Finance*, Aug. 2007:89, 2, pp.47-51
- Lind, E. A., T. R. Tyler. 1988. *The Social Psychology of Procedural Justice*. Springer, New York.
- Madjid, N.C. (2013). Analysis of Implementation of Performance-Based Budgeting (Case Study on Education and Training Agency finances). Academic Study of BPPK, Ministry of Finance of Republic of Indonesia
- Maddox, D. (1999). *Budgeting for Not-for-Profit Organizations*. New York: John Wiley and Sons.
- Marlyn K. Simon; Jim Goes (2011) Dissertation and scholarly research
- Mathenge, P.W. and Muturi, W. (2007). Effects of Financial Management Practices On Financial Performance of Public Universities in Kenya. *International Journal of Information Technology*
- Matthew Andrews and Herb Hill, (2003). The Impact of Traditional Budgeting Systems on the Effectiveness of Performance-Based Budgeting: A Different Viewpoint on Recent Findings, *International Journal of Public Administration*, Vol. 26, No. 2, 135-155.
- Moustafa, E (2005). An Application of Activity-Based-Budgeting in Shared Service Departments and Its Perceived Benefits and Barriers under Low-IT Environment Conditions. *Journal of Economic & Administrative Sciences* 21(1), 42 -72
- Obara L.C. (2013). *Budget Preparation and Implementation in the Nigerian Public Sector*. Research Journal of Finance and Accounting 4(16):50-54 · January 2013
- Pickard, A. J. 2007. *Research Methods in Information*. London: Facet Publishing.

- Rodrigues, A. Wainaina, G. and Mwangi E.W. (2014). *Income Generation at Public Universities: A Case of the University Of Nairobi Enterprises and Services Limited*
- Roberts, M., Muras, A. and Paschall, D. (2000). *Planning and budgeting for quality: an activity-based approach*. ASQ's 54th Annual Quality Congress Proceedings
- Sandeep S. and Sami Y. (2016). *Managing Budgetary Virements*. International Monetary Fund (IMF) Fiscal Affairs Department
- Salganik, M. and Heckathorn, D. 2004. *Sampling and Estimation in Hidden Populations Using Respondent-Driven Sampling*. *Sociological Methodology*, 34(1), pp 193–239.
- Schulze, W. S. “*The Two Resource-Based Models of the Firm: Definitions and Implications for Research*,” Academy of Management Best Paper Proceedings, 1992
- Shane, J. M (2005). *Activity-Based Budgeting: Creating a Nexus between Workload and Costs*
- Wamae M.K, (2008). A study on challenges of budgeting at National social security fund
Unpublished MBA thesis, University of Nairobi, School of business
- Wydiantoro, A.E. (2009). *Implementation of Performance Based Budgeting: A Study Phenomenology (Case Study at the University of Diponegoro)*. Thesis in the Master of Accounting Graduate Program Diponegoro University. Semarang
- Yang Liang and Yan Wang (2011). *Research on Budgeting and Abandoning Budgeting for Management* (<http://www.paper.edu.cn>. 2nd June 2019)

APPENDICES

Appendix I: Letter of Introduction

Carolyne A. Ochieng
MASENO UNIVERSITY,
KISUMU CITY CAMPUS

Dear Respondent,

RE: DATA COLLECTION

I am a student at Maseno University, pursuing a Degree in Master of Business administration, Finance option. I am currently undertaking a research study on Effect of Activity Based Budgeting on Resource based Performance in universities in western Kenya. You have been selected to participate in this study and I would greatly appreciate if you assist me by responding to the questions as correctly, completed and honestly as possible. Your response will be treated with utmost confidentiality and strictly used for academic purposes

Yours Faithfully

CAROLYNE A. OCHIENG.

Appendix II: Questionnaire

SECTION I: BACKGROUND INFORMATION

1. Indicate your gender
 Male [] Female []
2. What is your age bracket?
 21-30 years []
 31-40 years []
 41-50 years []
 50 years and above []
3. What is the level of your education?
 Diploma []
 Bachelor's degree []
 Master's degree []
 Doctorate []

SECTION II: ACTIVITY BASED BUDGET AND BUDGET GOAL REALLOCATION

Please indicate the extent to which you agree or disagree with each of the following statements on a scale of 1 to 5 concerning the budget goal reallocation (5= strongly agree, 4=agree, 3= neutral, 2=disagree, 1=strongly disagree).

	Statement	5	4	3	2	1
1.	Budget allocation is done in line with the personal supplies					
2.	Procurement processes has a positive effect on budget goal reallocation					
3.	Budget goal reallocation to a particular project is dependent on growth of the market					
4.	There is emerging potential players in budget goal reallocation to different sectors in the university					
5.	Budget goal reallocation is the best strategy for demographic factors use of resources in institutions of higher learning					
6.	Budget goal allocation has affected socio economic factors in the institution					
7.	Budget goal reallocation affect the performance of university					

SECTION III: ACTIVITY BASED BUDGET AND IMPLEMENTATION TIMELINES

Please indicate the extent to which you agree or disagree with each of the following statements on a scale of 1 to 5 concerning the effect of activity based budget on implementation timelines (5= strongly agree, 4=agree, 3= neutral, 2=disagree, 1=strongly disagree).

	Statement	5	4	3	2	1
1.	Cost revenue measurements in terms of personal supplies saves time in the institution					
2.	When the university uses procurement practices, there is improves speed on executing institution’s activities					
3.	Majority of projects done on growth of market activities have met the set timelines					
4.	Emerging potential players have enabled the institution makes quick and informed decision on resource spending					
5.	The institution have improved efficiency after implementing demographic factors technique					
6.	Socio economic factors are effective in institutions of higher learning					
7.	Activity based budgets affect resources performance of the institution					

SECTION IV: ACTIVITY BASED BUDGET AND EFFECTIVE BUDGET RESOURCE APPLICATION

Please indicate the extent to which you agree or disagree with each of the following statements on a scale of 1 to 5 concerning the effect of activity based budget on effective budget resource application (5= strongly agree, 4=agree, 3= neutral, 2=disagree, 1=strongly disagree).

	Statement	5	4	3	2	1
1.	Personal supplies have made easy application of funds to finance the budget					
2.	Procurement practices accountability in terms of resource application has been achieved in the institution					

3.	Credibility of growth of market activities has been enhancing during resource application processes					
4.	Approval of resource application has been fast as a result of emerging potential players					
5.	Proper use of resources has been witnessed in demographic factors					
6.	Flexibility of socio economic factors is key in resource application process in the institution					
7.	Resource application affect the performance of university					

SECTION IV: ACTIVITY BASED BUDGET AND VALUE OF THE FIRM

Please indicate the extent to which you agree or disagree with each of the following statements on a scale of 1 to 5 concerning the effect of activity-based budget on value of the firm (5= strongly agree, 4=agree, 3= neutral, 2=disagree, 1=strongly disagree).

	Statement	5	4	3	2	1
1.	There is optimal use of financial resources as a result of personal supplies in the institution					
2.	Procurement practices has been achieved in the university					
3.	Growth of market activities has been cost effective in the university					
4.	Fiscal discipline has been enhanced as a result of application of emerging potential players.					
5.	Demographic factors as activity to activity relationship has facilitated auditing processes in the university					
6.	Prudent utilization of resources has been witnessed in the university as a result of socio economic factors					
7.	The value of activity-based budget affects the performance of university					

END

THANK YOU