EFFECT OF BUDGET ABSORPTION ON COUNTY REVENUE COLLECTION AMONGST COUNTY GOVERNMENTS IN KENYA

BY

KIPKIRUI DENNIS KEMEI

REG NO. 17/00400

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN COMMERCE

(FINANCE AND INVESTMENT OPTION), IN THE SCHOOL OF BUSINESS AT KCA UNIVERSITY

NOVEMBER, 2022

DECLARATION

I, the undersigned below do hereby declare that this is my original work and has not been submitted to any other University or institution of higher learning for examination or academic purposes.

Signature……... Date…….

KIPKIRUI DENNIS KEMEI REG NO. 17/00400

This research dissertation has been submitted for examination with my approval as the project supervisor.

Signed…… Date……

Dr. CHRISTINE SIMIYU NANJALA

Supervisor

ABSTRACT

Budget absorption is the rate of real expense out of the budgeted or planned expense of the budget allocation. A budget is a component that ensures that planned or budgeted expense is utilized or implemented. The study focused on the budget absorption constituted by budget allocation and execution of expenditures, and revenue collection amongst county governments. In the context of this study, expenditure was categorized into development and re-current expenditure. Budget allocation refers to the funds released by the national government annually for the county governments to spend on various sectors of its operations. Revenue collection was considered as the total funds each county government collects annually as its own source of funds. Budget absorption is related to the overall budgeting process hence it explains the rate at which each county government distributes the allocated resources from the national government to various cost centers. Secondary data was sourced from annual county governments' budget implementation reports from office of controller of budgets. Descriptive research design was used to analyze the panel data collected using STATA software and the fixed effects model was considered as appropriate to use. This study established that budget allocation is not significant but positively related to revenue collection amongst county government. The study found out that recurrent and development expenditure are significant on revenue collection. Development expenditure has negative relationship to revenue collection while recurrent expenditure has a positive relationship. The study recommended that the county governments should have clear policies to guide on priority of expenditure. It also recommends that Development and recurrent expenditure are significant on revenue collection hence there is need to have clear roadmap to balance resource allocations.

DEDICATION

I sincerely pass my gratitude to my family and friends for the positive encouragement they have accorded to me in this academic journey.

ACKNOWLEDGEMENT

All glory to God for good health and immense grace.

I thank my supervisor Dr. Nanjala for the professional guidance she has accorded me during this dissertation writing.

LIST OF TABLES

LIST OF FIGURES

`

TABLE OF CONTENTS

ABBREVIATIONS AND ACRONYMS

ANOVA: Analysis of Variance

MCA: Member of County Assembly

CBK: Central Bank of Kenya

PFMA: Public Finance Management Amendment

GDP: Gross Domestic Product

IAS: International Accounting Standards

STATA: Statistical Software for Data Science

PFM: Public Financial Management

COK: Constitution of Kenya

OCOB: Office of Controller of Budgets

FY: Financial Year

OSR: Own Source of Revenue

CHAPTER ONE

INTRODUCTION

1.1 **Background Information**

Absorption rate refers to the share of the actual expenditure out of the budgeted expenditure (the target) (Kersan-skabic & Tijanic, 2017). The absorption rate is calculated as a percentage of actual expenditure to the Approved Budget (OCoB, 2015). According to Achim and Borlea (2015), higher rate of absorption is generally preferred because it explains that county governments are close to achieving their target budget objectives. The scenario where county governments experiences low absorption rates implies that they are performing below the budget projections in utilizing the expenditure on allocated projects. Various studies have revealed that, generally absorption the e is below 50%. A study by Zaman and Cristea (2011) revealed that the average absorption rate in European countries was at 27%. Low levels of absorption of resources in global fund grants has been a prevailing and continuous demerit facing grant implementation in sub-Saharan Africa states (Akinzika,2018). This explains the low levels of absorption rates among the developing countries especially in Africa continent. A study by Government Spending Watch (2015), analyzed data from 31 developing countries. This study found out that the essential sectors such as of water, and hygiene achieved high deficits in spending than other sectors such as education and agriculture.

Budgetary absorption capacity, which is given in percentage form of the total allocations, is a measure of how efficiently and effectively an institution is capable of using its resource allocation. According to experts, there are three main characteristics that are related to absorption; financial capacity, which refers to the ability to co-finance government-supported projects and activities; macroeconomic capacity; and administrative capacity, which refers to how well local

and central authorities can manage government projects and activities,2013 (Hassan).. The new government dispensation upon promulgation of 2010 constitution paved way for decentralization of services from the national government to the county government. Article 6 of the Kenya constitution categorized the government into three arms namely the executive, judiciary and Legislature where the Executive was devolved into 47 county governments (Republic of Kenya,2010). After Kenya attained independence in the year 1963, service delivery was majorly centralized to the national government. The new constitution brought a new dawn where essential services were decentralized to the county government which were previously the local governments under the old constitution. A study by Were (2017) stated that devolution was aimed at taking public resources closer to the citizens. The evolution of county government management has experienced various milestones of success. The major drawback has been seen to be the menace of corruption. Many elected governors have faced allegations of massive corruption where the Senate have upheld the decisions made by the members of the county assemblies to impeach the governors.

The report on annual county governments budgets implementation OCoB (2020), the 47 County governments' approved total budget projections came to Kshs 499.62 billion, with Kshs. 187.98 billion (37.6%) designated for development expenses and Kshs 311.63 billion (62.4%) for ongoing expenses. As provided under Section 107 (2(b)) of the PFM Act, 2012, which stipulates that at least 30% of the budgeted resources must be set aside for capital initiatives, the total allocation of expenditures for development complies with this requirement. County governments anticipated receiving Kshs. 316.5 billion as their fair share of national tax revenue, Kshs 22.9 billion in total conditional grants from the national government, Kshs. 39.09 billion in loans and

grants from development partners, Kshs. 54.9 billion in their own revenue sources, and Kshs. 51.23 billion in cash left over from FY 2018/19 to finance the budgets.

The report OCoB (2020) enumerated that recurrent expenses totaled Kshs 279.27 billion, or 89.6% of the yearly recurrent budget, down from the 90.4 percentage reported in FY 2018/19. An absorption rate of 55.6% was achieved with the total development expenditure of Kshs. 104.51 billion, down from Kshs. 107.44 billion in the FY 2018–19 when it reached a high of 57.8%. According to expenditure by economic classification, salaries and benefits accounted for Kshs 17.83 billion (44.8%), operations and maintenance Kshs 107.44 billion (28%) and development Kshs.104.51 billion (27.2%) of total expenditure.

A decade has passed since the county government governance was operationalized in Kenya. The reports from the office of Controller of Budgets however shows that the county governments are still depending of the national government annual allocations as the major source of financing. Gituma (2017) found out that the major sources of revenue among the Kenya county governments included allocations from the national government, local revenue collections, and revenue received externally. As the county governments grow and new management takes over after general election, this sought to establish the effects of absorption rates of revenue collection amongst county governments in Kenya.

Reny Andriati (2017) asserts that government spending has a large impact on economic expansion. Spending on products and capital projects is strategically important for accelerating national economic growth. Spending on government institutions could be the main driving force behind them. Poor performance is assigned to the government if the budget cannot be optimally absorbed. The Ministry of Finance supports the government's cooperation plan to make sure that all programs' budgets may be effectively absorbed. This project might have an immediate impact

on fostering economic expansion and enhancing governmental performance. If approved programs are implemented at the appropriate moment, economic growth results. In addition to the aforementioned justification, inconsistent findings were found in earlier research.

According to studies by Sholikhah and Wahyudin (2014) and Jaya and Dwirandra (2014), local own revenue has an impact on capital expenditure. According to Nugroho and Rohman's (2012) research, capital expenditures are significantly impacted by economic growth.According to Jaya and Dwirandra's (2015) research, economic growth has little impact on capital spending. Talluta, et al. (2018) also did not discover the impact of an over budget calculation on capital expenditures.Sugiarthi and Supadmi (2014), in contrast to Kusnandar and Siswantoro (2012) and their findings, determined that there is a substantial impact of Excess of Budget Calculation on capital spending.

Antari and Sedana (2018) and Al Qadar's research, et al. (2014), both came to the conclusion that capital spending had a large impact on financial performance. It conflicts with the findings of Nugroho and Rohman's investigation. Wandira's (2013) research findings to the contrary, Local Own Revenue has little impact on capital expenditure. Furthermore, according to study by Sari et al. (2018), balanced funds have little impact on capital expenditure.

1.1.1 Budget Absorption

Budget absorption refers to the portion of the real expenditure out of the expected expenditure that is derived by the budget or planning. In this study, budget absorption was considered to consist of three components comprising of budget allocation, development expenditure and recurrent expenditure. The office of controller of budgets computes absorption rate by considering these components. The absorption rate explains the efficiency amongst county governments in utilizing

allocated resources in terms of development and recurrent expenditure. The share at this stage is very relevant as it is the determinant of the efficiency and the financial achievements of the county governments. The intended funds have been utilized properly. A higher absorption rate is always preferred unlike the lower one. A higher one suggests that the funds collected have not in any way been misappropriated and the financial target is yet to be reached unlike the lower one where the performance is below the intended expenditure in this case either the fund has been s embezzled or misappropriated. According to the controller of budget in their annual county government budget report, only 20 counties were past the average mark on the absorption rate graph the rest fall behind with less than 68%. Nakuru County was the leading with a 99.3% absorption rate and Garisa County failed with the 21.2% absorption rate.

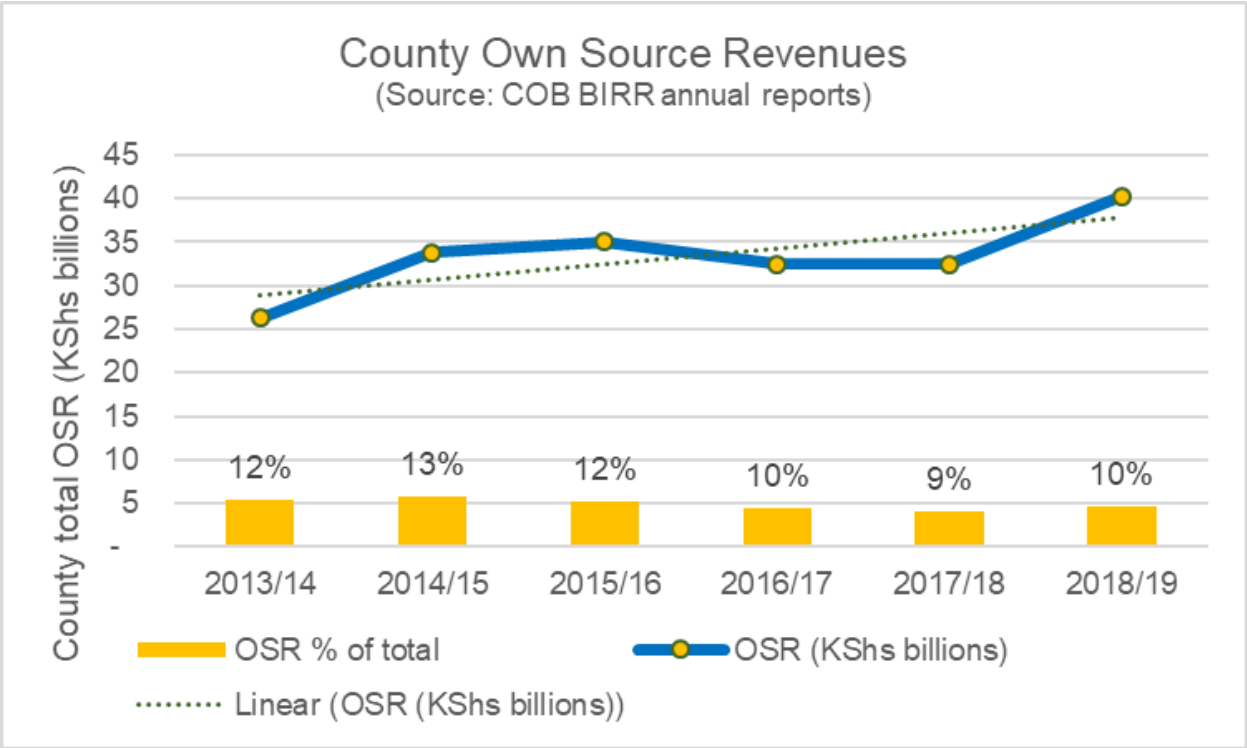
The local revenue target has been a challenge for the 47 counties to reach. A report by the office of controller of budgets financial year 2015/2016, states that there was no county government that attained revenue collection target. Different challenges do face these counties from reaching the target. A low budget execution rate within the county government is a challenge. It is always caused by lack of transparency in the execution process. The procurement process sometimes is longer than the expected time creating time lags. The estimated real budgets allocated to projects also take a lot of time. Contractors and suppliers are not paid on time thus prolonging the procurement process. Poor planning also contributes to poor budget absorption and it is a problem that is also experienced by the national government. All of the mentioned challenges can be categorized lack of good operational plans which has great a effect on the recurrent funds. They always increase the recurrent funds in any administration. This means that the same projects are budgeted for under both capital and recurrent expenditure (Karani, 2019).

Poor planning and budgeting have been a challenge to the county governments that leads to a larger proportion of allocations in the budget are being transferred to recurrent and non-essential expenditures at the expense of development expenditure (Kahari et al., 2015). Many projects will be less realized or totally not achieved. According to section 107 of the PFM Act the Fiscal The County Governments shall make sure that recurrent expenditures do not exceed the County Governments' total revenue and that development expenditures account for thirty percent (30%) of the County Budget.

To achieve desired county public finance management targets, absorption rate has a measure to explain the targeted results achieved and the variance output. Sharma (2012) explains that variance will be the basis of deriving necessary corrective measures towards reducing any extreme variances. According to Olaye and Oladipopu (2014), budget is a tool used to achieve planned ideas to ensure they are implemented. Budget absorption rate is the output of budget allocation, development expenditure and recurrent expenditure. This study considered these constituents as independent variables to explain revenue collection which was considered as dependent variable. County government budget absorption rate is driven by the timely disbursement of resources from national government to devolved units. The county government management board are responsible to draw the priority list among the development and recurrent expenditure. Each section in the county government is required to adhere to the annual approved budget to execute resource allocations. The national government and county governments relies on IFMIS to monitor all the payments for accountability. IFMIS have been considered as the critical tool to ensure increased budget absorption and enhance budget implementation (BPKP, 2011).

According to Article 209 of the Constitution, counties are allowed to charge for the services they offer, levy property taxes, entertainment taxes, and any other taxes permitted by a parliamentary act. As a result, various counties may classify identical revenues differently, making it difficult to evaluate the balance of revenue sources across them. Since the beginning of devolution, counties' total OSR collections have risen marginally (blue line with corresponding dotted upward trend), albeit at a slower rate than inflation. OSRs decreased in actual terms and as a share of total county revenues over time as county spending and intergovernmental payments rose (yellow bars) as in fig1.

Fig1. County own source revenue



1.1.2 Development Expenditure

County governments engage in development expenditure that majorly aims at financing projects which are considered to generate revenue. Mogues (2016), development expenditure is driven towards enhancing economic development by facilitating infrastructure which increases general production and real income of a country. A report on annual county government budget implementation done by office of controller of budgets revealed that aggregate development expenditure was Ksh36.6 billion representing 21.6% for 2013/2014 financial year. The analysis of development expenditure is of importance as it explains the rate at which county governments engage in income generating projects. These income generating activities propel the counties towards increasing internal revenues hence self-reliance and sustainability in the long run.

Currently, county governments heavily rely on national government annual allocations to sustain its expenditure. As a result, poor national economic performance normally delays the annual devolved funds disbursements. This have significantly affected negatively the performance of county governments as witnessed among the stalled projects in various counties. The non-operational projects contribute to the high rate of unemployment, huge pending bills. This study analyzed the effects of development expenditure on revenue collection among county governments where the findings are useful to enhance prudent prioritization among projects which are directly related to generate revenue.

1.1.3 Recurrent Expenditure

Efficiency in the context of government spending has significant influence on economic growth rate in any country (Lewis, 2018). According to Mophalla (2015), efficiency in government expenditure is of concern towards enhancing economic development. Efficiency in expenditure explains the rate at which county governments utilize allocated resources in recurrent and development expenditure. Recurrent expenditure entails expenditure associated with wages, salaries, operational costs and debt repayments among others (Olanubi 2017). Recurrent expenditure enhances county governments' operational efficiency. The annual county government budget implementation report for 2013/2014 financial year indicates recurrent expenditure at 82.7% of total county budget allocations.

According to the report, Nairobi County government incurred Ksh15.9 billion on recurrent which was the highest among all counties. Kiambu and Nakuru incurred Ksh 5.5 billion and Ksh 5.4 billion respectively. Counties with lowest recurrent expenditure rates were Lamu, Tana River and Elgeyo Maragwet which spend Ksh 609.2 million, Ksh1.29 billion and Ksh1.32 billion

respectively. The report also indicated that Mombasa Kisumu and Tana river counties had the highest rate of recurrent expenditure as per proportion to their total expenditure at 97.9%, 97.8% and 97.6% respectively. The report also indicated that counties like Meru, Nyeri. Tharaka Nithi and Muranga attained the highest absorption of recurrent expenditure at 115.9%, 107.8%, 104.8% and 101.9% respectively. The high recurrent expenditure absorption rate indicates that the mentioned counties utilized portion of resources meant for development expenditure on recurrent expenditure.

This study will take into analysis to examine the effects of recurrent expenditure on revenue collection among the county government. This is because there exists mismatch in proper allocation and actualizing budgeted recurrent expenditure in the county governments.

1.1.4 Budget Allocation

A budget allocation is the amount of funding designated to each expenditure line. It designates the maximum amount of funding an organization is willing to spend on a given item or program. Budget allocation is essential component to every government entity that aims to attain desirable performance of key government agencies (Gershon, 2014). In United Kingdom, treasury and essential government agencies are responsible for monitoring budgetary allocations. The treasury checks on the previous performance and trends among the government departments to derive the desired resources to allocate. The government agencies are required to have a mechanism for monitoring accountability to check on performance against budgetary allocation. The United Kingdom has functional systems such as National Audit office and Audit Commission which they act as supreme audit authorities to support the accountability in budgetary allocation (OECD,2005). In Pakistan, budgetary allocation is exercised in all public sectors in the

instrumental model. The process however has experienced challenges such as inconsistencies between the general public desires and the government implementation of policies. Pakistan government also adopted an approach of assessing the previous performance among the departments by analyzing

Previous budget allocation patterns and development proposals to ensure effective budgetary allocations. According to Green (2017), budgetary allocation has been unable to produce significant changes in efficiency among government entities. According to Fauzia and Riharjo (2017), development expenditure was positively and significantly impacted by the remaining budget financing. According to Sari, Djuanda, and Sarwani's (2017) research, there is a substantial and positive correlation between capital spending and remaining overbudget financing. The government's capital expenditures from the previous year had a significant impact on the allocation of funds for the following year's expenditures. The remaining excess financing can be used to finance these expenditures.

1.1.5 Revenue Collection

Public finance is the domain of all governments in the globe. According to Kayaga (2007), the scope of public finance includes how the government affects the distribution of income, the effective use of resources, and macroeconomic stabilization. Furthermore, it should be remembered that government operations and revenue distribution are included in government spending. The four main methods of funding governmental expenses are taxes, borrowing, public financing of state-owned firms, and public finance. In order to ensure that government operations are carried out efficiently, revenue from taxes, excise charges, customs, licenses, and other sources is vitally important (Gruber, 1998.

In Jordan, the key local administration unit is the municipalities, which, in this context are no different in consideration to revenue collection problems (Batarseh, 2004). Importantly, the total financial deficit of the Jordanian Municipalities was about 140 million US dollar in 2013 (Ministry of Municipalities Affairs Report, 2014). Such fiscal challenges urged municipalities to seek ways to expand or at least stabilize revenues and sustain best service provision levels. Following, municipalities have started diversifying their revenue structures away from property taxation into other tax and non-tax revenue sources (Carroll, 2009). In this vein, Jordanian municipalities are clearly having limited capacity to collect revenues (Batarseh, 2004, Masaedeh and Shaikaly,2001)

Tanzania majorly rely on taxation as a channel of revenue collection. Tanzania has a three tired tax administration structure, which includes the tax administration of the Central Government, the tax administration of Zanzibar and the tax administration of Local Government. Taxes levied by the central government are managed by the Tanzania Revenue Authority (TRA), domestic consumption taxes in Zanzibar are managed by the Zanzibar Revenue Board, and different locally imposed taxes are managed by local authorities. 90% of domestic revenue comes from taxes collected by the central government, which is the main source of income for the government (TRA 2006). There are four revenue agencies within the Tanzania Revenue Authority, the Tax Investigation Department, the Large Taxpayers Department, the Domestic Revenue Department, and the Customs and Excise Department. According to the literature, systems segmentation of taxpayers and domestic tax operations were combined to create the Large Taxpayers Department. On October 1st, 2001, it was established as a directorate of Large Taxpayers; eventually, it became a complete department. To provide consistent and high-quality

service to large taxpayers, secure revenue, improve audit programs, improve collections and management of tax debts, and also act as models or pilots for testing new processes (TRA 2012).

Kenya's constitution promulgated in 2010 stipulates clearly the funding of county governments in terms of internal and external sources. For efficient provision of services and governance, county governments are required to ensure existence of reliable and adequate avenues for revenue collection. County governments have operated since the year 2012 but they are currently facing revenue collection constraints. Bulunywa et al, (2014) argues that revenue collectors in county governments have not been channeling revenue collected to the county government treasury. This have resulted in huge corruption menace in the county government revenue collection management. Owuor et al, (2012) noted that revenue collection in county government among developing countries have not been as efficient as expected. Ismail (2016) clearly explains the challenges faced by revenue collectors when handling revenue collection channels and systems involved. To achieve optimal execution of county governments' budgets, local revenue sources are critical to enhance co-funding with the annual allocations received from the national government.

County governments in Kenya have enrolled automated systems to aid in revenue collection Gideon and Alouis, 2013). A study by Visser and Erasmus (2005) found out that revenue collection needs to be in line with the principles of equity, ability to pay, economic efficiency and certainty which are the major cannons of taxation. As county governments foster towards enhancing their local revenue collection, the members of county assembly need to pass legislations in adherence to the constitution to boosts revenue collection channels. This study considered

budget absorption rates components to explain the revenue collection amongst the county governments in Kenya.

According to a survey conducted by the Institute of Certified Public Accountants in Kenya (2014), several counties are collecting less revenue compared to what the non-functioning state or County Government that lay within their boundaries given in collectively and hence raising concerns on the capacity of the devolved units in raising own revenue. According to Nyongesa (2014) the County Governments have inexperienced personnel, use traditional methods in revenue collection systems, weak revenue bases, lack internal audits, and some county revenue officers are reluctant in accepting change, and therefore leading to low revenue collection in the County Governments. The law of the land has always ensured that there is equality in raising and distribution of income. The law is to provide for any other allocations to provinces, local government or municipalities from the National Government's share of that revenue, and any conditions on which those allocations may be made (Ambetsa, 2011).

1.1.6 County Governments in Kenya

After the launch of Kenya new constitution in 2010, a new dawn in running the devolved units was invented as county governments. These units are headed by a governor elected by the citizens after every five years of general elections. The county governments have formed ideal paradigm of governance which have ensured that resources which was previously centralized in the national government are delivered to the remote area of republic. This has resulted in efficient service delivery of essential services such as health, basic education to the general public. As provided in article 191 and 192 of the fourth schedule of the constitution of Kenya, and county government Act 2012 provided powers to the county government. There are forty-seven county governments

in Kenya which the Independent Boundaries and Electoral commission are mandated to draw their boundaries. The county governments are the replacement of local authorities which operated before the year 2010. It can be witnessed currently that the devolved approach of governance have outshined the previous mode of administration. Essential services such as of health, basic education, cultural activities and tertiary education have reached areas previously considered as remote areas. The county governments have ensured that productivity, efficiency and quality output are achieved (CoK,2010).

There are a total of 47 counties in Kenya founded per Article 6 section 1 on the Kenyan constitution 2010, as per the promulgated constitution devolution was to bring hopes to the marginal areas in Kenya. The introduction of county government was all about equality and transparency in resource management. These county governments were viewed as political governance units for the devolved areas and administer services to the areas within the constitutional rights of a particular region. The mandates that were initially the responsibility of the national government were also delegated to the devolved government. Governors are the head of the counties and are elected y the citizens in that particular county on their preferred political parties. There are county assemblies that also consist of the members of county assembly (MCA) elected to represent their wards (Constitution of Kenya, 2010).

The national government does releases annual proportion that is dedicated to the various counties. The fund comes from the treasury and always monitored by the controller of budget later audited by the Auditor General. County government has government accounts with the Central Bank of Kenya (CBK) for a portion of fund the government intends to release to the county. However, counties do have accounts with different commercial banks or financial institutions like

Nairobi County has over 30 commercial banks (Karani, 2018). Annually, the County Government is entitled to 15% of the National Revenues' share from the National Government under which the balance is to be covered by the County Government in either levy, infrastructural agreements, or partnerships (Constitution of Kenya, 2010).

Kamolo (2014) argues that it is inadequate for county governments to solely rely on the federal government for funding while establishing or maintaining programs whose advantages are felt locally. Local resources should be used to fund initiatives like feeder roads, rubbish collection, the construction and upkeep of sewerage systems, street cleaning, rural access roads, and the growth of markets and urban centers. To cover the growing financial expenses budgeted by the county and to maintain a balance between county budgetary allocations and county revenue collection through tax instruments, county governments must collect significant amounts of income through taxes.

The ability to generate funds in county is undeniable. County governments can collect revenue; allocate the same funds for utilization among the departments. There is need for the county executive to have a budget for planning and implementation to guarantee performance and accountability. Without allocation and utilization then absorption rates cannot be realized causing problems in the performance of the county governments. The absorption rate needs to be high for the good performance to be recorded. There is an annual report that reviews the county's implementation of the budget. The report investigates the revenue collected against the annual targets. The report has an obligation of providing the budget absorption rate. As per the Kenyan constitution Act, 2012 section 166 the office of the controller of budget is tasked with providing

counties with revenue. A budget has to be approved for the allocation at the same time differentiating the recurrent and development expenditure.

1.2 Problem Statement

Over the past few years, the county's government accounts have been into consideration and of interest to the taxpayer. Kenyans have gained interest on the accounts and financial positions of their county governments thus creating awareness. Upon realization the financial officers at the respective county officers are trying to fix things by increasing revenues so that it can match the expenditures placing the county governments in a constant trouble for poor budget absorption. Little research has been done to assess the revenue collected against the absorption rate. Revenue collections in county governments need to be critically scrutinized and any insights on the revenue collected and the absorption rate of the same funds collected. County budgets are yet to be realized because there is slow implementation, refunds to the national government and poor allocation of funds hence budgets are very important in making financial decisions of an organization. PFMA manages the movement of money that gets in and out of the finance departments in County Government. Counties are expected to ensure public participation, accountability and openness in general financial matters such as equity in distribution of resources, prudent use of available resources, clear fiscal reporting and responsible financial management. The aggregate absorption rate of county governments was 79.1% in 2014/2015 (OCoB,2015) and 40.82% in 2021/2022 (OCoB,2022). The pandemic has been a contributor to the fall in the percentage but the county governments have faced problems like poor budget preparation and implementation. The problem

of budgeting has since drawn attraction and research has been on why there is slow or poor budget implementation.

Research done by Darwis and Amin (2020) discussed the analysis and effects of financial regulations on the budget absorption rate in south Sulawesi. Budget absorption has a direct relationship with the bureaucratic environment and competence of the organization's commitment. There are policies made by national governments across the globe that always have an effect by maximizing or minimizing budget absorption. The findings of the study suggest that there is a positive and significant relationship between budget absorption and finance policies, its competence, commitment and bureaucratic environment. Therefore, suggest that the community should always be a interest in making the policies and principles in budget absorption that leads the activities of planning and implementation.

Gachithi (2010) did research on the challenges of budget implementation in public institutions. The conclusion was that there are no efficient budget preparation procedures. The study only focused on the University of Nairobi as a public institution. Cheboi (2019) also did a research on the budget implementation and performance of county governments a case study of Elgeyo Marakwet. The study concluded that there is problem in the availability of resources, budgetary staff and absence of auditing processes. The study only focused on one county government. Inadequate funds within departments were also a challenge and lastly unsatisfactory methods of revenue collection. Joseph (2017) did research relationships between public financial management practices and county government funds absorption rate. The study found out that there is a strong relationship between the public debt management and county government fund absorption rate.

A research by Erick (2020) on the effects of budget absorption on the performance of county governments. The research concludes that budget absorption is anchored by planning, organizing and a quality expenditure control tool. For optimal development within county government projects there must be a clear plan for prudential expenditure and a decrease in the non-existence expense. Research by Abdullah, et al (2015) on the effects of budget absorption showed that globally budget absorption is a problem and their factors that have influence of the budget absorption rate. The factors are slow budget approval which has reduces the rate backwards. Research also done in Indonesia West Nusa Tenggara province by Koriatmaja, et al (s2020) showed that procurement and budget execution have effect on the budget absorption.

Oluwalope and Ojediran (2017) recommended that each person participate in the budget-related tasks.This will have a favorable effect on the functioning of the county. The public should constantly be involved in county government decisions to improve service delivery and county performance. Additionally, involving the public in decision-making and information exchange improves accountability and facilitates the provision of services with efficiency. Kathungu (2016) concluded that county performance depends on budgeting and utilization. Additionally, a large deficit in the county budget signals poor performance because the resources will be spread thin or redistributed to optimize urgency and priority. As a result, a lot of projects will stall. Excellent capital structure, according to the study, is a crucial component of high county performance.Since the research was on budget utilization, budget absorption cannot be generalized.

According to Mutungi (2017), the county assembly members should adopt laws that would improve the county's performance because the absence of such laws leaves room for corruption and waste. The report also recommended that legislation and the budget work together in harmony to improve county performance and accommodate financial capability. According to Kihia (2016),

giving employees who oversee budget execution a nice environment will improve performance. The study also suggests that pay should be highly desirable to encourage job security and improve performance. If the collection officers' employment terms are well protected and preserved, they can function successfully and efficiently.

From the global, continental, regional and local studies above have not reviewed the effects of absorption rates on revenue collection in county governments. This brings research gap that this research undertook analysis to solve by outlining and discussing in detail the absorption rates and its effects on the budget allocation, development and recurrent expenditure to improve on the performance and create good return on the investments made by the county governments in Kenya. This study provides the solution to the research question by analyzing the effect of budget absorption on revenue collection amongst county government in Kenya.

1.3 Objectives of the Study

1.3.1 General objective

To determine the effect of budget absorption on revenue collection amongst county government in Kenya

1.3.2 Specific Objective

1. To analyze the effect budget allocations on revenue collection in County government funds in Kenya.
2. To evaluate the effects of development expenditure on revenue collections in County governments in Kenya.
3. To examine the effects of recurrent expenditure on revenue collections in County Governments in Kenya.

1.4 Research Questions

1. How do budget allocations affect revenue collection in County government in Kenya?
2. How does the development expenditure affect the revenue collection in county governments of Kenya?
3. How does recurrent expenditure affect revenue collection in County government in Kenya?

1.5 Significance of the study

1.5.1 National government

This research enables the Kenyan Government to understand on how absorption rates affect the revenue collection amongst county governments. The research provide strategy on how funds can

be channeled into right departments and be accountable for at the end of fiscal year. This is made possible because the study give insights into when and how finance is being spent.

1.5.2 County government

The study is of importance to County Governments as it outlines any kind of variance in budget absorption and difficulty in budget implementation that affects the financial performance of the County Government. It also provides the factors that affect the absorption rates that incur an effect on the development and recurrent expenditure.

1.5.3 Scholars

The research is also of importance to the scholars who wish to increase their knowledge base on this topic on the effects of budget absorption rate on revenue collection in county governments. There are not much studies on budget absorption, this study will give point of reference to other researchers to undertake analysis on this important component.

1.5.4 General public

The study is of significance the public by providing insights into how the government utilizes the scarce public resources and funds efficiently and optimally, and how the government forms policies for the improvement of relationships with the citizens from all 47 counties. The study educates the public by showing them how to form watch dog committees that will also make them understand on how funds are allocated by the national government to their respective county government, the efficiency and transparency of how the same funds are being utilized. The knowledge on the budget helps the citizens to realize how and where the funds go. It is of great help in understanding accountability.

1.6 Scope of the study

The study evaluated the effects of budget absorption on revenue collection amongst county governments majorly focusing on the 47 counties in Kenya. The study looks into the budget allocation, development and recurrent expenditure and their roles in the development of projects and county. The revenue collection was deeply analyzed. Budget absorption components were considered to be the dependent variable. The study also expounded on revenue allocation, recurrent expenditure and development expenditure as its specific objectives within the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter conducted the literature review of the topic. Theories were discussed and analyzed in relation with the effects of budget absorption rates on revenue collection in county governments. The analysis of the other researches, books and journals were featured as they help in forming the basis of this study by providing and identify the knowledge gap.

2.2 Theoretical review

This section contain reviews of theory attached with budget absorption. The theories to be discussed are theory of Agency, Resource dependency theory and budget theory under budgeting and lastly the internal fund theory. The section appraised the mentioned theories to deeply pin the subject under evaluation.

2.2.1 Budget theory

Shields and young (1993) defined this theory as the best mechanism in detecting the difference between existing and forecasted performance which is an effective tool of an effective budgetary performance. The main objective of budgets is to predict the future financial plan of an investment plan to show financial feasibility of the project. A budget is an important tool to any organization thus there is always planning and control. Many organizations prepare budgets annually and monitor the performance by evaluating the variance. In every budget it is very essential to measure the costs (Samira, 2018). The costs to be incurred by the county governments are estimated through

county planning based on the revenue from the national government and from the local contribution (Eunice, 2017). A budget is an arrangement plan for future financial performance and also a tool used for controlling the expenditures of an organization (Hirst, 1987). It is a tool that helps in the process of utilization of public resources efficiently.

Budgeting has four phases which include preparation, authorization, execution, and accountability. The first phase is all about getting the budget prepared. There has to be careful and critical thought at the ground level. Key elements to be considered at this stage are; income required vision and good leadership. The second phase is getting the budget approved by tuthorized personnel. At this stage the budget is channeled to a debate and few changes can be made or it is left in its initial state. The stage provides an opportunity to correct mistakes before they are realized. The budget is executed in the next phase after it has been approved. Lastly it is the evaluation and accountability stage. Adjustments in costs and prices are a trigger to why evaluation is important. The spending has to be lawful and in accordance to the budget in place (Fortuna, 2021). A government that has a budget intends to allocate revenues and funds to achieve the economic and social goals. The budget helps the government to plan on the resources it has and manage the same resources. The management of these resources has to promote development within the country.

The government makes its plans, goals policies and programs a priority within the constraints of its financial wellness as ruled by economic conditions. There is a need for revenues and expenses need to be included in reports at the end of the month in every department. A well-planned budget helps to allocate and control the funds in the firm. The process of preparing budgets also helps in increasing the structuring of a firm efficiency, openness and fiscal obligation. Budgets

are important tools in the county governments as it improves efficiency planning, allocation and control of revenue and expenditure in the county, (Adhiambo, 2014)

Sharma (2012) recommends that budgets be used as a tool in identification of funds in county Governments, the amount it receives from National government and local sources. There is need in punctuality when collecting taxes from the public. The County Government can grab the advantage attached to the funds set aside by the National Government instead of other private sources where some have only one stream of funds and their performance are recognized because of efficiency in funds management. This helps in comparison on their performance with those of the private industries (Sharma, 2012). Budgets have the potential in increasing the performance and decisions made by the County Government treasury and Controller of Budget in the country by changing the planned objectives and providing a comparison with other County Governments or departments against which they evaluate performance between the departments and even with other County Governments (Hancock, 2009).

The proper and prior planning provides for a finer and smooth allocation of resources and funds as perceived by many. Completion of objectives on time and, equality in distributing resources is a strategy in advocating for prior planning. When budgets are made, there should be funds and resources available to find the outlined plans on the budget. All this can only be achieved through responsibility and transparency on the public funds and resources. When the county attains their goals of planning and allocation of funds it's easier to increases the quality of service rendered to the public. The budgeting process in Governments allows the public to participate as they help in raising funds through taxation. The county government can also foster its desired financing of projects by borrowing money from the external financiers if their available income cannot meet

the planned budget (Kimani, 2014). When drafting annual budgets, the county treasury should analyze all the expenditures in that financial year. The responsible committee should prioritize projects which needs special attention. In order to find out the relationship between the budgeting system and its financial performance, the county should determine the types of expenditure of the county and its performance. The county should compare their planning methods with the national and private firms to enhance financial performance (Kimani, 2014). This theory is considered in this study as the anchoring theory to explain the allocation, expensing towards the desired results.

2.2.2 Keynesian Theory

Kynes (1963) stipulates that the public expenditure is a vital component to drive economic growth and development. The theory advocates that it is necessary to formulate a policy to address continuous fluctuations in the economy. A government is required to be continuously relevant in responding to peaks and floors of economic growth by increasing expenditure. According to Tily (2009), designed policy documents are considered to be critical components in achieving the short-term economic stability and the general long-term growth rate in economy. Bogdien et al, (2004) cited that Keynesian theory argued that economic performance can be improved by making private borrowings which can be used in various development projects across the general public. This theory explains macro comics of total spending in the economy. This attribute has economic effects on the revenue employment and inflation rate. This theory was advanced by British economist who desired to understand the great depression. The theory focuses on the fluctuations in economic ties over the short run. It explains that well designed public interventions can be of great significance towards economic stabilization.

This theory explains that the general public expenditure enhances economic growth by enhancing the purchasing power. A country can utilize the borrowed resources to build a downsized economy where the expenditure is directed to income generating ventures. The theory explained the concept where short-term drivers are applied to counter the challenges of decline in economy, Carling (2012). Kenya being a developing country has embarked on big development projects including roads, railway lines, industries, education sector and health. This has resulted in huge spending results in multiplier effects by injecting resources in the economy. This study considered Keynesian theory as relevant to explain development expenditure variable. It explains the general public expenditure to generate robust employment opportunities, increased income generating ventures and the general public investment which is paramount for economic growth. The county governments in Kenya have advocated for equal employment opportunities which was previously considered reserved for national government. This has brought resources for investment to the remote areas which boost revenue collection for county governments.

2.2.3 Resource Dependency Theory

Resource dependency theory is of the idea that an organization within the society must have transactions or engage with other actor in the environment in order to acquire resources for its success. The actors can be other businesses, organization, the general public or community. The transactions can sometimes be advantageous or bring shortcomings to the organization. According to Hessels and Terjesen (2010), the resource dependency theory puts focus on a firm's need to access resources from other sources within the environment hence being dependent on other factors in the external environment. Organizations are forced to depend on other external factors due to scarcity of resources (Hessels & Terjesen, 2010). According to Pfeffer and Salancik (1978)

who developed the theory, organizations are embedded in a network of interdependence and social relationships. The environment provides constraints that force organizations to deliver their services in accordance with the external resource providers.

Research shows that there is similarity in the way expenditure functions are assigned across levels of government and this is due to the fact that most nations take efficiency into consideration as they strive to delivery public goods and services. Most governments not only focus on the delivery of public goods and services but also give sub-national governments the power to 17 choose the best programs that suites the communities they represent (Boadway & Shah, 2007). According to Boadway and Shah (2007), local governments are tasked with the responsibility of providing local public goods and services, including water and sanitation, local roads, and recreational facilities, the state is tasked with the responsibility of providing important public services, such as health, education, and welfare, in addition to state public goods, such as roads and police protection and lastly, the federal government provides national public goods which includes national infrastructure, banking and defense foreign affairs money. The study states that the assigning of responsibilities assists higher levels of government in determining the way expenditure programs should be designed and delivered for reasons such as efficiency and equity. This theory gives a clear explanation of the need for self-sustainability. It is relevant to this study to explain the dependent variable of revenue collection for county governments to thrive without relying on national government allocations only.

2.2.4 Agency theory

Agency was first proposed by Stephen Ross and Barry Mitnick in the early 1970s. The two scholars were for the idea of economic and institutional theory of agency. Ross was responsible for

problems of compensations in agency theory while Barry introduced common insight that does exists in institutions in agency theory. The two ideas were responses to the imperfection that is in organizations. The theory thus suggests that when certain behaviors occur then the principle of imperfection in agency theory allows for the society to create institutions that make solving the imperfection their objective. The institution created by the society does not have to necessarily deal with the problem but provide ways of managing, adapting and chronically distorted to them.

Relationships in businesses between principals and agents are deeply explained in agency theory. It can also be viewed as an agreement that is reached amongst individuals who intend to do business transactions. Mainly the agent always makes decisions on behalf of the principal. Ross and his counterpart came up with the idea to eradicate the disputes that were arising over different priorities and obligations of both the principal and agent. These priorities included the interests of the principals. Over the past years the principals have been forced to deal with the financial problems that the agents had created. The agents have been exploiting the resources that have been entrusted to them by the principals with high expectations that they will have a greater output because of large input. To some extent it has been seen as act of embezzlement. The theory was developed to stop such events and bring peace between agents and principals which is greatly termed as reducing loss agency.

According to a report by The East African news on March (2013), on the clash between national government and county government with onset of devolution there are a number of conflicts that are outlined. Bigger bill, this happens when the county government being left with the obligation of planning their own budget they still leaves the burden to the national treasury. The county governments sometimes have a higher expenditure than the expected one. The

counties have been seen spending on unnecessary projects and infrastructures that increase the expenditure. Wrangles between the national and county government, this has always taken place during the time of transition. The interim and the national government are expected to continue with the operations and functions when handing over of office is expected. The national government does not release funds sooner than expected thus slowing down the operations or continuation of projects.

Transparency is one of the methods of reducing agency problem. It is very important for both the principal and agent to be honest and transparent with one another. Decisions coming from one party during implementation should be agreed on and reasonably fair. Imposing of restrictions and remove negative restrictions would be a significant way of reducing the effect of agency loss. Abolishing restrictions is advantageous because it builds trust in agents and gives them courage to make decisions on behalf of the principals. Apart from abolishing the restrictions there is need to set new restrictions that are in line with the main objective of the relationship between the agent and the principal. The new restrictions will make the principal feel more confident with their agent thus less conflict.

Solomon et al (2021) did a cross country analysis based on the agency theory and entrepreneurship. The article majored on economic development of entrepreneurs. Agency theory as explained by the journal has been of help on how better national policies made from the central rule of law can stimulate entrepreneurships. Investigations have shown that direct and joint market has less impact on the entrepreneur's activity whether there is market freedom or spending policies within the market. The entrepreneurial activities are boosted when there are mixed national policies that bring a combination of both the market freedom and spending policies. This theory

is of relevance to this study to anchor the first objective where various stakeholders are involved in the process of resource allocation on behalf of the government and the people.2.3 Empirical Studies

2.3.1 Budget allocation and revenue collection

Recent studies have emphasized the interdependence of several travel expense components and highlighted that adjustments to one budget share may result in changes to the distribution of the remaining components. Low-cost airlines' lower transportation costs, according to Martinez-Garcia and Raya (2008) and Ferrer-Rosell et al. (2016), can encourage visitors to spend a larger amount of their travel budget at their destination. These results support the observations made by Morley (1992) and Dolnicar et al. (2008) that budget allocation decisions are interconnected and that a specific expense for a trip may be impacted by an excess or a shortage in another expense.

Kiriria (2013) as observed The Public Finance Management Act 2012, outlines the rules of how the national and county governments can collect and spend revenues. The Public Finance Management Act, 2012 section 125 allows for the process of budgeting to be followed at the County level. He further suggests that as there must be an effective PFM system at the county level to ensure successful management of the public sector and the economy. Research done by World Bank (2012) suggests on the guidelines and templates that need to be developed to guide the formulation of county budgets. More so the World Bank keenly emphasizes for a country to have a wide chart of accounts for preparing, executing and reporting the budget. In addition to this, the counties would be expected to develop adequate PFM, Human resource and service delivery capacity.

Anohene (2011) did research on the role of budgeting in the financial management processes of the local governments in Ghana. The study used in purpose the sampling to derive a sample of fifty respondents made of budget committees within local governments in the Kumasi area of Ghana. Data were collected using a structured questionnaire. The findings of the study were there is majority of 90% of the respondents indicated that there were budgetary controls in the local governments. With respect to the role of budget differences on the financial performance of the local government, a percentage of 92% indicated that budget differences had effect on the financial performance of local governments. There was also an observation on the budgeted revenues and there was realization that it was less than the actual achieved budgets on the ground. This difference between the budgeted and achieved budgets had an effect on the financial performance of local governments.

Obwaya (2011) analyzed the role of participatory budgeting on the performance of city council of Nairobi. A descriptive research design was applied with a sample size of 44 respondents made of the city council of Nairobi employees used for the study. The study concluded that there exist a positive and significant relationship between budget participation and organizational performance. Ndunda et al, (2015) did a research on the influence of local revenue management on financial distress in selected county governments in Kenya. Through a descriptive survey design it reveals that revenue management has a positive relationship and is significantly important to each other. The study findings show that tax compliance has a significant effect on revenue collection, which subsequently influenced overall budget execution. The study only focused on Nakuru County.

2.3.2 Development expenditure and revenue collection

Frank (2019) did a study to evaluate the influence of public participation on public accountability in Kenya. The study targeted the residents of Kitui County in Kenya. The findings of the study showed that there is a bigger challenge in process of public participation thus placing public accountability into jeopardy. The study identified civil education as the cause of lack of public participation, not all of the respondents is aware that their opinion matters in most of the public resources available within the locality. The study was concluded by it suggesting that public forums should be done as part of civil education to the residence. The civil education should be in line with the law.

Yurtkur and Abasz (2018) use a heterogeneous panel causality test to examine the relationship between economic growth and R&D spending. Even though there is a causal relationship, different countries have conservative, growth, and neutrality hypothesis. Inekwe (2014) discovered a substantial positive correlation between research and development spending and economic growth for upper-middle income countries, but a negligible correlation for lower-middle income countries. Additionally, the study found that spending on research and development has a short-term contractionary influence on growth and a long-term expansionary effect. Freimane and Blia (2016) use a panel inquiry to look at the relationship between research and development spending and economic growth in the EU from 2000 to 2013. Their findings are similar to those of Inekwe (2014).

Kamau (2018) did research on factors influencing performance of county government projects. The target for the study was Gatundu market in kiambu county, Kenya. The staff of Gatunde sub-county and Ng'enda ward leaders were not left behind. The study found that factors

attached to good management were essential for the performance of the county projects. These factors include effective communication, management experiences, skilled staff of labor and proper planning. Public participation was also an important factor because the respondents felt like they were being left out of the development projects whereas they do also have ideas of developments. Therefore, they suggested that the county officials hold more forums to express their views and opinions. Monitoring and evaluation also was a strong point of expression from the study. Poor monitoring was observed to be a limiting factor for the success of these projects. The study recommends that skilled and competent staff should be hired; effective planning and efficient communication should be introduced. The County Governments spent 104.51 billion shillings on development activities, which is an absorption rate of 55.6% of the annual development budget, down from 57.8 billion shillings which is 57.8% of the reported 107.44 billion shillings in development expenditures in FY 2018/19.

2.3.3 Recurrent expenditure and revenue collection

Acharya (2017) did a research on an economic scrutiny of government revenue and expenditure in Nepal. The study found that both the government income and expenditure are important fiscal elements used to gain various economic objectives like proper allocation and price stability. The research also discovered an increasing trend between the expenditure and income. An increase in expenditure has been more than that of the government income. The conclusion was that there is gap between expenditure and government income ad it has been widening as the years go by. The government income is increasing at a slower rate compared to expenditure. Thus, there is need in strengthening the tax capacity of the country.

Alobari (2019) did research on the role of taxation on capital and recurrent expenditure: implications for economic growth in Nigeria. The study reveals that tax revenue has an improving and important relationship with capital and recurrent revenue. More, the findings suggest that the ratio of taxation on capital and recurrent expenditure has a good relationship with GDP there is an increase in taxation revenue that increases the capital and recurrent expenditure in the government. Therefore, the study recommends that taxation be the main source of revenue for the government due to its ability to increase the capital expenditure and also the growth of the economy. The study also suggests for strengthening of the tax collection systems.

David (2016) did research on the relationship between internal controls and performance of county governments of county governments in Kenya. The findings of the study revealed that the respondents were not sure whether the adoption of internal control practices has led to The County's asset base greatly increasing over time. Also they were neither sure if the County's system of accounting sufficiently recognizes the receipt and expenditure of grand contracts, they were neither sure if the adoption of internal control practices has led to the adequacy of the taxes collected by the county to cover the cost of running the courses, adoption of internal control practices has led to all levies being collected or paid .it was not certain if the result of such implementation the County has adequate funds to fulfill its responsibilities efficiently as and when they fall due. This is therefore an indication that internal control practices in the county governments have not led to improved performance at the county level. Van and Sudhipongpracha (2015) argue that government agencies use diverse fiscal instruments to attain economic growth and social stability. One of these fiscal instruments is government expenditure, a function of budget absorption. National budgeting in the U.S underwent changes as costs of healthcare and

social programs expanded and deficits grew. As the economic environment changed, the budgeting strategies changed markedly and there has been immense attention on budgeting, allocation, and absorption of resources. Public budgeting is about accountability, governance, financial management, and pursuance of strategies that deliver optimal public good to the citizens. Budgeting can be conceptualized as a yard stick of what an entity or country intends to achieve using limited resources.

Masaviru (2012) conducted research to ascertain whether Kenya's economic growth was affected by the mix of state expenditures. Data on public spending components such as health, defense, transportation, education, and economic affairs for the years 1972 to 2008 were differenced and linearized for estimation using OLS. According to the author, economic growth was significantly impacted by expenditure on education, whereas it had a weaker impact on spending on transportation, communications, and economic affairs. Spending on agriculture was large but had a negative effect on growth, whereas spending on health and defense was not shown to be significant. The effects of the composition of government spending on economic growth in Kenya from 1964 to 2011 were examined by Muthui et al. (2013). The authors discovered that economic growth is improved when government funding is directed towards infrastructure development and education using the vector error correcting method. Growth was hampered by spending on public safety, law and order, debt repayment, salaries, and healthcare. The authors came to the conclusion that investments in infrastructure development significantly improved economic growth compared to consumer expenditure.

.

2.3.4 Summary of Empirical Literature

Title	Author	Objectives	Methodology	Conclusion
Effect of Budgeting process on budget performance of state corporations in kenya: a case of kenyatta national hospital	John Kuria Kamau 2017	To determine the effect of budgeting process on budget Performance of State Corporations in Kenya	-The study used descriptive statistics	Budgetary participation had the greatest effect on the budget performance of State Corporations of Kenya, followed by budgetary control, then budget feedback while budgeting sophistication had the least effect on the budget performance of State Corporations of Kenya
Effects of Budgetary accounting techniques on the management of financial resources at the	Joshua Kadenge 2021	To determine the effect of budgetary control uses on management of financial resources in	Descriptive research design was used -Secondary and primary data was used	-Significant relationship between budget and management of financial resources at the county level -There is significant relationship between revenue optimization of financial resources at the county level - There is significant relationship between budget control and

county government of Kakamega		county government of Kakamega.		management of financial resources at the county level
Effect of healthcare budget allocation on county government economic growth in Kenya	Virginiah Wanjuhi Waruingi 2020	To determine the effect of health budget allocation on economic growth of the devolved county governments in Kenya	Study used a descriptive research design method	Study concluded that healthcare budgetary allocation, national allocation shares and internal appropriations had a statistically significant and positive relationship with economic growth of Counties in Kenya
The effect of budget utilization on the performance of county government-case study of eastern region	Ruth Kathungu 2016	To investigate the effect of budget utilization on the financial performance of county governments in Kenya	Descriptive research design was used	Budget utilization has influence on performance of county government

Effect of budgeting and budgetary control on financial performance of devolved governments in Kenya	Zipporah Wayua Mutungi 2017	To establish relationship between budgeting and budgetary control and financial performance of county governments	Quantitative descriptive research design was applied	Budgets and budgetary controls help county governments to estimate revenue and expenditure
Effects of budget execution on the performance of counties in Kenya	Dickson Ocharo 2019	To establish the effect of budget execution on performance of counties in Kenya	Descriptive research design was used where secondary data from forty-seven counties from office of controller of budgets were relied on	Budget execution affect the performance of county governments in Kenya
Relationship between budgeting process and	Thomas Kipkosgei Korir, (2022)	To establish the relationship between	-Used Descriptive and inferential statistics analysis -	A unit increase in production increases financial performance and can be enhanced by having well-structured budgetary planning

financial performance of tea processing industries in Kericho and Bomet counties-Kenya		budgeting process and financial performance of selected tea processing factories in Kericho and Bomet Counties	Correlation research design was used.	-Participatory budgeting is important predictor of successful budgeting.
Factors affecting budget preparation	Mwasi Roselyn Mkanjala 2017	Determine the effects of budget preparation on budget variance	Descriptive research design was used -Primary data was collected using questionnaires and stratification was applied to get the sample for study.	External factors such as inflation, taxation and exchange rates are relevant in budget preparation
Effects of activity-based budgeting on	Carolyn Akinyi Ochieng	To determine the effect of Activity-	-Adopted correlational research design	Activity-based budgeting significantly contribute to budget goal reallocation

resource-based performance in universities in western Kenya	2019	Based Budgeting on Resource-based performance in universities in western Kenya, Kenya	-Used primary and secondary data -Applied structured questionnaires and secondary data schedules to collect data	
Relationship between pos-audit practices and budgetary performance on Suna East NGCDF-Migori county	Fred Obiye Nyakundi 2017	To establish the relationship between post-audit practices and budgetary performance of National Government Constituency Development Fund	Correlation research design was used	Review of governance process leads to improved budgetary performance

		(NGCDF) in Suna East constituency.		
Budget and Budgeting in selected Nigeria Universities	Daniel Emojorho	-Examine various sources of revenue in selected Nigeria universities' libraries	Used Survey study with structured questionnaires	The library budget is an integral part of university budgets and is usually planned in advance
Budgeting participation, goal commitment and employee performance	John Kizito 2009	To examine the effects of budgeting participation and goal commitment on employee performance in the hotel industry	Used closed-ended questionnaires -Analysis was conducted using the Linkert scale -Applied quantitative research method	-Budgeting participation alone does not significantly influence employee performance but requires both budget participation and goal commitment

2.4 Conceptual framework

Mathieson et al (2011), explained a conceptual framework as an organization of ideas within a study that shows the result of the intended purpose of a study. This study will consider budget absorption comprising of; budget allocation, development expenditure and recurrent expenditure as independent variables while revenue collection as dependent variable.

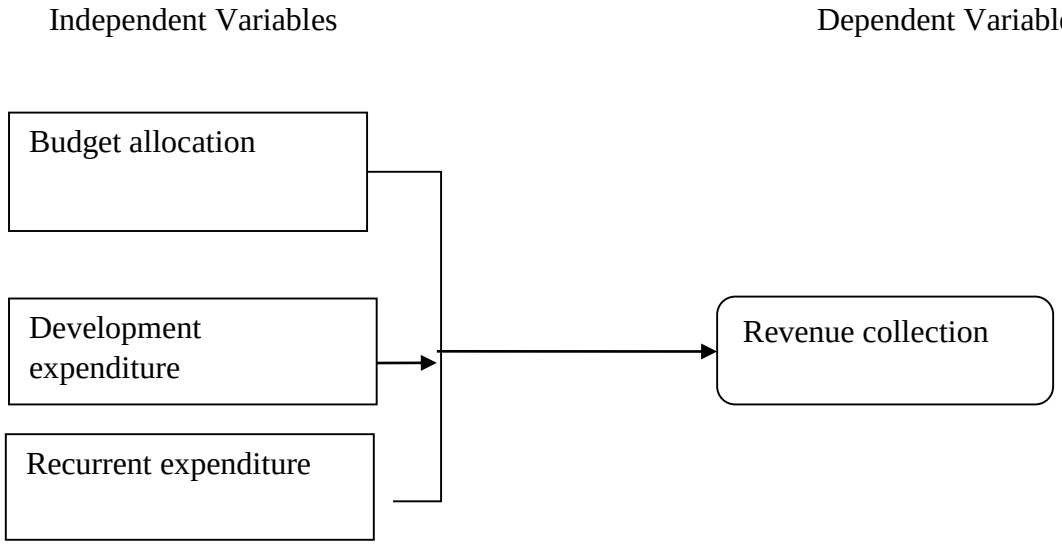


Figure 2. Conceptual framework (Source: Researcher, 2022)

2.5 Operationalization of Research Variables

Table 1; Operationalization of Research Variables

Variables	Source	Source	Scale	Measurement
Budget Allocation (BA)	Budget allocation entails taxing, spending and debt management of government, which influences resource allocation and income distribution.	Rosen (2013)	Ratio	Total Amount (Ksh millions)

Development Expenditure (DE)	These are expenditure which majorly aims at financing projects which are considered to generate revenue.	Mogues (2016)	Ratio	Total Amount (Ksh millions)
Recurrent Expenditure (RE)	Recurrent expenditure is the expenditure associated with wages, salaries, operational costs and debt repayments among others.	(Olanubi, 2017)	Ratio	Total Amount (Ksh millions)
Revenue collection (RC)	Revenue collection is the amount of money that a company receives during a specific period.	Awitta (2010)	Ratio	Total Annual Revenue Collected

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This study utilized this chapter to explain the research methodology to be applied. The research design, population size, sampling procedure were described. The instrument's reliability and validity with detailed data analysis process were discussed.

3.2 Research Design

According to Sekran (2001), the research design is a research plan of logical nature that provides key indications or directions on the way or path the research is to be conducted. Kothari (2004) defines descriptive research design as one that provides the outline of the existing terms and conditions, relationships about the research problem under investigation. This research considered a descriptive research design to analyze the effects of budget absorption of revenue collection among county governments in Kenya. The design is considred appropriate to run quantitative data collected from the office of the controller of budgets (OCoB).

3.3 Target Population

A target population is a group of people or elements from which a sample might be taken from (Saul McLeod, 2019). Ngechu (2004) defines population as a group of individuals, elements, events or groups of stuff that are under scrutiny by the researcher. Target population is the set of elements, items or objects or individuals with similar identity characteristics (Mugenda, 2003). Neuman (2000) defines the target populations as the set of observable identities in elements, households, persons or events that have been put under investigation or research by the study**.** This study considered all the forty-seven county governments in Kenya and collected data for seven

years (2013 to 2021). The promulgation of the current constitution in 2010 ushered in the new government structure. The general election was conducted in 2012 which brought to operation the forty-seven-county government. This study considered year the 2013 as the base because this was the first year to actualize the devolved government.

3.4 Model specification

Data findings are to be presented using pie charts, graphs, bar diagrams, tables and to facilitate comparison and for easy inference.

3.5 Sampling and Sampling Procedure

Kothari (2004) defined sample size as the representation of an entire population by a unit or a section of the population**.** The study analyzed total population of forty-seven county government in Kenya hence no sampling was to be taken. According to Ngulube (2003) sampling procedure is the process that involves the selection of a selected number of respondents for a study. On the other hand, Schindler and Cooper (2004) urges that sampling procedure is the process being utilized to select the most appropriate sample size out of a group for a study or the most reliable sample size. This study did not adopt any sampling procedure because the data were sourced for all the forty-seven counties from the reports of the controller of budget.

3.6 Research Instruments

This research considered sourced secondary data from office of controller of budget annual reports on annual county governments budget implementation and KNBS data. The data collected are on annual basis over different county government hence constituted panel data.

3.7 Data Processing and Analysis

Marshall and Rossman (1999) argue that data analysis is the process of conducting order, structure and interpretation to the numerous data collected. According to Saunders, Lewis and Thornbill (2009), data analysis is the processing of data to make meaningful information after quantitative data is collected. The study utilized STATA software to clean, explore and run the data collected to generate desired outputs for analysis using panel regression approaches. The data being of various county government units on annual timelines required test on pooled ordinary least squares analysis (OLS), fixed and random effects model to confirm the appropriate model. The study adopted fixed effects model as appropriate foe analysis. The research analyzed the impact of variables that vary over time and effect of individual-specific characteristics that are inherently unmeasurable. The fixed-effects model assumes that the individual-specific effect is correlated to the independent variable. The random-effects model allows making inferences on the population data based on the assumption of normal distribution. To achieve the optimal model between fixed and random effects, the Hausman specification test was conducted. Hausman's (1978) specification test, compares an estimator that is known to be consistent with another estimator that is efficient under the assumption being tested. STATA software was used to run descriptive analysis and inferential statistics. The results are presented in tables and graphs. Correlation and regression analysis were performed to test the existence of multicollinearity and significance among the variables.

This study considered test on the above models because the data set is PANEL data covering many firms over several years. According to Wooldridge (2010), pooled OLS is employed when you select a different sample for each year, month and period of the panel data. Fixed effects or random effects are employed when observing the same sample of individuals. The fixed effect model was considered in the study with the aim of removing omitted variables biasness. Analysis by the random effect model was of importance to make inferences on the population data based on the assumption of normal distribution. The random-effects model assumes that the individual-specific effects are uncorrelated with the independent variables. The pooled OLS, fixed and random effects models were to be as follows:

1. Pooled OLS:

   $RC_{it} = \alpha + \beta_1 BA_{it} + \beta_2 DE_{it} + \beta_3 RE_{it} + \varepsilon_{it}$

2. Fixed effects:

   $RC_{it} = \alpha_i + \beta_1 BA_{it} + \beta_2 DE_{it} + \beta_3 RE_{it} + \varepsilon_{it}$

3. Random effects:

   $RC_{it} = \alpha + \beta_1 BA_{it} + \beta_2 DE_{it} + \beta_3 RE_{it} + \varepsilon_{it} + \mu_{it}$

Where; RC= Annual County government revenue collection

BA= Annual County government budget allocation

DE= Annual County government development expenditure

RE=Annual County government recurrent expenditure

ε_{it} = within entity error term, μ_{it} = between entity error term

3.8 Diagnostic Tests

The research conducted diagnostic tests to determine the best model to use. The research analyzed panel data which requires tests to choose among POLS, fixed effects and random effects models. The study used Housman test to choose between FE and RE, the test output confirmed that the FE model was appropriate for analysis.

3.8.1 Exploratory Analysis

The exploratory analysis tests were conducted to analyze the trend plots and growth of the dependent variable for the years under study. This analysis gives the firms' behavior over time to explain the growth patterns of dependent variable over the years.

3.8.2 Descriptive Analysis

This study conducted descriptive test to analyze variability of variables. The output confirmed existence of variability among all variables. This necessitated the need to transform all variables to log form to change their functionality as shown in Table 2. Correlation test was also conducted to ascertain the existence of correlation and significance levels among the variables under study. Table 3 confirmed that there was no correlation among variables.

3.8.3 Normality Test

After fitting FE model, the study normality test to predict distribution of residuals. Normality PP-plots and QQ-plot was tested which confirmed that the residuals were normally distributed. Normality test is appropriate to confirm whether data under study follows normal distribution or asymmetrical distribution (John & Johnson, 2011). The distribution plots confirmed that the residuals are normally distributed hence the assumption on normality of data is upheld.

3.8.4 Multicollinearity Test

The test for multicollinearity was conducted to ascertain if the independent variables have high intercorrelation in a regression model. According to Dunn (2010), multicollinearity exists if the independent variables are found to have high intercorrelation in a regression model. The data under analysis must be free of multicollinearity for analysis. This study used Variance Inflation Factor test to check on multicollinearity. A mean VIF which is less than 10 implies nonexistence of multicollinearity but a VIF exceeding score of 10 signify presence of multicollinearity.

3.8.5 Heteroscedasticity Test

Heteroscedasticity test was conducted to ascertain the distribution of error terms in the model. Linear regression assumption requires that error term has normal distribution with zero mean and constant variance and this is known as homoscedasticity (Yang et.al, 2019). Fixed effects model was considered appropriate model to conduct analysis hence Modified Wald test was conducted to check on existence of Heteroscedasticity. If $P<0.05$, null hypothesis of homoscedasticity is rejected to mean presence of heteroscedasticity.

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DISCUSSIONS

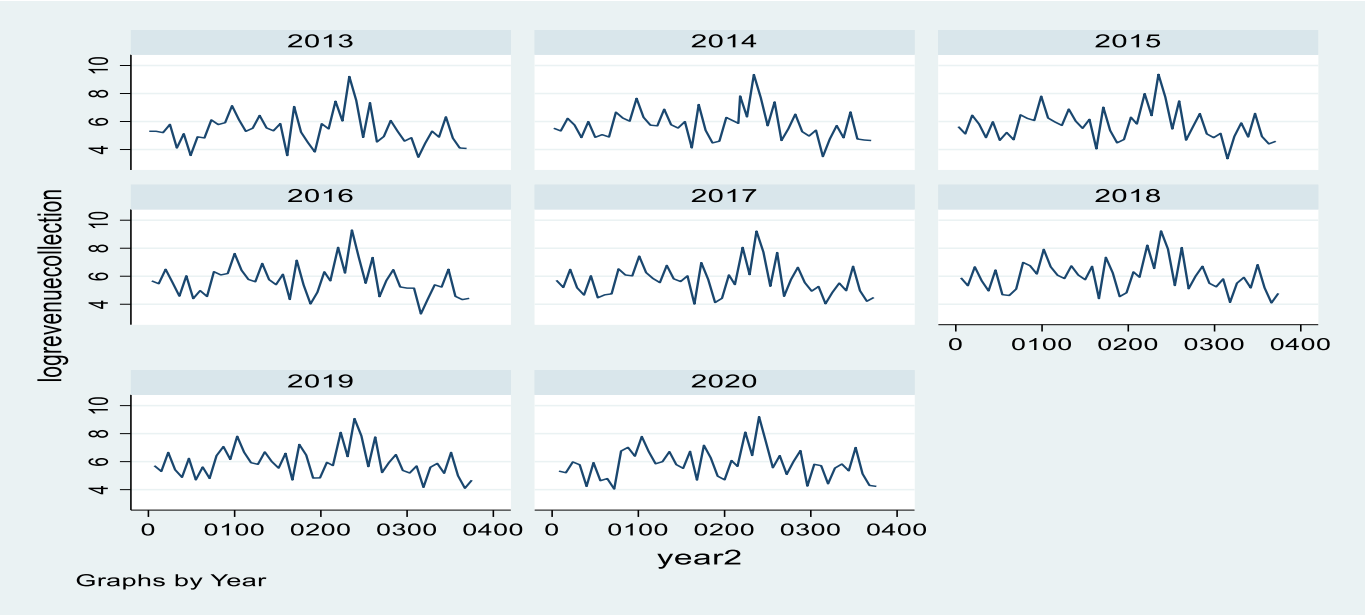
4.1 Introduction

This chapter presents analysis of data, findings and the discussions to explain on the objectives being sought by the study. The study analysis was guided by three specific objectives and the findings were presented in figures and tables. The study made descriptive analysis and a regression model to aid in the discussions and findings. Data analysis was conducted using STATA software version 16 and linear regression model was established to determine the effects of budget absorption of revenue collection amongst county governments in Kenya.

4.2 Exploratory Analysis

The trend plot analysis as in Fig1 was conducted which revealed a similar trend of revenue collection for the eight years under study. The revenue collection plots show rise and fall trends with a higher rise in revenue collection during similar period for all years under consideration.

Fig 2. Trend Plots



4.3 Descriptive Analysis

This research used overall standard deviation to analyze the variations range of observations from the mean. The overall minimum and maximum possible values were used to in this study to measure the lowest and highest value for a given variable under study and the results were as shown in table 2.

To test the variability of variables, the study conducted descriptive analysis as show below. The analysis transformed the variables to log for to change their functional form. After transformation, the variability of variables was removed to ensure they are evenly distributed as shown below. The descriptive statistics as in table 1 show that budget allocation has a mean of 8.95% with a standard

deviation of 0.52 and a minimum level of 6.67%. The development expenditure has a mean of 7.43% with a standard deviation of 0.81 and at a minimum level of 4.42%. Recurrent expenditure had a mean of 8.34%.

Table 2: Variations Table

Variable	Obs	Mean	Std. Dev.	Min	Max
logrevenue~n	376	5.772677	1.123015	3.311164	9.368199
logbudgeta~n	375	8.952883	.5241366	6.66055	12.22717
logdevelop~e	376	7.434077	.8092489	4.420405	15.04748
logreccure~e	376	8.338753	.5500321	6.370226	12.63638

4.4 Correlation Analysis

Table3: Correlation Table

	logrev~n	logbud~n	logdev~e	logrec~e
logrevenue~n	1.0000			
logbudgeta~n	0.5583*	1.0000		
	0.0000			
logdevelop~e	0.2120*	0.5254*	1.0000	
	0.0000	0.0000		
logreccure~e	0.6214*	0.7714*	0.4626*	1.0000
	0.0000	0.0000	0.0000	

A correlation analysis was conducted with a confidence level 95% as shown in table 3. The results as shown above revealed that all variables are significant. There was no correlation output exceeding 0.8 which implied that there is no correlation among variables hence precluding multicollinearity.

4.5 Multicollinearity test

Table4: Collinearity Table

Collinearity Diagnostics

Variable	VIF	SQRT VIF	Tolerance	R-Squared
logrevenuecollection	1.72	1.31	0.5817	0.4183
logbudgetallocation	2.82	1.68	0.3547	0.6453
logdevelopmentexpenditure	1.44	1.20	0.6951	0.3049
logreccurentexpenditure	2.92	1.71	0.3425	0.6575
Mean VIF	2.22			

The study conducted multicollinearity test to check on the existence of collinearity of variables. The analysis generated a VIF of 2.22 in table 4 which is less than 5. The low VIF indicates that there is no multicollinearity among variables considered in the study.

Table 5.

	Eigenval	Cond Index
1	4.9663	1.0000
2	0.0247	14.1806
3	0.0066	27.5022
4	0.0016	56.2434
5	0.0008	77.0703

Condition Number 77.0703

Eigenvalues & Cond Index computed from scaled raw sscp (w/ intercept)

Det(correlation matrix) 0.1684

4.6 Fixed and Random Effects models

The study conducted the research on data collected from year 2013 to 2020 and was analyzed as panel data. The study considered fixed and random effects analysis to check existence of time related fixed effects and to make inferences on the population data based on the assumption of normal distribution.

Table6: Random Effects Model

```
Random-effects GLS regression                   Number of obs     =       375
Group variable: year                            Number of groups  =         8

R-sq:                                           Obs per group:
     within  = 0.4521                                         min =        46
     between = 0.6686                                         avg =      46.9
     overall = 0.4183                                         max =        47

                                                Wald chi2(3)      =    266.80
corr(u_i, X)   = 0 (assumed)                    Prob > chi2       =    0.0000
```

logrevenuecollection	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
logbudgetallocation	.5519856	.139717	3.95	0.000	.2781454	.8258258
logdevelopmentexpenditure	-.2117304	.0650383	-3.26	0.001	-.3392031	-.0842577
logreccurentexpenditure	1.009767	.1279584	7.89	0.000	.7589732	1.260561
_cons	-6.016388	.7743725	-7.77	0.000	-7.53413	-4.498646
sigma_u	0					
sigma_e	.83398982					
rho	0	(fraction of variance due to u_i)				

The analysis above has a chi-test of 0.000 which is less than 0.05. This signify that the model is fit for testing. All variables are significant with $p<0.05$.

The analysis on table 6 also has $p<0.05$ hence the model is fit for analysis.

4.7 Determining best model between Random and fixed effects models.

The study analyzed panel data collected from year 2013 to 2020, which required determination of the best model to use among POOLED OLS, Fixed effects and Random effects models. Using panel data, you can consider issues like cultural aspects or variations in corporate business processes that are difficult to see or measure. Whenever you are solely concerned in examining the impact of factors that change over time, use fixed-effects (FE). FE investigate the relationship between the variables that predict and influence an entity's outcomes. Each thing has unique

qualities that might or might not have an impact on the predictor variables. Every level in a random effect can be viewed as a random variable drawn from an underlying process or distribution.

Similar to a fixed effect, estimation of random effects offers population level data and, consequently, information about absent levels, as well as inference about the individual levels.

This is frequently referred to as exchangeability, which is the idea that the levels that are supplied in a random effect are truly representative levels from a larger collection of levels that might not even be observed, rather than separate and independent levels.

```
Fixed-effects (within) regression               Number of obs      =       375
Group variable: year                            Number of groups   =         8

R-sq:                                           Obs per group:
     within  = 0.4525                                         min =        46
     between = 0.6801                                         avg =      46.9
     overall = 0.4180                                         max =        47

                                                F(3,364)           =    100.29
corr(u_i, Xb)  = -0.4328                        Prob > F           =    0.0000
```

logrevenuecollection	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
logbudgetallocation	.6364847	.1367577	4.65	0.000	.3675503	.9054191
logdevelopmentexpenditure	-.2133101	.0655935	-3.25	0.001	-.3422999	-.0843204
logreccurentexpenditure	1.157583	.1271603	9.10	0.000	.9075218	1.407644
_cons	-7.993952	.852606	-9.38	0.000	-9.670604	-6.3173
sigma_u	.28712838					
sigma_e	.83398982					
rho	.10596998	(fraction of variance due to u_i)				

```
F test that all u_i=0: F(7, 364) = 4.50                     Prob > F = 0.0001
```

```
Random-effects GLS regression                   Number of obs     =       375
Group variable: year                            Number of groups  =         8

R-sq:                                           Obs per group:
     within  = 0.4521                                         min =        46
     between = 0.6686                                         avg =      46.9
     overall = 0.4183                                         max =        47

                                                Wald chi2(3)      =    266.80
corr(u_i, X)   = 0 (assumed)                    Prob > chi2       =    0.0000
```

logrevenuecollection	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
logbudgetallocation	.5519856	.139717	3.95	0.000	.2781454	.8258258
logdevelopmentexpenditure	-.2117304	.0650383	-3.26	0.001	-.3392031	-.0842577
logreccurentexpenditure	1.009767	.1279584	7.89	0.000	.7589732	1.260561
_cons	-6.016388	.7743725	-7.77	0.000	-7.53413	-4.498646
sigma_u	0					
sigma_e	.83398982					
rho	0	(fraction of variance due to u_i)				

Table9:HausmanTable

```
. hausman fixed random

                 ---- Coefficients ----
             |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
             |     fixed        random       Difference          S.E.
-------------+------------------------------------------------------------
logbudgeta~n |    .6364847     .5519856       .0844991            .
logdevelop~e |   -.2133101    -.2117304      -.0015797         .008516
logreccure~e |    1.157583     1.009767       .1478157            .
------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(3) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =      717.77
                Prob>chi2 =      0.0000
                (V_b-V_B is not positive definite)
```

.

To determine the appropriate model to use in this study, Hausman test was conducted as shown in table 9. The results as shown in table 8 has a pro> chi2= 0.0000 hence $p<0.05$. This implies that we reject H_o that difference in coefficients are not systematic and accept H_1 that difference in coefficients are systematic hence the study adopted the fixed effects model for analysis.

4.8 Breush and Pegan Test

The test in table 10 was utilized to decide the best model between fixed effects and random effects model. The null hypothesis was that the variances across the groups is zero. If p>0.05 at 1.0000, hence null hypothesis is accepted to mean fixed effects model is appropriate.

Table10:BreushPeganTable

Breusch and Pagan Lagrangian multiplier test for random effects

logrevenuecollection[year,t] = Xb + u[year] + e[year,t]

Estimated results:

	Var	sd = sqrt(Var)
logreve~n	1.264357	1.124436
e	.695539	.8339898
u	0	0

Test: Var(u) = 0

chibar2(01) = 0.00

Prob > chibar2 = 1.0000

4.9 Heteroscedasticity Test

This study conducted a parametric statistical test called the Wald test (Wald Chi-Squared Test) as shown in table 11used to determine whether a group of independent variables is considered to be significant for a model or not. It is also used to determine the significance of each independent variable included in a model. The null hypothesis for this test is that data is homoscedastic, to imply that the variance is constant. The test in table 10 shows a $p<0.05$ hence the null hypothesis was rejected which will mean that there is presence of heteroscedasticity in the dataset. The study applied robust standard errors in the regression to remove the heteroscedasticity.

Table11.ModifiedWaldTest

```
Modified Wald test for groupwise heteroskedasticity
in fixed effect regression model

H0: sigma(i)^2 = sigma^2 for all i

chi2 (8)  =       18.81
Prob>chi2 =      0.0159
```

4.10 Regression Analysis

From table 12, it can be deduced that F-test in the model explains if all the coefficients in the model are different from zero and shows if the model is significant at 95% confidence level. The p- value of 0.0000 is less than 0.05, which confirms that the fixed effects model was appropriate to be relied on for analysis.

Table12:Robust Test

```
Fixed-effects (within) regression               Number of obs      =       375
Group variable: year                            Number of groups   =         8

R-sq:                                           Obs per group:
     within  = 0.4525                                         min =        46
     between = 0.6801                                         avg =      46.9
     overall = 0.4180                                         max =        47

                                                F(3,7)             =     67.61
corr(u_i, Xb)  = -0.4328                        Prob > F           =    0.0000

                                                (Std. Err. adjusted for 8 clusters in year)
```

logrevenuecollection	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
logbudgetallocation	.6364847	.3810074	1.67	0.139	-.2644546	1.537424
logdevelopmentexpenditure	-.2133101	.090849	-2.35	0.051	-.4281338	.0015135
logreccurentexpenditure	1.157583	.4620745	2.51	0.041	.0649503	2.250215
_cons	-7.993952	1.106787	-7.22	0.000	-10.61109	-5.376816
sigma_u	.28712838					
sigma_e	.83398982					
rho	.10596998	(fraction of variance due to u_i)				

The model as shown in table 12 shows an overall R-sq=0.4180. This reveals that 41.80% of the changes in the dependent variable (revenue collection) are explained by the independent variables considered in this study. The remaining 58.20% are explained by other variables outside this study. The prob>0.0000 show that the model is fit for analysis hence the results are reliable. The rho=0.1059 is the intraclass correlation to explain that 10.59% of the variance is due to the differences across panels. The sigma_u of 0.2871 and sigma_e of 0.8339 are the standard deviation of residuals within groups and residuals overall error term. Budget allocation and recurrent

expenditure have positive and significant relationship on revenue collection while development expenditure have negative but significant relationship on revenue collection. Budget allocation, development expenditure and recurrent expenditure have t=1.67, t=-2.35 and t=2.51 respectively. This mean that budget allocation is not significant to revenue collection while development expenditure and recurrent expenditure are significant to revenue collection amongst county governments in Kenya.

4.11 Regression Coefficients

This study was conducted to determine the effects of budget absorption of revenue collection amongst county governments in Kenya. The specified model was considered as below and the STATA output is shown in table 13.

$$RC_{it} = \alpha_i + \beta_1 BA_{it} + \beta_2 DE_{it} + \beta_3 RE_{it} + \varepsilon_{it}$$

The analysis was conducted and the fixed coefficients were as below

$$RC = -7.994 + 0.6365BA - 0.2133DE + 1.1576RE$$

The panel regression above showed that if budget allocation, development expenditure and recurrent expenditure between year 2013 and 2020 were held constant at zero, the revenue collection amongst county governments in Kenya will be at -7.994. A unit change in budget allocation to county government leads to increase in revenue collection amongst county governments by 0.636.A unit change on development expenditure would reduce revenue collection amongst county governments by 0.2133 on the current year while a unit change on recurrent expenditure would lead to increased revenue collection by 1.1576.

Table13.

logrevenuecollection	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
logbudgetallocation	.6364847	.3810074	1.67	0.139	-.2644546	1.537424
logdevelopmentexpenditure	-.2133101	.090849	-2.35	0.051	-.4281338	.0015135
logreccurentexpenditure	1.157583	.4620745	2.51	0.041	.0649503	2.250215
_cons	-7.993952	1.106787	-7.22	0.000	-10.61109	-5.376816
sigma_u	.28712838					
sigma_e	.83398982					
rho	.10596998	(fraction of variance due to u_i)				

4.12 Normality test

To apply a variety of statistical analysis techniques, such as individual control charts, t-tests, and analysis of variance, normally distributed data is required (ANOVA). When data is not distributed normally, the reason for the non-normality should be identified, and the required corrective measures should be performed. The study conducted normality test to confirm that the data are well distributed. The standardized residual analysis using pp-plot graph was conducted as shown in the figure below. The fig3 below shows that the residuals are normally distributed.

Fig3: Normality Graph

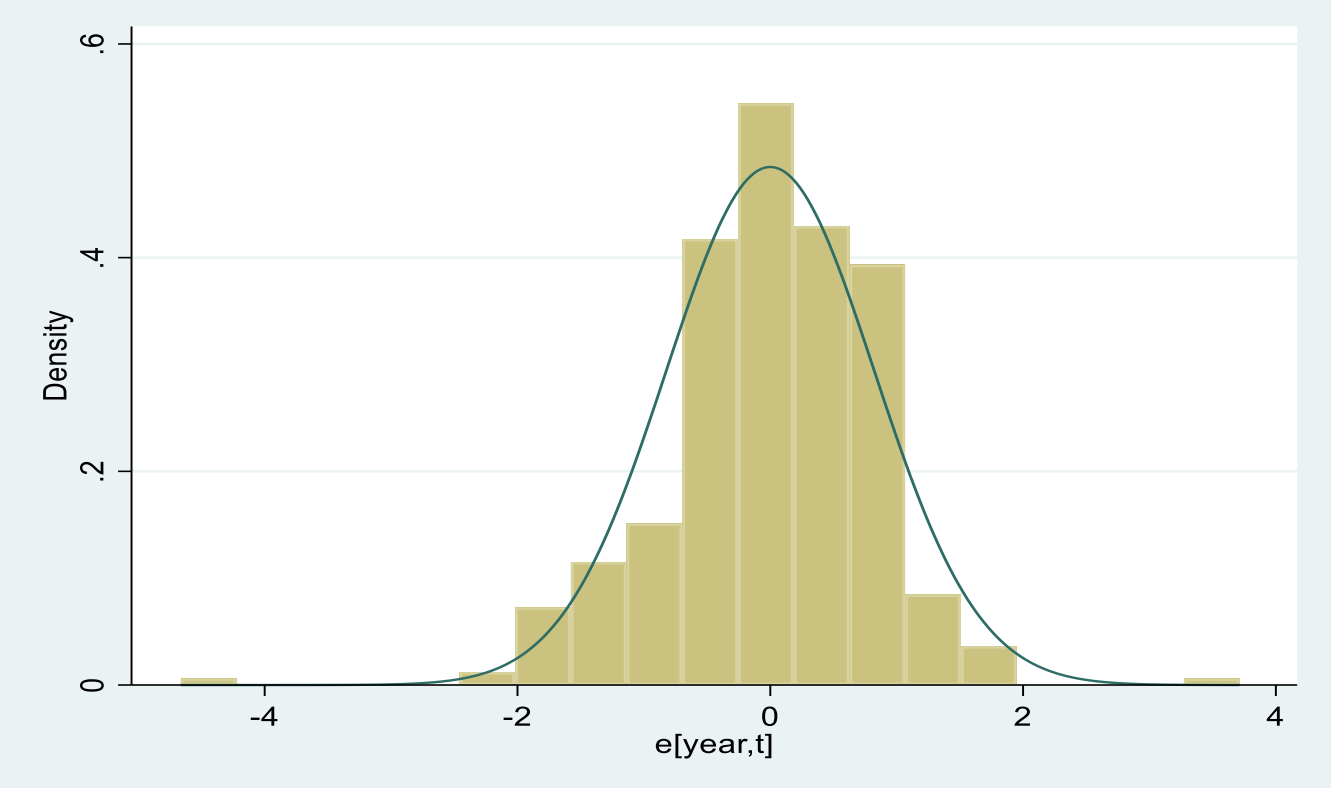
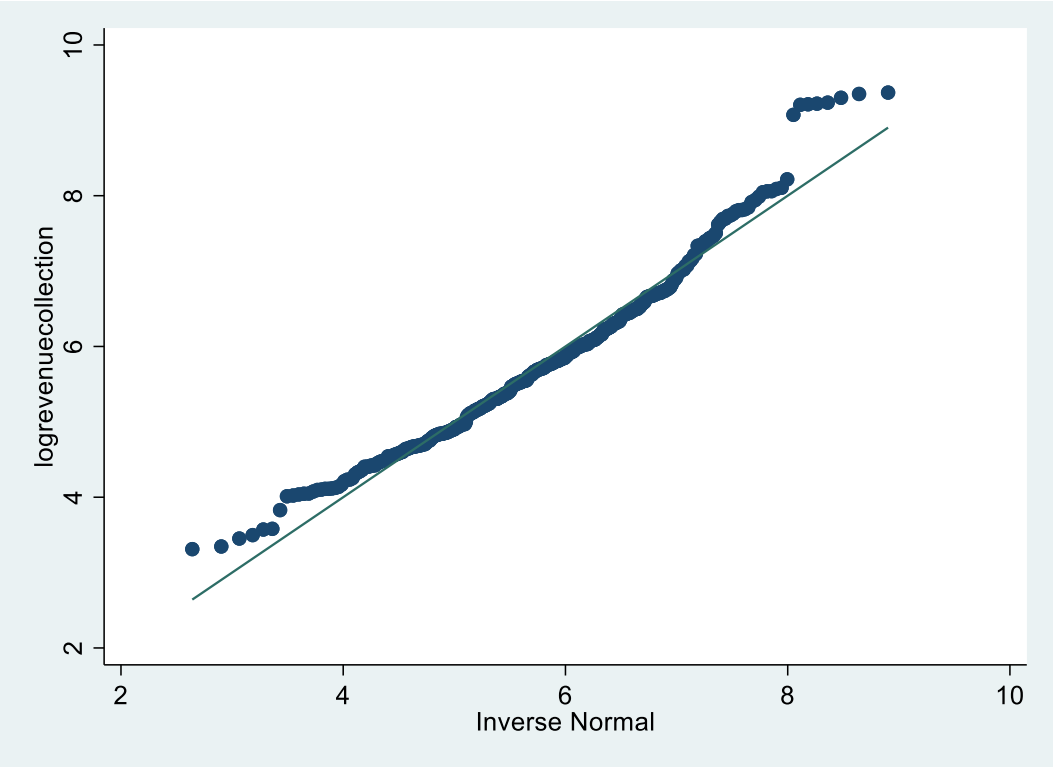


Fig 4: Variables Distribution



The study checked on the points which fall along the reference line to interpret a scatter plot. It was presumed that the data is distributed normally if the bulk of points fall along this line. It can be concluded that the data lacks a typical trend if the vast majority of points do not follow this pattern. The scatter graph in Fig4 shows that the error terms are distributed within the stipulated normal line. The deviations are within the tolerable range with minimal and insignificant effects.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter was used to make summary of the study, conclusion and the recommendations basing on the findings discussed in chapter four.

5.2 Summary

This study was conducted to analyze the effects of budget absorption on revenue collection amongst county governments in Kenya. Independent variables considered were budget allocations, development expenditure and recurrent expenditure, while revenue collection was considered as dependent variable. The researcher utilized secondary data collected from annual county governments' budgets implementation reports sourced from office of controller of budgets from year 2013 to 2020 for all the forty-seven county governments in Kenya. This study will be ideal given the current devolved governments in Kenya. The study sought to prove insights to the policy makers based the national government and county governments to enable them make prudent decisions on resource allocation and prioritizing expenditure. The study also is resourceful to the researchers, legislators especially the senate and other stakeholders interested with performance of county governments.

5.3 Conclusion

The county governments have proved to be a vital tool in enhancing equal development of all regions in the Kenya territory. Previously when the services were centralized in the national government, many regions such as Turkana, Mandera and other northern regions were

marginalized in developments. County governments rely on allocations from the national governments and own source of funds as revenue. The use of budgets is significant to ensure there is a clear pathway on expected revenues and priority of expenditures. High absorption rate is considered as a measure of efficiency, effectiveness amongst county government operations and performance in utilizing the available resources. The lower budget absorption is deemed to signify stagnated county government performance in terms of developments and service delivery. Erick (2017) noted that county governments should develop county development fiscal strategy as a yardstick to ensure a balanced budget implementation between development and recurrent expenditure. Budget allocations also plays an integral part in ensuring that county government prioritized expenditures have resources to actualize the achievement. Recurrent expenditure helps in financing short term services which aid in running county governments activities. From the annual county governments' budgets implementation annual reports, it is clear that most counties allocate huge resources on recurrent expenditure. Some counties have reallocated development resources to recurrent expenditure which have led to rising senate and public concerns towards the county governors.

The study found out that development expenditure and recurrent expenditure are significant to revenue collection while budget allocation was not significant. Budget allocation and recurrent expenditure are positively significant while development expenditure is negatively significant to revenue collection. This relationship between development expenditure and revenue collection can be explained on the basis that development expenditure is long term and may not necessarily generate revenue for the current year hence will have an inverse effect. The study concluded that decisions on budget allocation, development expenditure and recurrent expenditure must be put into consideration by policy makers to enhance revenue collection amongst county governments

in Kenya. This consideration will ensure county governments are able to generate own source of revenue and reduce dependence on national government annual allocations.

5.4 Limitations of the Research

The study has considered three independent variables which explains 41.83% of the changes in the dependent variable this leaves out the other factors which explain 58.17%. The variables not captured in this study may explain much better the effects of budget absorption on revenue collection amongst county governments. The study relied on secondary data sourced from published annual reports from OCoB. The data used to prepare the reports were submitted from county government treasury. This data may be subjected to biasness since the county officers may manipulate them to fit their desired levels.

5.5 Recommendations

The study conducted analysis and the outputs gives clear indication that budget allocations, development expenditure and recurrent expenditure are significant variables county governments revenue collections. The county governments should have clear policies to guide on priority of expenditure. Development and recurrent expenditure are significant on revenue collection hence there is need to have clear roadmap to balance resource allocations.

5.6 Suggestions for further research

This study suggests for more research on determinants of revenue collection amongst county governments, drivers for efficiency on collection of revenue collection in county governments. This study found out that development expenditure has a negative coefficient on the revenue collection of the current year. There is a need to conduct a research using dynamic panel models

to check the effects of development expenditure on revenue collection for the subsequent year. This study found R-squared of 41.80%, other studies need to be conducted on other possible variables responsible for the level of revenue collected.

REFFERENCE

Acharya, C. N. (2018). Switching to Clean Energy: A Milestone for Energy Security and Economic Advantage for Nepal. Asia Proceedings of Social Sciences, 1(1), 20-23.

Ambetsa, M. O., Oluka, M. N., Okalebo, F. A., Mulwa, N. C., Fadare, J., & Godman, B. (2017). One-day out-patient prescribing patterns at a national referral hospital in Kenya. African Journal of Pharmacology and Therapeutics, 6(2).

Anohene, J. (2011). Budgeting and budgetary control as management tools for enhancing financial management in local authorities, afigya kwabre district assembly as a case study. *Journal of Business Management & Social Sciences Research*.

Achim, M. V., & Borlea, S. N. (2015). Developing of ESG score to assess the non-financial performances in Romanian companies. Procedia Economics and Finance, 32, 1209-1224.

Anohene, J. (2011). Budgeting and budgetary control as management tools for enhancing financial management in local authorities, afigya kwabre district assembly as a case study. Journal of Business Management & Social Sciences Research.

Awitta, M. (2010). Effectiveness of revenue collection strategies at Kenya Revenue Authority in Nairobi (Doctoral dissertation).

Blumberg, B., Cooper, D., & Schindler, P. (2014). EBOOK: Business Research Methods. McGraw Hill.

Boadway, R. W., & Shah, A. (Eds.). (2007). Intergovernmental fiscal transfers: principles and practices. World Bank Publications.

Carling, R. (2012). Keynes, Hayek and the great recession. Policy: A Journal of Public Policy and Ideas, 28(4), 17-21.

CHEBOI, E. K. (2019). Budget implementation and financial performance of The county government of elgeyo marakwet, Kenya. A research project submitted in partial fulfilment for The award of the degree of master of business Administration (finance option), school of business, of Kenyatta university. Prieiga per internetą: https://irlibrary. ku. ac. ke/bitstream/handle/123456789/21669/Budget% 20Implementation.... pdf.

Constitution of Kenya, (2010).

Daoud, N., Matheson, F. I., Pedersen, C., Hamilton-Wright, S., Minh, A., Zhang, J., & O'Campo, P. (2016). Pathways and trajectories linking housing instability and poor health among low-income women experiencing intimate partner violence (IPV): Toward a conceptual framework. Women & Health, 56(2), 208-225.

Emojorho, D. (2004). Budgets and budgeting in selected Nigerian university libraries. The bottom line.

Erlina, A. S., & Muda, I. (2017). The analysis of the influencing factors of budget absorption. International Journal of Economic Research, 14(12), 287-300.

Fortuna, C. P. A. (2021). Budgeting Practices: Its Impact on the Profitability of Small and Medium Enterprises in Isabela. Universal Journal of Accounting and Finance, 9(3), 336-346.

Gachithi, E. W. (2010). The Challenges of budget implementation in Public Institutions: A case study of University of Nairobi (Doctoral dissertation).

Geofrey, k., & nazarius, m. t. (2011). a research report submitted to Makerere university in partial fulfilment of the requirement for the award of bachelor of commerce degree.

Gituma, M. M. (2017). Effects of marketing mix on sales performance: A case of Unga Feeds Limited (Doctoral dissertation, United States International University-Africa).

Gideon, Z., & Alouis, C. (2013). The challenges of self-financing in local authorities the case of zimbabwe. International Journal of Humanities and social science, 3(11), 233-245.

Government Spending Watch (2015)

Gusmartina, S., Azlina, N., & Julita, J. (2021). The Effect of Budget Planning, Budget Implementation, Procurement of Goods and Services, Competence of Human Resources and Budget Politics on Budget Absorption (Empirical Study on Opd Pelalawan District). AFEBI Accounting Review, 6(1), 1-9.

Hessels, J., & Terjesen, S. (2010). Resource dependency and institutional theory perspectives on direct and indirect export choices. Small business economics, 34(2), 203-220.

Hirst, M. K. (1987). The effects of setting budget goals and task uncertainty on performance: A theoretical analysis. Accounting Review, 774-784.

Inekwe, J. N. (2015). The contribution of R&D expenditure to economic growth in developing economies. *Social indicators research*, *124*(3), 727-745.

Institute of Certified Public Accountants in Kenya (2014).

Lewis, W. D. (2018). From Newgate to Dannemora. In From Newgate to Dannemora. Cornell University Press.

Kadenge, J. M. (2021). Effects of Budgetary Accounting Techniques on the Management of Financial Resources at the County Government of Kakamega.

Kähäri, H., Teirikangas, M., Juuti, J., & Jantunen, H. (2015). Improvements and Modifications to Room-Temperature Fabrication Method for Dielectric Li 2 MoO 4 Ceramics. Journal of the American Ceramic Society, 98(3), 687-689.

Kamau, J. M. (2018). *Factors influencing performance of county government projects: a case of Gatundu modern market, Kiambu County, Kenya* (Doctoral dissertation, School of Mathematics, University of Nairobi).

Kamau, J. K., Rotich, G., & Anyango, W. (2017). Effect of budgeting process on budget performance of state corporations in Kenya: A case of Kenyatta National Hospital. International Academic Journal of Human Resource and Business Administration, 2(3), 255-281.

Karani, H., Pradillo, G. E., & Vlahovska, P. M. (2019). Tuning the random walk of active colloids: From individual run-and-tumble to dynamic clustering. Physical review letters, 123(20), 208002.

Karani, W. (2018). Business Process Outsourcing, Operational Efficiency, Firm Characteristics and Performance of Oil and Gas Distribution Firms in Kenya (Doctoral dissertation, University of Nairobi).

Kathungu, R. (2016). The Effect of Budget Utilization On the Performance of County Governments: A Case Study of Eastern Kenya Region (Doctoral dissertation, University of Nairobi).

Kanyange, N., Kimani, P., Onyango, P., Sweenarain, S., & Yvergniaux, Y. (2014). Performance assessment of Beach Management Units along the coastlines of Kenya and Tanzania.

Kersan Škabić, I., & Tijanić, L. (2017). Regional absorption capacity of EU funds. Economic research-Ekonomska istraživanja, 30(1), 1192-1208.

Kipkirui, E. (2020). Effects of Budget Absorption on Performance of County Governments in Kenya (Doctoral dissertation, University of Nairobi).

Kiriria, N. (2013). Public Management in a county: What the leaders should know. The Star Kenya.

Kizhisseri, M. I., Mohamed, M. M., El-Shorbagy, W., Chowdhury, R., & McDonald, A. (2021). Development of a dynamic water budget model for Abu Dhabi Emirate, UAE. Plos one, 16(1), e0245140.

Korir, T. K. (2022). Relationship between budgeting process and financial performance of tea processing factories in Kericho and Bomet counties, Kenya (Doctoral dissertation, university of kabianga).

Kothari, C. R. (2004). Research methodology: Methods and techniques. New Age International.

Kyei-Mensah, J., Su, C., & Joseph, N. L. (2017). Shareholders wealth and mergers and acquisitions (M&As). Investment Management and Financial Innovations, (14,№ 3), 15-24.

KYNES, J. (1963). DIVISION OF BEACHES AND SHORES: JURISDICTION, BOARD OF CONSERVATION, TRUSTEES OF INTERNAL IMPROVEMENT FUND. REP ATT'Y GEN FLA, 063-67, JUNE 18, 1963.

Lee, T. W. (1999). Using qualitative methods in organizational research. Sage.

McLeod, S. A. (2019). What does effect size tell you. Simply psychology.

Mitnick, B. M. (2019). Origin of the theory of agency: an account by one of the theory's originators. Available at SSRN 1020378.

Mudaki, J., & Masaviru, W. (2012). Does the composition of public expenditure matter to economic growth for Kenya. *Journal of Economics and sustainable Development*, *3*(3), 60-70.

Mugenda, O. (2003). &Mugenda A.(2003). Research methods: quantitative and qualitative approaches.

Munjal, S., & Sharma, S. (2012). Applying innovative food cost management practices in inflationary times: Indian budget restaurant segment experiences. Worldwide Hospitality and Tourism Themes.

Muthui, J. N., Kosimbei, G., Maingi, J., & Thuku, G. K. (2013). The impact of public expenditure components on economic growth in Kenya 1964-2011. *International Journal of business and social Science*, *4*(4).

Mogues, T., & Do Rosario, D. (2016). The political economy of public expenditures in agriculture: Applications of concepts to Mozambique. South African Journal of Economics, 84(1), 20-39.

Mutungi, Z. W. (2017). Effects of Budgeting and Budgetary Control on Financial Performance of Devolved Government in Kenya (Doctoral dissertation, University of Nairobi).

Mutisya, J. M. (2014). *Effects of an intergrated Revenue collection system and challenges facing its implementation in Machakos County* (Doctoral dissertation, University of Nairobi).

Nai'em, F., Darwis, A. M., & Amin, F. (2020). Analysis of work accident cost on occupational safety and health risk handling at construction project of Hasanuddin University the Faculty of Engineering. Enfermeria Clinica, 30, 312-316.

Neuman, W. L., & Wiegand, B. (2000). Criminal justice research methods: Qualitative and quantitative approaches. Boston: Allyn and bacon.

Ngai, R. K., Kimathi, A., & Kithinji, M. (2021). Budgeting practices and absorption rate of devolved funds by County Government of Nyeri.

Ngechu, M. (2004). Understanding the research process and methods. An introduction to research methods. Unpublished MBA Thesis, School of Business: University of Nairobi.

Ngulube, P. (2005). Research procedures used by Master of Information Studies students at the University of Natal in the period 1982–2002 with special reference to their sampling techniques and survey response rates: a methodological discourse. The International information & library review, 37(2), 127-143.

NYAKUNDI, F. O. (2017). Relationship between post-audit practices and budgetary Performance of Suna East national government Constituency development fund, Migori county, Kenya (Doctoral dissertation, Maseno University).

Nyongesa, M. W., Onyango, R., & Kakai, R. (2014). Determinants of clients' satisfaction with healthcare services at Pumwani Maternity hospital in Nairobi-Kenya.

Nwosu, D. C., & Okafor, H. O. (2014). Government revenue and expenditure in Nigeria: A disaggregated analysis. *Asian Economic and Financial Review*, *4*(7), 877-892.

Obwaya, G. D. (2011). The relationship between participatory budgeting and performance of local authorities in Kenya (a case study of the city council of Nairobi) (Doctoral dissertation, University of Nairobi).

Ocharo, D. M. (2019). Effect of Budget Execution on the Performance of Counties in Kenya (Doctoral dissertation, University of Nairobi).

Ochieng, J., Owuor, G., & Bebe, B. O. (2012). Determinants of adoption of management interventions in indigenous chicken production in Kenya. African Journal of Agricultural and Resource Economics, 7(311-2016-5598), 39-50.

Office of Controller of Budget, 2015

Olanubi, S. O., & Osode, O. E. (2017). The efficiency of government spending on health: A comparison of different administrations in Nigeria. Journal of Policy Modeling, 39(1), 79-98.

Organization for Economic Cooperation and Development,2005

Ouma, S. A., Odongo, T. M., & Were, M. (2017). Mobile financial services and financial inclusion: Is it a boon for savings mobilization?. Review of development finance, 7(1), 29-35.

Peteraf, M. A., & Barney, J. B. (2003). Unraveling the resource-based tangle. Managerial and decision economics, 24(4), 309-323.

Republic of Kenya,2010)

Rosen, M. A. (2013). Using exergy to correlate energy research investments and efficiencies: Concept and case studies. Entropy, 15(1), 262-286.

Salancik, G. R., & Pfeffer, J. (1978). A social information processing approach to job attitudes and task design. Administrative science quarterly, 224-253.

Sekran, M. (2001). Function of the Egyptian university in light of traditional and modern perspectives.

Sharma, P., Jha, A. B., Dubey, R. S., & Pessarakli, M. (2012). Reactive oxygen species, oxidative damage, and antioxidative defense mechanism in plants under stressful conditions. Journal of botany, 2012.

Sharp, R., Green, A., & Lewis, J. (2017). Education and social control: A study in progressive primary education. Routledge.

Shields, M. D., & Young, S. M. (1993). Antecedents and consequences of participative budgeting: evidence on the effects of asymmetrical information. Journal of Management Accounting Research, 5(1), 265-280.

Van, V. B., & Sudhipongpracha, T. (2015). Exploring government budget deficit and economic growth: Evidence from Vietnam's economic miracle. *Asian Affairs: An American Review*, *42*(3), 127-148.

Visser, A. T., & Erasmus, F. (2005). Practical evaluation of additives used for soil stabilization: geology. IMIESA, 30(4), 28-31.

Tily, G. (2009). Keynes and the financing of public works expenditures.

Ulrich, R. S., Zimring, C., Zhu, X., DuBose, J., Seo, H. B., Choi, Y. S., ... & Joseph, A. (2008). A review of the research literature on evidence-based healthcare design. HERD: Health Environments Research & Design Journal, 1(3), 61-125.

Waruingi, V. (2020). Effect of Healthcare budget allocation on County government economic growth in Kenya (Doctoral dissertation, UoN).

Wooldridge, J. M. (2010). Econometric analysis of cross section and panel data. MIT press.

Zaman, G., & Cristea, A. (2011). EU structural funds absorption in Romania: obstacles and issues. Romanian Journal of Economics, 32(1), 41.

APPENDIX1: DATA COLLECTED FROM ANNUAL COUNTY GOVERNMENTS BUDGETS IMPLEMENTSTION REPORTS

County	County No	Year	Revenue Collection	Budget Allocation	Development Expenditure	Recurrent Expenditure
Baringo	30	2013	201.519606	3644.9	366.5	2444.2
Baringo	30	2014	249.723429	5012.35	1215.55	2945.57
Baringo	30	2015	279.317203	5901.77	1273.08	3415.48
Baringo	30	2016	288.518677	6511.43	1466.3	3748.09
Baringo	30	2017	301.404377	6959.39	987.44	4214.92
Baringo	30	2018	359.32152	8125.03	1158.45	4394.23
Baringo	30	2019	301.66	8385.34	1730.08	4594.15
Baringo	30	2020	205.203689	7912.54	887.52	3708.44
Bomet	36	2013	200.949332	3800	1718.5	1834.4
Bomet	36	2014	206.386334	4510.49	2053.95	2359.47
Bomet	36	2015	166.987287	5170.96	2300.87	2770.01
Bomet	36	2016	236.697038	5590.49	1504.09	3799.88
Bomet	36	2017	181.375343	6242	874	4074
Bomet	36	2018	205.47639	8134	2062	4822
Bomet	36	2019	201.51	7512.7	1707.43	4505.16
Bomet	36	2020	183.008302	7619.7	1493.68	4148.52
Bungoma	39	2013	182.70228	8853.9	562.1	3598.8
Bungoma	39	2014	504.623643	10255.99	2561.01	4584.06

Bungoma	39	2015	630.988485	10053.76	3022.84	5252.14
Bungoma	39	2016	661.588149	10469.91	1844.18	6147.98
Bungoma	39	2017	656.750139	11254	1507	7124
Bungoma	39	2018	788.333189	12765.32	2344.53	7226.41
Bungoma	39	2019	777.46	13836.13	2654.44	8161.42
Bungoma	39	2020	395.118238	14002.89	3360.76	8032.87
Busia	40	2013	328.993569	4305.4	311.8	2161.1
Busia	40	2014	315.202075	6322.56	2025.02	2971.44
Busia	40	2015	334.222084	7300.56	2487.22	3378.56
Busia	40	2016	256.826239	7545.62	1963.61	3917.79
Busia	40	2017	176.294585	7449	1078	4730
Busia	40	2018	292.732697	8826.5	1941.1	4707.6
Busia	40	2019	225.83	9275.98	1690.39	5060.86
Busia	40	2020	322.558227	10418.91	2175.49	5298.28
Elgeyo/Marakwet	28	2013	61.001213	2603.7	391.8	1321.9
Elgeyo/Marakwet	28	2014	128.905771	3780.93	1128.6	2258.8
Elgeyo/Marakwet	28	2015	128.055734	3850.31	881.11	2274.44
Elgeyo/Marakwet	28	2016	97.323973	4739.18	1167.67	2797.01
Elgeyo/Marakwet	28	2017	105.483195	4944.69	948.9	2921.59
Elgeyo/Marakwet	28	2018	141.856503	5601.08	1333.3	3091.3
Elgeyo/Marakwet	28	2019	131.96	5773.52	1106.74	3236.51
Elgeyo/Marakwet	28	2020	69.075375	5951.74	1449.34	3315.1

Embu	14	2013	168.486515	4023.5	148	2597.4
Embu	14	2014	401.105103	4990.3	625.66	3177.16
Embu	14	2015	396.525612	5728.34	932.31	3024.85
Embu	14	2016	416.272247	6725.47	2099.16	3660.08
Embu	14	2017	416.111597	6176	1091	3972
Embu	14	2018	629.429825	6828.24	1361.23	4552.03
Embu	14	2019	509.65	6780.22	1085.73	4077.74
Embu	14	2020	375.326291	7107.1	1277.2	3950
Garrisa	7	2013	35.892845	4847	486.8	1682.6
Garrisa	7	2014	130.717649	7851	2919.6	3676.6
Garrisa	7	2015	105.943675	37105.29	2600.96	3945.5
Garrisa	7	2016	81.958151	7571	2442.4	4681.1
Garrisa	7	2017	86.687563	7964	1002	5505
Garrisa	7	2018	108.297434	10723.65	2375.45	6615.45
Garrisa	7	2019	109.92	10868.38	2015.26	6370.06
Garrisa	7	2020	103.525792	10176.76	1821.16	6643.24
Homa Bay	43	2013	134.98539	5314.7	1371.5	2661
Homa Bay	43	2014	157.860245	5016.23	1862.9	3416.21
Homa Bay	43	2015	183.765405	6551.7	1903.12	3873.11
Homa Bay	43	2016	144.131692	6732	1417.49	4319.67
Homa Bay	43	2017	106.939465	7568.99	1078.23	4067.26
Homa Bay	43	2018	101.968	8467.34	1011.12	4726.99

Homa Bay	43	2019	274.6	8969.58	2194.2	4994.06
Homa Bay	43	2020	120.412567	8984.93	2193.72	5262.57
Isiolo	11	2013	125.064066	2784.6	532.3	1535.8
Isiolo	11	2014	133.699318	3380.66	1086.5	1758.97
Isiolo	11	2015	110.108172	3735.36	1118.64	2127.49
Isiolo	11	2016	94.996063	3746.43	1292.9	2200.2
Isiolo	11	2017	114.557116	4340.8	1138.42	2251.91
Isiolo	11	2018	161.767322	5484.09	997.92	3281.22
Isiolo	11	2019	122.08	5733.1	1923.38	3128.91
Isiolo	11	2020	57.181282	5761.62	1029.39	3359.35
Kajiado	34	2013	453.371648	3758.2	576.5	2249.5
Kajiado	34	2014	785.837768	5668.6	1025.57	3507.47
Kajiado	34	2015	650.984978	6927	1544.66	3596
Kajiado	34	2016	557.094069	7010.38	1250.4	3811.52
Kajiado	34	2017	682.162558	8188	1185	4321
Kajiado	34	2018	1076.698544	9605.25	2391.17	5335.68
Kajiado	34	2019	616.8	10252.32	1859.24	5370.33
Kajiado	34	2020	862.288151	10050.63	2852.18	6036.54
Kakamega	37	2013	325.2163	9640.3	1518.9	3699.8
Kakamega	37	2014	516.889024	10579.46	3107.15	4380.14
Kakamega	37	2015	504.238292	12312.45	4246.53	5605.76
Kakamega	37	2016	443.17602	12369.76	5208.76	5636.36

Kakamega	37	2017	440.611031	13445.27	3879.95	6663.96
Kakamega	37	2018	858.335582	14489.43	4983.68	7194.63
Kakamega	37	2019	1180.81	15407.06	4924.45	7600.32
Kakamega	37	2020	1118.235983	16073.68	4612.47	7997.84
Kericho	35	2013	371.395186	3632.6	642.4	2169.8
Kericho	35	2014	413.581432	4814.64	1245.44	3035.26
Kericho	35	2015	434.404563	5570.16	1676.54	3135.78
Kericho	35	2016	489.980629	6298.95	2022.5	3578.22
Kericho	35	2017	414.04871	6540.47	996.25	4180.28
Kericho	35	2018	473.9784	8417.97	1417.09	4714.78
Kericho	35	2019	473.73	8746.13	1771.43	4728.46
Kericho	35	2020	595.976653	7622.8	18614	4278.9
Kiambu	22	2013	1246.68389	9323	1155.1	5527.6
Kiambu	22	2014	2110.856557	10374.02	2287.28	6478.61
Kiambu	22	2015	2461.351513	11480.93	2265.66	8161.6
Kiambu	22	2016	2032.980758	12399.15	2510.49	8301.08
Kiambu	22	2017	1693.708234	12586	2775	9805
Kiambu	22	2018	2742.223118	16914	4495	9765
Kiambu	22	2019	2466.26	17861.84	4411.33	10563.32
Kiambu	22	2020	2425.245161	17878.4	3312.68	10338.39
Kilifi	3	2013	459.575703	6701.2	426.2	3586.9
Kilifi	3	2014	545.49905	9617.82	2986.44	4535.87

Kilifi	3	2015	519.075625	11520.17	3725.87	4743.5
Kilifi	3	2016	620.093575	780.98	83.13	584.19
Kilifi	3	2017	523.34719	12127	3122	6406
Kilifi	3	2018	792.493811	14483	3567	6075
Kilifi	3	2019	788.78	15034.62	3671.47	7653.15
Kilifi	3	2020	833.845292	14662	4104	7769
Kirinyaga	20	2013	200.373963	3026	308.8	1493
Kirinyaga	20	2014	311.635045	4101.58	902.57	2282.39
Kirinyaga	20	2015	390.37714	4777.49	1065.09	307546
Kirinyaga	20	2016	320.638299	5244.86	1083.54	3163.04
Kirinyaga	20	2017	343.970322	5695	722.28	3872.6
Kirinyaga	20	2018	432.638447	5911.45	1138.52	4025.61
Kirinyaga	20	2019	374.74	6131.6	1149.1	3620.7
Kirinyaga	20	2020	346.521599	6795.61	1457.99	4139.33
Kisii	45	2013	250.147453	6553.2	1822	3357.6
Kisii	45	2014	296.771415	7449.56	2283.52	4254.77
Kisii	45	2015	306.129638	9180.07	2540.7	5399.74
Kisii	45	2016	271.64438	10070.53	2014.89	5970.72
Kisii	45	2017	256.284854	10897.35	1901.22	6681.75
Kisii	45	2018	342.64669	12011	2285.49	7276.27
Kisii	45	2019	333.15	12925.56	2543.62	6900.61
Kisii	45	2020	403.00186	12671.28	2595.11	7184.16

Kisumu	42	2013	621.861798	7320.6	681.3	4248
Kisumu	42	2014	970.903407	7940	1346.36	4411.16
Kisumu	42	2015	978.889261	9637.62	1828.67	4611.47
Kisumu	42	2016	1004.043906	9395.21	1982.57	4855.28
Kisumu	42	2017	874.901775	9215.35	669.36	5264.9
Kisumu	42	2018	842.816398	11875	2676	5703
Kisumu	42	2019	804.35	12215.96	2379.77	6740.83
Kisumu	42	2020	822.299848	12780.36	1930.92	7322.45
Kitui	15	2013	255.241581	6489	895.7	3374
Kitui	15	2014	320.521294	9569.72	2964.75	3936.53
Kitui	15	2015	416.188728	10114.35	3771.92	4098.7
Kitui	15	2016	315.347364	10970.4	3688.65	4625.95
Kitui	15	2017	335.122477	11243.35	3341.76	5978.14
Kitui	15	2018	440.523923	11687.76	3304.57	6563.1
Kitui	15	2019	408.29	11795.25	2918.84	7092.24
Kitui	15	2020	326.450311	11839.81	3452.09	7058.38
Kwale	2	2013	208.454345	4391.4	963.5	2231.9
Kwale	2	2014	253.97226	6519.74	2027.44	2449.24
Kwale	2	2015	248.617586		3257.63	2543.64
Kwale	2	2016	221.011186	7948.51	2056.69	3803.95
Kwale	2	2017	276.295129	9315.49	2143.28	4444.79
Kwale	2	2018	315.025181	11518.02	2609.95	5084.61

Kwale	2	2019	254.45	13246	3505.07	5394.45
Kwale	2	2020	250.090346	12261.32	3670.21	6075.76
Laikipia	31	2013	347.118457	3317.8	528.4	2311.9
Laikipia	31	2014	400.484744	4323.78	979.22	2410.58
Laikipia	31	2015	471.147987	5184.38	1317.55	2676.57
Laikipia	31	2016	462.723251	5966.48	1547.09	3163.57
Laikipia	31	2017	413.328186	5706	1011	3791
Laikipia	31	2018	815.790157	6928	1786	3924
Laikipia	31	2019	727.96	7173.11	1024.95	4378.95
Laikipia	31	2020	840.396632	7498.62	1449.93	4376.6
Lamu	5	2013	35.566589	1648.5	199.8	898.9
Lamu	5	2014	61.372255	2509.73	575.99	1141.01
Lamu	5	2015	57.3244	3180.22	916.55	1588.91
Lamu	5	2016	76.960788	3211.2	467.35	1526.21
Lamu	5	2017	55.286688	3019.06	361.27	1699.75
Lamu	5	2018	81.837327	4846.74	693.6	2208.62
Lamu	5	2019	108.91	4736.32	843.61	2208.88
Lamu	5	2020	108.43365	4706.66	854.12	2263.8
Machakos	16	2013	1175.227171	8015.7	2566.5	3642.7
Machakos	16	2014	1356.559888	9262.04	2033.64	5051.72
Machakos	16	2015	1121.68095	11718.15	2539.94	5788.71
Machakos	16	2016	1259.304944	11181.98	3343.57	5805.2

Machakos	16	2017	1063.726784	10078.54	1021.76	6362.38
Machakos	16	2018	1557.229789	14965.21	3097.86	8554.73
Machakos	16	2019	1376.17	13329.65	1958.24	7503.62
Machakos	16	2020	1296.364668	13488.57	2589.41	8367.28
Makueni	17	2013	189.187741	5071.2	1345.5	2713.2
Makueni	17	2014	215.349954	6971.08	1251.01	3132.92
Makueni	17	2015	213.170805	9449.93	1504.47	4001.25
Makueni	17	2016	216.257976	10756.36	4036.53	4885.98
Makueni	17	2017	319.282234	9675	1603	5591
Makueni	17	2018	511.702072	10651.8	2655.8	5780.7
Makueni	17	2019	644.48	11186.28	2468.73	5954.61
Makueni	17	2020	527.527341	11705.11	3310.36	5925.44
Mandera	9	2013	90.06863	6987.6	985.2	2578.8
Mandera	9	2014	87.729461	11274.61	4913.1	4106.65
Mandera	9	2015	88.234634	11501.41	5450.7	4101.76
Mandera	9	2016	55.843625	12028.79	5831.48	4365.46
Mandera	9	2017	61.813295	12246.86	3892.28	5644.55
Mandera	9	2018	94.23458	13709.96	5750.39	6291.37
Mandera	9	2019	124.96	13118.31	5014.79	6535.53
Mandera	9	2020	143.313898	13211.36	4432.3	7212.05
Marsabit	10	2013	46.032691	3840	1354.6	2188
Marsabit	10	2014	99.107465	5753.77	1919.55	2468.38

Marsabit	10	2015	111.943205	6276.94	2235.91	3042.75
Marsabit	10	2016	128.730136	6819.18	2791.75	3349.74
Marsabit	10	2017	83.39048	7730.87	2540.47	4027.18
Marsabit	10	2018	124.10497	8718.8	3604.99	3862.71
Marsabit	10	2019	126.71	8348.52	3161.42	4004.93
Marsabit	10	2020	110.368253	8715.1	3438.43	3764.88
Meru	12	2013	343.805963	5681.7	1119.3	3904
Meru	12	2014	539.23991	7744.75	2268.19	3985.25
Meru	12	2015	548.289334	8223.01	1661.35	4550.21
Meru	12	2016	552.668157	10141.1	2238.99	6105.03
Meru	12	2017	441.69048	10739	813	5988
Meru	12	2018	550.089828	12556.1	2641.51	7139.04
Meru	12	2019	383.3	11243.65	2170.58	7291.56
Meru	12	2020	435.932406	11783.78	2625.97	7447.39
Migori	44	2013	238.630499	5530.7	1516	3028.9
Migori	44	2015	339.368968	7269.2	2152.8	3720.2
Migori	44	2016	290.815303	7730.7	1867.38	3949.24
Migori	44	2017	222.25129	8166.9	1848.99	4084.7
Migori	44	2018	376.224761	8802	1814	4553
Migori	44	2019	305.69	9727.32	1662.82	4937.32
Migori	44	2020	288.535155	9156.77	2190.14	5144.41
migori	44	2014	355.111556	5802.87	1905.88	2857.37

Mombasa	1	2013	1716.054436	11686	211.4	5196.6
Mombasa	1	2014	2492.600145	9870.2	2092	5625.32
Mombasa	1	2015	2943.520686	9979.37	2774.61	5770.44
Mombasa	1	2016	3166.240961	11647.65	2743.13	6390.44
Mombasa	1	2017	3159.156334	12635	2908	7394
Mombasa	1	2018	3705.398047	14457	3106	9534
Mombasa	1	2019	3260.01	13670	1861.9	8933
Mombasa	1	2020	3314.532178	15634.6	4750.5	6780.8
Murang'a	21	2013	419.989717	5121.9	1711.7	2403.2
Murang'a	21	2014	562.227534	5981.6	2348.1	3071.2
Murang'a	21	2015	617.526359	6900.28	2719.23	3327.59
Murang'a	21	2016	506.685732	8213	2037	4395
Murang'a	21	2017	453.706818	8304.25	2199	4369.13
Murang'a	21	2018	704.03042	8850.78	2502.68	4658.74
Murang'a	21	2019	580.3	8823.44	2804.47	4606.13
Murang'a	21	2020	627.164598	8884.92	2540.83	5177.35
Nairobi	47	2013	10026.1718	25225.2	1475.9	9057.8
Nairobi	47	2014	11500.04948	25588.82	2298.34	18724.29
Nairobi	47	2015	11710.0083	29088.06	4166.16	19784.87
Nairobi	47	2016	10929.83035	34784.86	3779.73	21078.91
Nairobi	47	2017	10109.41949	33649	2179	22362
Nairobi	47	2018	10248.42539	33344.85	5900.44	23497.73

Nairobi	47	2019	8715.07	36981.8	1979.9	21373.5
Nairobi	47	2020	9958.038681	37881.74	5629.64	24506.42
Nakuru	32	2013	1816.532536	10038	841.4	6498.2
Nakuru	32	2014	2200.279602	11085	1600.23	6603.59
Nakuru	32	2015	2295.462842	13985	2230.89	8154.72
Nakuru	32	2016	1548.294999	15090.55	2049.83	8613.39
Nakuru	32	2017	2278.646064	16098.93	1576.63	7977.11
Nakuru	32	2018	2814.425385	18479	1477	8659
Nakuru	32	2019	2551.21	21951.21	4109.73	9969.1
Nakuru	32	2020	1628.821537	20971.17	4882.5	8996.8
Nandi	29	2013	130.536752	3899.8	875.7	2441.1
Nandi	29	2014	298.042483	5190.4	2266.7	2399.1
Nandi	29	2015	236.898601	5700	1974.92	3019.66
Nandi	29	2016	244.730757	6903.32	1833.4	3531.5
Nandi	29	2017	197.886883	6847.93	716.92	4079.13
Nandi	29	2018	208.345024	8426.85	1732.33	4994.32
Nandi	29	2019	283.19	8720.45	1305.21	4778.88
Nandi	29	2020	261.039027	7611.52	1922.8	5034.26
Narok	33	2013	1538.560899	7325.2	848.4	4061
Narok	33	2014	1639.20571	8032.73	2356.71	4302.24
Narok	33	2015	1752.937952	8306.98	2108.6	5130.3
Narok	33	2016	1533.93396	9079.49	2150.62	5323.09

Narok	33	2017	2188.436615	9806	1928	6322
Narok	33	2018	3122.38366	10194.85	3008.04	6952.16
Narok	33	2019	2345.48	11998.09	2924	7707.3
Narok	33	2020	618.992783	11665.64	1163.03	7709.74
Nyamira	46	2013	94.025895	3415.7	639.2	2085.6
Nyamira	46	2014	104.254684	4678.26	1277.79	2361.57
Nyamira	46	2015	106.981969	5450.46	1284.15	3033.54
Nyamira	46	2016	93.920087	5609.06	979.21	3522.39
Nyamira	46	2017	96.617045	6111.82	527.66	3703.45
Nyamira	46	2018	165.44757	6954.2	1120.56	4481.79
Nyamira	46	2019	185.57	7001.98	1203.2	4568.97
Nyamira	46	2020	162.86388	6800.24	1398.2	4347.82
Nyandarua	18	2013	138.439331	3387	757.3	2325.2
Nyandarua	18	2014	240.629472	4454.76	1289.04	2643.24
Nyandarua	18	2015	279.226186	5597.06	1679.72	5354.28
Nyandarua	18	2016	296.766563	5668.13	1642.72	3320.3
Nyandarua	18	2017	318.585599	6105.18	895.38	3649.34
Nyandarua	18	2018	403.402541	7669.09	1581.9	3893.97
Nyandarua	18	2019	379.48	7983.71	1893.61	4679.18
Nyandarua	18	2020	408.718259	7815.57	2044.53	4617.81
Nyeri	19	2013	432.22936	4550.4	941.2	3098.4
Nyeri	19	2014	680.700067	5444.53	1076.11	3739.11

Nyeri	19	2015	709.554435	6277.55	1161.3	3804.18
Nyeri	19	2016	643.139153	7282.4	1220.7	4464.4
Nyeri	19	2017	760.225951	7961.1	841.57	4506.03
Nyeri	19	2018	819.811673	8836.54	1884.35	5161.05
Nyeri	19	2019	664.86	8974.93	164602	5735.44
Nyeri	19	2020	886.892734	9098.02	2175.81	5575.11
Samburu	25	2013	201.001447	2906.5	385.7	1790
Samburu	25	2014	195.715348	4139.75	1618.17	1664.65
Samburu	25	2015	166.836134	4448.89	1157.68	2502.99
Samburu	25	2016	187.663504	4668.65	1263.82	2903.28
Samburu	25	2017	257.292957	4832	549	3038
Samburu	25	2018	243.861101	5861.12	745	3438
Samburu	25	2019	215.67	6968.61	947.4	4116.68
Samburu	25	2020	70.378827	6790.66	1373.76	3856.45
Siaya	41	2013	99.771315	4264.1	1105.8	2435.7
Siaya	41	2014	143.328488	5884.66	1466.74	2704.95
Siaya	41	2015	127.931767	6946.32	1835.09	3098.21
Siaya	41	2016	172.837124	7070.36	1983.35	3646.81
Siaya	41	2017	139.336798	6845.34	777.57	3333.46
Siaya	41	2018	189.668022	8443.59	1175.71	4526.53
Siaya	41	2019	179.43	8881.8	2122.8	4747.7
Siaya	41	2020	332.883061	8221.11	2245.77	4706.01

Taita/Taveta	6	2013	126.861698	2920.4	530.6	1829.7
Taita/Taveta	6	2014	216.603678	4147.39	948.54	2558.37
Taita/Taveta	6	2015	172.765506	4155.76	513.56	2949.31
Taita/Taveta	6	2016	172.017112	4656.43	405.65	2979.4
Taita/Taveta	6	2017	193.595795	5524.4	206.46	3131.1
Taita/Taveta	6	2018	332.712552	5987.45	1301.84	3764.93
Taita/Taveta	6	2019	296.04	5665	806	3634
Taita/Taveta	6	2020	302.0054	6114.73	1777	3568.35
Tana River	4	2013	31.556087	3206.1	1145.5	1612.9
Tana River	4	2014	33.03349	4923.4	982.74	1274
Tana River	4	2015	28.405081	4566.7	2250	1614.58
Tana River	4	2016	27.417024	4585.18	1779.11	1767.26
Tana River	4	2017	56.625198	5795.03	918.61	2000.06
Tana River	4	2018	62.648714	7573.36	1588.65	3203.41
Tana River	4	2019	64.47	8035.3	6662.1498	8035.3
Tana River	4	2020	83.075805	8145.28	1290.26	3387.18
Tharaka Nithi	13	2013	85.372943	2580.2	473	1681.3
Tharaka Nithi	13	2014	115.729772	3961.08	906.38	1798.29
Tharaka Nithi	13	2015	139.130083	3815.75	790.94	1905.3
Tharaka Nithi	13	2016	78.569191	3959.91	546.72	2227.13
Tharaka Nithi	13	2017	126.606742	4632	1080	2570
Tharaka Nithi	13	2018	245.31716	5721	1395.66	3206.89

Tharaka Nithi	13	2019	270.15	5119.1	1116.3	3097.2
Tharaka Nithi	13	2020	254.745602	5857.83	1259.58	3675.3
Trans Nzoia	26	2013	201.655713	4424.5	1072.3	2504.9
Trans Nzoia	26	2014	301.267105	5272.49	1215.89	2875.38
Trans Nzoia	26	2015	364.970035	6154.87	1789.8	3543.53
Trans Nzoia	26	2016	217.893803	6875	1711.19	4293.25
Trans Nzoia	26	2017	246.062902	204265.2	1077.21	3137.98
Trans Nzoia	26	2018	370.824751	8042.56	2395.37	3992.57
Trans Nzoia	26	2019	356.08	7974.4	2194.8	4123.4
Trans Nzoia	26	2020	340.453746	8396.21	2747.97	4659.55
Turkana	23	2013	132.882771	8145.1	2390.8	2322.2
Turkana	23	2014	126.524507	13122	5784	3234
Turkana	23	2015	134.015965	13517.69	6432.92	3727.05
Turkana	23	2016	186.316769	14365.95	6159.91	5031.5
Turkana	23	2017	143.896898	12150	1991	6424
Turkana	23	2018	175.028751	15352.29	1974.22	8495.71
Turkana	23	2019	176.23	14842.63	2511.09	9840.61
Turkana	23	2020	209.830607	15319.89	2770.28	9439.6
Uasin Gishu	27	2013	563.669444	4618	1619.3	2816.2
Uasin Gishu	27	2014	800.823542	6929.45	2434.49	3102.98
Uasin Gishu	27	2015	719.042325	7542.62	2220.83	3991.47
Uasin Gishu	27	2016	663.830778	7719.07	1460.35	4134.22

Uasin Gishu	27	2017	819.220211	8062.19	1557.04	4732.21
Uasin Gishu	27	2018	918.942252	9958.06	1635.43	5109.83
Uasin Gishu	27	2019	779.33	11567.62	2675.35	5424.42
Uasin Gishu	27	2020	1105.67654	12011.93	2564.14	5717.14
Vihiga	38	2013	123.302433	3263.9	725.9	2061.6
Vihiga	38	2014	115.939226	5873.44	1271.2	2234.59
Vihiga	38	2015	138.938281	4367.76	970.28	2037.18
Vihiga	38	2016	96.033	5040.64	793.12	2925.55
Vihiga	38	2017	143.530752	5582.24	297.47	2407.91
Vihiga	38	2018	177.23329	7002.56	1569.37	4129.68
Vihiga	38	2019	148.2	6955.03	1310.27	3576.15
Vihiga	38	2020	169.109802	6584.5	2002.3	3711.2
Wajir	8	2013	61.03293	5365.5	2941.8	1883
Wajir	8	2014	107.742634	7273.55	3899.39	2673.72
Wajir	8	2015	81.782275	8272.8	3533.79	3701.44
Wajir	8	2016	75.90872	8681.95	3688.78	4554.11
Wajir	8	2017	67.608475	9362	843	5572.01
Wajir	8	2018	60.123112	13176.2	4520.16	5861.3
Wajir	8	2019	60.42	11610.15	3488.08	6127.25
Wajir	8	2020	73.955722	10944.1	3105.19	6140.76
West Pokot	24	2013	58.887573	3631.3	899.9	2081.9
West Pokot	24	2014	103.899329	4273.14	1645.84	2388.54

West Pokot	24	2015	98.305114	4830.5	1595.3	2755.3
West Pokot	24	2016	83.218907	5246.4	1565.65	3238.44
West Pokot	24	2017	88.411177	5649	3427983	5649
West Pokot	24	2018	118.824134	6469.51	1619.91	3899.5
West Pokot	24	2019	107.18	6421.8	1103.21	4247.98
West Pokot	24	2020	68.86691	6990.77	2007.48	4256.39

APPENDIX II: RESEARCH BUDGET

Number	Description	Amount (Ksh)
1.	**Proposal printing and typesetting**	**4,000**
2.	**Transport and Airtime**	**5,000**
3.	**Stationery**	**3,000**
4.	**Report binding services**	**4,000**
5.	**Miscellaneous**	**2,000**
	Total	**18,000**

APPENDIX III: KENYA COUNTY GOVERNMENTS

County Name	County Number
Mombasa	1
Kwale	2
Kilifi	3
Tana River	4
Lamu	5
Taita/Taveta	6
Garrisa	7
Mandera	9
Marsabit	10

Isiolo	11
Meru	12
Tharaka Nithi	13
Embu	14
Kitui	15
Machakos	16
Makueni	17
Nyandarua	18
Nyeri	19
Kirinyaga	20
Murang'a	21
Kiambu	22
Turkana	23
West Pokot	24
Samburu	25
Trans Nzoia	26
Uasin Gishu	27
Elgeyo/Marakwet	28
Nandi	29
Baringo	30
Laikipia	31
Nakuru	32

Narok	33
Kajiado	34
Kericho	35
Bomet	36
Kakamega	37
Vihiga	38
Bungoma	39
Busia	40
Siaya	41
Kisumu	42
Homa Bay	43
migori	44
Kisii	45
Nyamira	46
Nairobi	47

APPENDIX IV: WORK PLAN

TASK 2022	March	April	May	June	July	August	Sept	Oct	Nov
1.Topic Identification									
2.Submission of Concept paper									
3.Confirmation of the topic and objectives by Supervisor									
4.Proposal submission									
5.Data collection									
6.Data Analysis									
7. Dissertation Submission									
8.Dissertation Defence									

APPENDIX V: CONCEPTUAL FRAMEWORK

Independent Variables Dependent Variable