

**AGENCY REVENUE COLLECTION, AUTOMATION AND OWN SOURCE
REVENUE TARGETS AMONG SELECTED COUNTY GOVERNMENTS IN
KENYA**

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Requirements for the Conferment of the Degree of Doctor of Philosophy in Business
Administration (Finance Option) of the University of Kabianga**

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DECLARATION AND APPROVAL

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This thesis is my original work and has not been presented for the conferment of a degree or the award of a diploma in this or any other university:-

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DEDICATION

To my children

Kayla, Amanda and Gabriel who make it worth the effort and the joy they bring to my life. I want to leave the world a better place for them and their offspring.

To my grandparents

The Late Mr. Kipsigei Arap Sasingwek, The Late Mrs. Martha Sasingwek, The Late Barnabas Arap Sambu and Mrs. Benedetta Sambu who laid a great hardworking and educational foundation I will be indebted to you forever.

My Parents

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ABSTRACT

The attainment of own source revenue targets by counties holds significant importance as it underpins their financial autonomy, local development initiatives, and effective service delivery. As per the Office of the Controller of Budget however, a declining trend has emerged from an analysis of own source revenue as a percentage of the targeted annual revenue over the past five financial years. A notable decline is observed during this period (2018/19 to 2022/2023), dropping consecutively from 74.8 percent, to 65.2 percent, to 64.2 percent, to 59.4 percent, to 46.4 percent. This trend reveals a consistent decline in performance with counties raising less than 60% of their estimated own source revenue potential despite using agents and having undertaken automation of the revenue collection processes. Against this backdrop, the study sought to establish the relationship between agency revenue collection and own source revenue target among selected county governments in Kenya with automation of revenue collection as a moderating variable. Specifically, it sought to determine competencies of revenue collectors, stakeholder engagement, regulatory compliance, revenue management and determine the moderating effect of revenue collection automation on the relationship between agency revenue collection and own source revenue target. Agency theory, New Public Management Theory and Resource-Based view theory guided the research. A cross-sectional study design was adopted by this study, targeting a population of 708 employees working in six selected county governments. All the 24 county revenue administration executives were selected using purposive sampling, while the stratified random sampling technique was employed in sampling revenue officers. A sample of 284 was determined in the latter, obtained by use of the Yamane formula. Primary data was collected through structured questionnaires while secondary data was collected using data extraction tool for actual own source revenue collected. In order to examine quantitative data, descriptive statistics including frequency, mean, and standard deviation were used, while inferential statistics were produced using both multiple and moderated regression analyses. Results indicate that competency of revenue collectors ($\beta = 0.545$, $p = 0.000$, Sig. <0.05); stakeholder engagement ($\beta = .608$, $p = 0.000$, Sig. <0.05); regulatory compliance ($\beta = .703$, $p = 0.000$, Sig. <0.05); and revenue management ($\beta = .669$, $p = 0.000$, Sig. <0.05) have a significant effect of own source revenue target. Revenue collection automation was also found to significantly moderate the relationship between own source revenue target and stakeholder engagement ($\beta = -.108$, $p = 0.027$, Sig. <0.05). It however fails to moderate the relationship between own source revenue target and competency of revenue collectors ($\beta = -.075$, $p = .164$, Sig. >0.05); regulatory compliance ($\beta = -.069$, $p = .128$, Sig. >0.05); and revenue management ($\beta = -.062$, $p = .201$, Sig. <0.05). The findings indicate that while revenue collection automation significantly moderates the relationship between stakeholder engagement and own source revenue target, it does not significantly moderate the relationships between own source revenue target and competency of revenue collectors, regulatory compliance, or revenue management. The study recommends that county governments prioritize strengthening their agency revenue collection systems, through ongoing capacity-building for revenue collectors, stakeholder engagement, robust regulatory compliance and effective revenue management. They should also strategically integrate revenue collection automation, ensuring that it strengthens rather than undermines these critical factors in optimizing OSR performance.

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LIST OF ABBREVIATIONS AND ACRONYMS

Aut.	Revenue Collection Automation
CBEF	County Budget and Economic and Forum
CBOs	Community Based Organization
CFSP	County Fiscal Strategy Paper
COB	Controller of Budget
CoK	Constitution of Kenya
Comp.	Competency of Revenue collectors
CRA	Commission on Revenue Allocation
CSOs	Civil Society Organizations
FY	Financial Year
GRA	Ghana Revenue Authority
IBP	International Business Partnership
ICPAK	Institute of Certified Public Accountants in Kenya
IFMIS	Integrated Financial Management Information System
IS	Information Systems
KAPS	Kenya Airports Parking Services
KRA	Kenya Revenue Authority

LAIFOMS	Local Authority Information Financial and Operations Management Systems
NG-CDF	National Government – Constituency Development Fund
NMS	Nairobi Metropolitan Services
NPMT	New Public Management Theory
OSR	Own-Source Revenue
PFMA	Public Finance Management Act
RBV	Resource-Based View Theory
Reg. Comp.	Regulatory Compliance
Rev. Mgt	Revenue Management
SARAs	Semi-Autonomous Revenue Agencies
Stake. Eng.	Stakeholder Engagement
UK	United Kingdom
UNCTAD	United Nations Conference on Trade and Development
WDF	Ward Development Fund

OPERATIONAL DEFINITION OF TERMS

Agency revenue collection: The structured process by which county governments in Kenya outsource the collection of own source revenue, to an independent third party including the outsourcing of the revenue collection automation process.

Own source revenue target: The specific amount of revenue that a county government aims to generate from its own resources. These revenues are derived from various local sources, including taxes, fees, licenses, permits, fines, and charges for services provided by the government, rather than from transfers or grants from higher levels of government.

Revenue collection automation: The computerization of all the processes of own source revenue collection by county governments or revenue collection agents through automated registration, e-filing and electronic payment.

Regulatory compliance: Actions taken by county governments in order to abide by pertinent Kenyan laws, policies, and regulations pertaining own source revenue collection, including Articles 209 and 210 of the Constitution; the County Government Act of 2012; and the Public Finance Management Act of 2012.

Revenue management: Processes employed by revenue collectors or agents to ensure revenue maximization from the levies imposed by different county governments.

Staff competency: The basic qualification required for one to effectively collect own source revenue in the county governments which is dependent on capability and capacity improvement through training.

Stakeholder engagement: Interaction between parties and group problem-solving between public who are the taxpayers and government bodies such as Commission of Revenue Allocation (CRA), Office of the Controller of Budget (COB) and the Ministry of National Treasury and Planning, with the goal of achieving better and more acceptable decisions in relation to own source revenue target.

CHAPTER ONE

INTRODUCTION

1.1 Overview

The chapter presents the background information, problem warranting the research, specific and general objectives, study hypothesis, justification, scope, significance of the investigation, limitation of the investigation and assumptions of the investigation.

1.2 Background Information

Government plays a pivotal role in providing essential public services that contribute to societal well-being and progress, encompassing responsibilities from education to public safety (Garcia-Perez, Cegarra-Navarro, Bedford, Thomas & Wakabayashi, 2023; Gatta, Boushey & Appelbaum, 2018; Kennedy & Sugden, 2022). Within this broader framework, county governments embody the principles of decentralized governance, infusing the spirit of local responsiveness and empowerment into the provision of public utilities (Bahl & Martinez-Vazquez, 2023). On a county scale, the government's role in service delivery is much more detailed and closer to the specific needs and aspirations of the local communities (Ismail, Fathonih, Prabowo, Hartati & Redjeki, 2020). Revenue collection at the county level thus forms the financial backbone that enables effective delivery of vital public services (Culpeper & Aniket, 2023). In generating income through local taxes, fees, licenses, and fines, county governments leverage own source revenues (OSR) to acquire the resources necessary to fund education, healthcare, infrastructure, and various community-oriented initiatives (Fombad & Steytler, 2019). This self-sustaining revenue model grants counties the autonomy to address unique local

needs, ensuring that services are tailored to the specific demands of their residents (Fakhari, Din & Omar, 2022).

Own source revenues are an important source of funding for county governments' operations and the provision of services, primarily strengthening the social contract between citizens and government since the citizens pay taxes and, in exchange, expect from the county government a certain level of services and consideration in decision-making (Bahl & Martinez-Vazquez, 2023). When residents and corporate organizations interact with their counties on market fees or other levies and rates, this is obvious in the counties (Asree, Zain & Razalli, 2020)). Therefore, County Governments should work to maximize local revenues to prevent the growing dependency on transfers from the National Treasury (Bird, 2024).

In an effort to realize OSR, county governments set revenue targets to serve as benchmarks that outline clear objectives for revenue generation from local taxes, fees, and other sources (Fernandhytia & Muslichah, 2020). By defining specific revenue goals, county governments establish a framework for focused efforts and systematic planning. Revenue targets facilitate disciplined financial management, prompting counties to adopt efficient collection methods, enforce regulations, and streamline administrative procedures (Abiola & Asiwah, 2022). As counties work towards these set targets, they cultivate a culture of accountability, transparency, and responsible fiscal practices, ultimately driving the successful realization of their own revenue sources (Kwaji & Dabari, 2022).

Globally, the effectiveness of sub-national revenue collection varies widely, influenced by factors such as governance structures, economic conditions, and the level of autonomy granted to sub-national entities (Sykesville & Vasudevan, 2024). For instance, in countries like Canada and the United States, sub-national governments have significant autonomy and responsibility for revenue collection (Malalgoda, Amaratunga & Haigh, 2021). This autonomy, coupled with advanced technology and robust legal frameworks, has enabled these entities to achieve and often surpass their revenue targets (Bird, 2024; Slack, 2023).

In Sub-Saharan Africa, the challenges of sub-national revenue collection are even more pronounced. Many countries in the region have adopted decentralization policies, which have transferred significant revenue collection responsibilities to local governments. However, the success of these initiatives has been mixed (Balunywa, Nangoli, Mugerwa, Teko & Mayoka, 2024). Countries like South Africa have made significant strides in enhancing local revenue collection through the adoption of modern technology and the implementation of strong legal frameworks (Steytler, 2024). On the other hand, in countries like Nigeria, despite the establishment of sub-national revenue authorities, the achievement of revenue targets remains a challenge due to issues such as corruption, inadequate infrastructure, and resistance to change (Olusola & Siyanbola, 2024).

The introduction of automation in revenue collection has shown promise in addressing some of these challenges. Studies (Okunogbe & Santoro, 2023; Balunywa et al., 2024) have shown that automation can significantly improve efficiency, reduce leakages, and enhance transparency in revenue collection processes. For example, in Rwanda, the introduction of automated tax systems at the local government level has led to a

substantial increase in revenue collection, enabling the country to achieve its revenue targets more consistently (Kayaga, 2007).

In the Kenyan context, OSR is highly relevant to Kenya's Vision 2030, particularly the Economic Pillar, which aims to transform the country into a middle-income economy by fostering sustained economic growth through improved infrastructure, public sector efficiency, and enhanced revenue collection mechanisms (Republic of Kenya, 2007). Efficient revenue collection at the county level is critical for financing the devolved functions and achieving the economic goals outlined in Vision 2030. Further, automation of revenue collection aligns with the broader global agenda of Sustainable Development Goal (SDG) 16, which emphasizes building effective, accountable, and inclusive institutions at all levels. In improving revenue collection systems, county governments can better finance development initiatives, thereby promoting sustainable economic growth, reducing inequalities, and enhancing service delivery (United Nations, 2015).

Kenya's county governments were established in 2013 following the promulgation of the new Constitution in 2010, which ushered in a devolved system of governance. These county governments are mandated to generate their own-source revenue to supplement transfers from the national government (Global Centre for Policy and Strategy, 2024). The revenue potential for each county is calculated based on the proportionate county infrastructural endowments and the respective maximum possible own source revenue that each county government can collect from the most important revenue streams prescribed by the constitution, when they apply the best practices in revenue administration (World Bank, 2019). However, despite the potential, many counties have struggled to meet their revenue targets. Data from the Controller of Budget (2023) shows

that on average, counties have been collecting only about 60% of their annual revenue targets.

In the 1st half of the Financial Year (FY) 2023/24, the OSR only contributed to 24.9 percent of the aggregate annual target of Sh80 billion. Over the same period, only five counties attained over 50 percent of local revenue collection against the annual target (Global Centre for Policy and Strategy, 2024). During the 2022/2023 financial year (FY), revenue collection by county governments reached Kshs.28.77 billion from OSR, which was 46.3 percent of the Kshs.62.10 billion target (Office of the Controller of Budget (OCB), 2023) which was a decline compared to Kshs.35.91 billion generated during a similar period in the previous financial year. In the FY 2021/22, total own source collection was Kshs.35.91 billion, a 59.4 per cent proportion of the annual target (Kshs.60.42) (OCB), 2022). This was decline from the 64.2 per cent achieved in the FY 2020/21, with a collection of Kshs.34.44 billion vis-à-vis a target of Kshs.53.66 billion (OCB, 2021). The FY 2020/21 collection was itself a decrease compared to Kshs.35.77 billion generated in FY 2019/20, representing 65.2 per cent of the target collection of Kshs.54.9 billion. This was further, a decrease compared to the 74.8 percent of the targeted collections in FY2018/19, at Kshs.40.30 billion against the goal of Kshs.53.86 billion (OCB, 2020). While the foregoing statistics may not give individual performance of each county, the summation depicts the average dismal performance of counties, in achieving their respective annual own source revenue targets.

The underperformance in revenue collection among Kenyan counties can be attributed to various factors, including inadequate staff capacity, outdated revenue collection systems, and corruption (Omolo & Anyanzwa, 2019; Kenya Institute for Public Policy Research

and Analysis (KIPPRA), 2024). Some counties have attempted to address the foregoing challenges by adopting automated revenue collection systems. For instance, Nairobi City County's adoption of the electronic payment platform (eJijiPay) in 2014 was expected to enhance revenue collection by reducing leakages and improving efficiency (KIPPRA, 2024). Some counties, including Nairobi, Meru, Kakamega, Narok, Nakuru, and Kericho, are also increasingly harnessing the power of agency revenue collection, either by appointing the Kenya Revenue Authority (KRA) as an agent or engaging private firms as proposed by the National Policy to Support Enhancement of County Governments' Own Source Revenue (2019) (Olatunji & Ayodele, 2017; Ngure, Kananu, Munini, Evusa, Ndirangu & Sisimonda, 2019; Global Centre for Policy and Strategy, 2024). While there have been some improvements, the overall impact of agency revenue collection and automation on achieving revenue targets remains a subject of ongoing study (KIPPRA, 2021).

Further, KIPPRA (2024) observes that there is need for County governments to enhance the capacity of revenue collection staff through implementing focused training. Accordingly, the Commission on Revenue Allocation (CRA) (2021) developed the "Counties' Own Source Revenue Training Guidelines" aimed at enhancing technical expertise among revenue collection staff across county governments. Beside enhancing staff competence, the guidelines also recognize stakeholder engagement, regulatory compliance and effective revenue management as key OSR enhancement strategies (CRA, 2021). It however remains scantily explored in the Kenyan body of knowledge, how the interrelationship between agency revenue collection, automation and own source revenue target among selected county governments in Kenya

1.3 Statement of the Problem

The performance and efficiency of governmental services, as well as the expansion of local economies, heavily rely on the effectiveness of revenue collection. Ideally, county governments in Kenya should generate OSR to finance their budgets, reducing dependence on national government transfers. To achieve these revenue targets, counties have implemented various strategies, including the establishment of revenue collection agencies and the adoption of automation technologies. However, despite these efforts, there remains a significant shortfall in the achievement of OSR targets. In the first half of the 2023/24FY for instance, OSR contributed only 24.9 percent of the aggregate annual target of Ksh80 billion, with only five counties achieving over 50 percent of their local revenue collection against the annual target. This stark underperformance is also highlighted by the County OSR Report which indicates that most counties raise an average of 60% of their potential OSR, highlighting a persistent gap between revenue collection and actual outcomes. This shortfall raises critical questions about the effectiveness of both agency-based revenue collection and the automation processes intended to enhance these efforts. It is crucial to ascertain whether the problem lies within the automation systems themselves, the operational efficiency of the revenue agencies, or a combination of both. Further, with the rising costs associated with establishing and maintaining these revenue agencies, there is an urgent need to justify their cost-effectiveness and assess whether automation can truly moderate and enhance the relationship between agency efforts and OSR target attainment.

1.4 General Objectives

The general objective of this study was to establish the relationship between agency revenue collection, automation and own source revenue targets among selected county governments in Kenya.

1.5 Specific Objectives

The specific objectives were to:

- i. Determine the relationship between competencies of revenue collectors and own source revenue targets among selected county governments in Kenya.
- ii. Assess the relationship between stakeholder engagement and own source revenue targets among selected county governments in Kenya
- iii. Examine the relationship between regulatory compliance and own source revenue targets among selected county governments in Kenya
- iv. Determine the relationship between revenue management and own source revenue targets among selected county governments in Kenya
- v. Establish the moderating effect of revenue collection automation on the relationship between competencies of revenue collectors, stakeholder engagement, regulatory compliance, revenue management and own source revenue targets among selected county governments in Kenya.

1.6 Research Hypothesis

The study hypotheses were;

H₀₁: There is no statistically significant relationship between competencies of revenue collectors and own source revenue targets among selected county governments in Kenya.

H₀₂: There is no statistically significant relationship between stakeholder engagement and own source revenue targets among selected county governments in Kenya

H₀₃: There is no statistically significant relationship between regulatory compliance and own source revenue targets among selected county governments in Kenya

H₀₄: There is no statistically significant relationship between revenue management and own source revenue targets among selected county governments in Kenya

H₀₅: Revenue collection automation does not have statistically significant moderating effect on the relationship between competencies of revenue collectors and own source revenue targets among selected county governments in Kenya.

H₀₆: Revenue collection automation does not have statistically significant moderating effect on the relationship between stakeholder engagement and own source revenue targets among selected county governments in Kenya.

H₀7: Revenue collection automation does not have statistically significant moderating effect on the relationship between regulatory compliance and own source revenue targets among selected county governments in Kenya.

H₀8: Revenue collection automation does not have statistically significant moderating effect on the relationship between revenue management and own source revenue targets among selected county governments in Kenya.

1.7 Justification of the Study

This study is crucial for several reasons. Firstly, the Public Finance Management Act (PFMA) of 2012 establishes a detailed framework for managing public finances in Kenya, emphasizing the importance of effectively collecting Own Source Revenue (OSR) to ensure that county governments can finance their operations independent of national government transfers. Despite a decade of devolution and the implementation of revenue collection agencies and automated systems, many counties continue to fall short of their OSR targets. This persistent shortfall raises fundamental questions about the effectiveness of these interventions and the capacity of county governments to achieve financial self-sustainability.

Carrying out this study now, rather than in the future, is particularly relevant due to the ongoing challenges faced by county governments in meeting their OSR targets. The dynamic nature of fiscal policies, evolving technological advancements, and changing administrative practices necessitate timely research to address current inefficiencies and to optimize the use of automation in revenue collection. Immediate analysis is critical to

provide actionable insights that can enhance revenue collection strategies and improve fiscal management practices.

The selected counties of Nairobi, Meru, Kakamega, Narok, Nakuru, and Kericho represent a diverse cross-section of Kenya's counties, offering a comprehensive view of different economic activities and administrative capacities. This diverse representation allows for a refined understanding of the factors affecting OSR performance and the impact of revenue collection automation and agency-based systems. By focusing on these counties now, the study aims to offer evidence-based recommendations that can be quickly implemented to address existing gaps and improve revenue collection outcomes.

Ultimately, the findings of this study will provide valuable insights for policymakers, county governments, and regulatory bodies, guiding the design and implementation of more effective revenue collection strategies. The urgency of this research lies in its potential to contribute to the ongoing efforts to enhance the financial autonomy and sustainability of county governments, ensuring that they can better manage their finances and reduce dependency on national government transfers.

1.8 Significance of the study

This study may benefit the stakeholders and decision-makers in both revenue collection agencies and county governments to develop frameworks in revenue collection as it has highlighted the variables of staff competency, stakeholder's engagement, regulatory compliance and revenue management. Using the findings of the study, the national and county assemblies who are the major stakeholders may be able to formulate legislations to help the County Governments' effective and efficient tax collecting systems.

Constitutional Commissions and Independent Offices may be able to generate policies on OSR that guide appropriations and budgets during the review of county budgets.

For policymakers, particularly those involved in fiscal decentralization and public finance management, this study offers critical insights into the effectiveness of agency-based revenue collection and automation in achieving OSR targets. The findings will help inform the development of policies and strategies aimed at enhancing the efficiency of revenue collection mechanisms in county governments. In understanding the factors that contribute to or hinder the achievement of OSR targets, policymakers can design more targeted interventions, allocate resources more effectively, and set realistic performance benchmarks for county governments. Additionally, the study will provide evidence to justify or reconsider the current investments in automation and agency revenue collection systems, ensuring that public funds are utilized in the most effective manner.

For county governments, the study offers practical recommendations on optimizing revenue collection strategies. In identifying the key factors that influence the effectiveness of agency revenue collection and the role of automation, the study provides actionable insights that county governments can implement to enhance their revenue performance. This is particularly important for counties that have struggled to meet their OSR targets, as the study will highlight best practices and areas for improvement. For regulatory bodies, such as the Controller of Budget and the Commission on Revenue Allocation, the study's findings will be instrumental in assessing the performance of county governments and ensuring that they adhere to national standards and guidelines. The study will also be beneficial to external auditors and other oversight bodies, as it will

provide a framework for evaluating the cost-effectiveness and impact of revenue collection strategies at the county level.

To academia, this study makes a valuable contribution to the academic field by filling a critical gap in the existing literature on devolved government revenue collection in Kenya. While much of the previous research has focused on the KRA at the national level, this study shifts the focus to county governments, examining the interplay between agency revenue collection, automation, and OSR target. The study also introduces a fresh perspective by exploring the moderating role of automation, thus adding depth to the discourse on public finance management. The findings will provide a robust empirical foundation for future research and will be of interest to scholars in public finance, economics, and governance, who seek to explore similar dynamics in other contexts.

1.9 Scope of the Study

This investigation covered the relationships between various variables and own source revenue targets by county governments. The research was carried out in the county governments of Nairobi, Meru, Kakamega, Nakuru, Narok and Kericho in Kenya which are six out of the 47 county governments as listed in Appendix VIII. These six counties were appraised to undertake revenue collection through agencies either in effecting collection or process automation. The study was limited to the study variables, which were: competency of revenue collectors, stakeholder engagement, regulatory compliance and revenue management while considering the moderating effect of automation of own source revenue collection on the specific variables.

The analytical scope of this study focuses on examining the relationship between agency revenue collection, automation, and the achievement of OSR targets in selected Kenyan county governments. The study employed a cross-sectional study design approach to provide a comprehensive analysis of the factors influencing revenue collection outcomes.

Conceptually, the study explored the interrelationships between revenue collection agencies, automation technologies, and OSR target. It specifically investigated the moderating role of automation, providing a deeper understanding of how technology can enhance or impede the effectiveness of revenue collection. The study also considered the influence the variables of competencies of revenue collectors, stakeholder engagement, regulatory compliance and revenue management, to offer a holistic view of the revenue collection landscape.

Periodically, the research was conducted over a period of six months, between June 2023 and November 2023. This timeframe allowed for a thorough examination of trends and patterns in OSR performance, providing sufficient data to assess the long-term impact of agency revenue collection and automation initiatives.

Geographically, the study focused on selected county governments in Kenya, representing a diverse cross-section of counties in terms of size, economic activity, and administrative capacity. This selection enabled the study to capture variations in OSR performance across different contexts and provide insights that are applicable to a wide range of counties.

The subject scope encompassed five specific variables, which included competency of revenue collectors, which entailed how the skills and expertise of revenue collectors

influence the effectiveness of revenue collection and the achievement of OSR targets; stakeholder engagement, which assessed the role of engaging with stakeholders in enhancing revenue collection and achieving OSR targets; regulatory compliance, which explored how adherence to regulatory requirements impacts OSR performance; revenue management, entailing the effect of revenue management practices on the achievement of OSR targets; and revenue collection automation, which involved assessing the moderating effect of automation on the relationship between the variables in agency revenue collection and OSR targets was specifically examined.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter entails; theoretical review, literature review on agency revenue collection, automation on achievement of own source revenue target, conceptual framework, and knowledge gaps will also be included in this chapter.

2.2 Review of Related Literature

The following literatures were reviewed based on the study variable;

2.2.1 Competency of Revenue Collectors and OSR Target

Potnuru and Sahoo (2022) define competency of revenue collectors as the skills, knowledge, and abilities of individuals responsible for collecting revenue on behalf of a government or organization. Measured by capability and knowledge; and training and development, the competency of revenue collectors is critical in ensuring efficient and effective revenue collection, which directly impacts the achievement of revenue targets and the financial health of the organization or government. Accordingly, research has consistently demonstrated a positive correlation between achieving own-source revenue targets and employee competency. Barão, de Vasconcelos, Rocha and Pereira (2023) define competence as a formal procedure for transferring essential knowledge and abilities required for high productivity. Enhancing employee skills involves ensuring they have the capacity to perform specific tasks effectively. Goetz and Wald (2021) describe competence development as a learning process aimed at improving employees' abilities

to complete tasks successfully. In developing nations, training plays a crucial role in tax collection and is often included in aid programs to enhance public service delivery (Razzaq, Shujahat, Hussain, Nawaz, Wang, Ali & Tehseen, 2022). These programs primarily focus on reducing organizational constraints within public institutions, informing government policy, promoting global data exchange, and fostering informed discussions on tax-related matters (Garcia-Perez, Cegarra-Navarro, Bedford, Thomas & Wakabayashi, 2023).

Keeping competent personnel is the key to achieving the own source income target, according to Potnuru and Sahoo (2022). Abbas and Kumar (2021) claim that the competency approach to staff selection is concentrated on classifying, characterizing, and evaluating individual differences for specific job-related components that enable successful job performance. Competence of revenue collectors improves worker performance by assisting them in comprehending the necessary degree of understanding through the sharing of knowledge (Akudugu & Oppong-Pepurah, 2023). There was need to address this core component of worker competency in order to promote competitiveness and ensure the achievement of the own source income target. According to Tahiru, Agbesi and Osei-Owusu (2023), capability is a collection of behaviors that have a recognizable appearance pattern and define how pertinent activities are carried out.

Malalgoda, Amaratunga and Haigh (2021) conducted an empirical study with 70 respondents from ten different UK cities looked into how employee training affects service delivery and revenue collection. Regression analysis was employed in the investigation. The results of the study demonstrated that in order to increase tax

collection, the various governments had improved staff training. The highly trained workforce was credited with the improvement, ensuring that revenue collection was successful. There was need to determine the relationship of competency of staff in revenue collection in the Kenyan context with regards to county governments.

According to Ling and Ahamad (2020) study on the impact of Indonesia's knowledge on the management of finances, supervision act and competence on government financial accountability, 71 respondents were surveyed. Multiple Linear Regression was used to examine the data, and the results demonstrate that competence affects the effectiveness of the audit review. This was further supported by Abd El maksoud (2023) who performed analysis of the connection between motivation and competence in the same nation and discovered that performance is influenced by competence. To properly collect income from their own sources, revenue collectors or agents must make sure their staff members have both accounting knowledge and up-to-date abilities. Muturi and Kiarie (2020) noted that a high level of staff competency is required of revenue collectors in order to improve OSR collection.

Malik, Sheikh and Mahmood (2023) carried out a survey on performance management and key competencies in Pakistani public libraries. The research uncovered 6 key competencies. The results showed that interpersonal, analytical, adaptable, planning and organizing, customer service, technological proficiency, organizational knowledge, and communication skills were the most crucial competencies to improve employee performance. Unsatisfactory performance in any competency necessitates an action plan to improve the relevant ability in order to achieve superior performance and meet defined goals. This study concentrated on general competences but did not provide a thorough

analysis of staff accounting competencies, leaving a conceptual gap for this study to fill. The previous study focused on performance management, whereas the current study examined agency revenue collection in relation to achieving own source revenue collection goals. By carrying out the study in developing nations like Kenya, the study also aimed to close the contextual gap. While the current investigation used a correlation research design, a survey research design was previously used in other studies.

Culpeper and Aniket (2023) employed a descriptive survey research design in their study on staff training and tax collection. The study sampled 20 parking attendants who were selected at random in China. The results of the study demonstrated that extrinsic factors, such as the fairness of present training processes and aptitude for training, significantly influenced work performance in the tax collection industry. There was need to conduct research on staff training and development in Kenya to contextualize the findings discovered in China.

Also, in China, the relationship between employee development and tax collection was studied by Ruz (2021). The outcomes of the investigation demonstrated that extrinsic variables, such as the equality of present training procedures and the capacity for training, directly impacted work performance in the tax collection industry. Charity (2021) having investigated effect of staff competence on county government found out that the competency has a favorable and favorable impact on productivity. The competencies of revenue collectors stand as a cornerstone, encompassing their knowledge of tax laws, customer service skills, and proficiency in modern collection techniques (Ruz, 2021).

Fakhari, Din and Omar (2022) carried out a study in the United Arab Emirates to look into the mediating impact of management performance on competency of the employees,

assistance, and the collection of VAT in the country. The study used a structural equation modeling approach and a quantitative causal research strategy. The investigation found that support services for revenue collection were insufficient, and the hired staff lacked expertise and needed training. This study checked the Kenyan context if staff competence had an effect on own source target with revenue automation as a moderating variable with a focus on all OSR sources in county governments.

Asree, Zain and Razalli (2020) conducted study on organizational excellence and staff core competencies. The study included a cross-sectional survey approach and interpretive analysis. In-depth interviews with fifteen directors and managers of Malaysia's service-based industry's human resource management were conducted as part of the study's qualitative methodology. The results show that despite the diverse activities, roles, and nature of service-based enterprises, core competencies are extremely important for excellence in organizational performance. Even though this study's results were encouraging, further quantitative research is still needed to understand how staff skills affect these outcomes. This study sought to include a sizable sample of 280, which allowed the conclusions to be generalized because the 15 individual sample was too small to allow the findings to be applied to a large population. By doing the study in the setting of Kenya, the contextual gap was filled.

Fadilah (2024) looked into the fundamental skills that professional workers, particularly those working at the Inland Revenue Board of Malaysia, need. The research objective was addressed by conducting an extensive interview using a qualitative methodology. The information was examined using a thematic approach. According to the findings, the four crucial qualities that employees need are cognitive, functional, leadership and

communication competencies. Employees that possess these skills are regarded as invaluable resources or assets by their employers. This study intended to check if competencies of staff can enable county governments achieve own source revenue targets.

In order to better understand the impact of staff competencies in India's public and private banks, Salman, Ganie and Saleem (2020) conducted a study where 325 employees from management and lower ranks were interviewed as part of the study utilizing a cross-sectional research approach and convenience sampling. Employee competency has a good and significant impact on performance, according to the study. Contrarily, it was discovered that self-competence had a considerable detrimental impact on performance, and this contradictory conclusion necessitates more research. Additionally, Ali and Mustapha (2023) conducted research on Mid-Size Accounting firms in the United States of America using a survey design. The study found that accounting skills were important in audit firms, but their value and relevance dropped as staff members approached partner level, which were senior management, based on the 699 replies out of the 1,380 planned sample size.

Gong, Huang and Farh (2022) portends that the keeping of competent staff is key in achieving income targets in organizations due to performance enhancement by enabling them to comprehend the degree of understanding by knowledge sharing. Olowookere and Fasina (2023) found out that staff training on revenue collection in the Nigeria increases tax collection due to the skill gained during the training. The study further found out that performance was greatly influenced by competence and that to properly collect revenue all staff ought to have accounting and be appraised of abilities on revenue collection.

Fakhari, et al., (2022) found out in the United Arab Emirates that staff who lacked expertise needed training so as to improve collection of local taxes.

Emojong (2018) conducted research on the impact of competency-based education approaches on employee productivity and efficiency in the educational programs of the Ugandan Revenue Authority. In order to accomplish this, 281 respondents—271 members of the operational staff and 10 members of the management team—were interviewed using a mixed research method that combined descriptive and correlation research. As per the investigation, there is a substantial positive linkage between competency-based education and employee productivity and efficiency in their positions as registers, assessors, and collectors of data. This study intended to check if the findings would hold in relation to staff competency and own source revenue target in the county governments in Kenya.

Prior to the establishment of county governments in Kenya, local authorities tended to have a sizable staff surplus, which led to a significant turnover in the number of specialists and experts. This resulted from a lack of motivation, motivators, and conflict between local governments and the Public Service Commission, which is tasked with resolving personnel difficulties in government (Muturi & Kiarie, 2020). The extent of corruption and wasteful practices that local governments must deal with is both a cause and a consequence of the significant turnover of qualified specialists within such organizations. Along with their incapacity to deliver administrations to tax payers and city residents, the other characteristic of most local governments was a periodic slowness in paying their personnel (Ambarwati, Firmansyah, Hartopo & Iswandy, 2023). To ensure that they received back pay and arrears, several municipal employees engaged in

industrial action, such as a boycott of their assigned tasks. In this case, administrative conveyance is hampered, delayed, and underprovided, which negatively impacts personnel morale as well as tax payers. As the county governments function inside the boundaries of the long-gone local authorities, the study attempted to determine whether the conclusions from the local authorities still apply.

According to Chepkorir, Rugut and Langat (2021), one primary challenge facing revenue collection by devolved units in the country lies in the capacity and expertise of county governments to effectively design, implement, and manage revenue collection systems. Many counties lack the institutional capacity and skilled personnel required to efficiently administer revenue collection programs. This results in inefficiencies, revenue leakages, and low compliance rates, all of which hinder the realization of revenue targets. This is supported by Owidhi (2018) who observes that the need for substantial investments in human capital development and capacity building is evident to equip county governments with the skills and resources necessary to navigate the complex revenue collection landscape.

Charity (2021) conducted a study on the impact of employee competency on county government performance in Kenya's central region using a descriptive and explanatory research methodology. 252 respondents were given an organized electronic survey to complete across the five counties of central Kenya. For the purpose of analysis, both inductive and enumerative statistics were utilized, and a 95% confidence level was evaluated on the complete model. Results showed that staff competency has a favorable, statistically significant impact on county government performance. Therefore, in order

for revenue collection agents to effectively collect own source revenue and help the county government reach its revenue collection goal, they must possess accounting skills.

In order to identify the variables that impacted income collection in the Nairobi City County Government, Ngicuru and Muiru (2019) conducted a study applying a descriptive research design. The study involved conducting in-depth interviews with a sample of 180 employees using a survey questionnaire. Both descriptive and inferential statistics were utilized to analyze the data in the study, which employed multivariate regression. The research showed that the most common criteria were competent staff, computer availability, communication system availability, tax structure, and tax education. This current study checked on the findings if they still hold and introduce other variables including the moderating effect of revenue collection automation.

Hussein and Mutswenje (2020) investigated revenue performance with specific emphasis on the collection procedures in Garissa County. The study's objective was to determine how technology and automation, education of the people paying tax, monitoring of revenue, employee motivation and training, and technology all affected the collection of taxes in the County of Garissa. This investigation was grounded on the agency, budget and technological acceptance theory, and the optimal tax theory. The investigation's intended audience consisted of the 237 middle and senior management staff members from the several county departments and agencies. A descriptive research design was adopted. Using a model based on regression, the investigation examined the relationship between Garissa County's administrative procedures and revenue collection. Increased revenue collection which could be accomplished if the county implemented or improved the use of positive procedures within the administration of the county. A number of

suggestions were advanced, including that the county administration increases funding allocations for programs through the agencies aimed at enhancing the skills of various teams, and that the HR department create open and equitable reward structures and incentive schemes to motivate revenue officers to perform well in their roles. The current study determined the connection between revenue collectors' competency against the accomplishment of their own source targets.

In Kenya's Taita Taveta County, Ogada and Shibairo (2018) investigated perceived barriers to efficient County own source revenue collection. 60 members of the general public and 132 employees from the County's Finance and Planning Department served as the target audience for a descriptive survey research strategy. Through the use of a questionnaire, primary data was gathered. Inferential statistics were applied to descriptive analysis, which made use of frequencies, percentages, and correlation analysis. According to the study, own source revenue collection was significantly impacted by county human resources. Internal controls should be tightened to make sure that the money collected is adequately protected against embezzlement. It is also advised that staff members undergo regular training on the systems and practices for collecting money from County-own sources as well as the importance of maintaining the integrity of the structure in the County Administration's best interests. Additionally, the report suggests that greater funding be allocated for information, communication, and new technology. In order to reap long-term gains, facilities that assist revenue collection should be purchased. There ought to be an adequate and functioning system of internal control to provide better control over the collected taxes. The county government must regularly assess, establish goals for realistic County own source revenue collection, and implement

measures to assure high compliance. The current study was conducted on counties that have used agencies in their revenue collection while considering internal strengths to the counties towards OSR target attainment.

In Kenya's sub-national government sector, Wang'ombe and Kibati (2020) conducted research at the county government of Nakuru. The investigation's approach was interpretative. They employed sampling stratification to make it simpler to divide the sample into the three categories, with 10% of the sample being selected from each stratum of the target population. The research claims that in order to alter its culture and offer high-quality services, the council must allocate appropriate resources to staff training and development. The study in Nakuru had a smaller proportion of top management and a high portion in lower management and in line with corporate governance principles this study concentrated with top management who are the policy and decision makers in the county governments on aspects of performance management.

Kogei (2020) conducted a study on the effects of revenue collection strategies on revenue collection in Kenya's Meru County government. The benefit theory and the ability to pay theory, which in retrospect explain why taxpayers are motivated to pay their taxes, served as the foundation for this study. A descriptive research methodology was used to examine the 114 management and revenue collection staff members who worked in the finance division of Meru County. The size of the sample was set at 35 workers using a stratification method. The information was collected systematically using a survey, and SPSS was used for analysis. To ascertain how various strategies affect the amount of money collected, the study used descriptive statistics. The researcher advises the county to empower the workforce by investing in capacity building and information technology

in order to realize the optimum revenue. The current study determined the relationship between the competency of revenue collectors while considering a bigger sample of 280 respondents against 35 considered in Meru County for purposes of inferring and generalizing the results to other county governments.

Kimutai, Mulongo and Omboto (2017) assessed how training affected the mobilization of money in 6 county administrations in Rift Valley. This investigation used a descriptive design and discovered that county revenue staff training increased their understanding of the work they were assigned, which in turn affected their productivity in revenue mobilization. The counties' level of revenue collection was raised as a consequence of seminars and workshops that provided county personnel with knowledge of various revenue mobilization tactics and revenue management. According to the report, it is essential that county revenue-related staff receive the appropriate training and are hired based on their credentials. The present investigation established the relationship between capacity building plans of staff on the achievement of their own source revenue targets.

Guyo and Ombui (2022) surveyed Kenyan chartered universities to assess how training and development affect employee performance. Through the use of structured and unstructured questionnaires throughout the sampling group and secondary data derived through organizational reports, information was gathered from 220 employees. The study found that employee engagement and productivity were positively impacted by training and development. While the current study aimed to consider additional potential influencing elements own source revenue target, training and development have received a lot of attention. Furthermore, the focus of the last study was the private sector, whereas this one was on county governments, which are a part of the public sector.

The reviewed literature considered the effect of various human resource factors touching on training and development, motivation and staff competency among others. Conceptually, none of the studies looked at the competency of revenue collectors with specific attention on capability and knowledge and the aspect of training and development which are considered in the current study. Contextually, Malalgoda et al. (2021), Ling and Ahamad (2020), Malik et al. (2023), Culpeper and Aniket (2023), Fakhari, et al., (2022), Asree et al. (2020), Fadilah (2024) and Salman et al. (2020), undertook research in foreign countries of United Kingdom, Malaysia, Indonesia, Canada, China, United Arab Emirates and India which are not similar to county governments in Kenya. In addition, Guyo and Ombui (2022) study on the effect of staff competency on service delivery was undertaken in chartered universities which are academic institutions and the same is not comparable to county governments which are public sector establishments. Most of the studies reviewed greatly relied on cross sectional methods and information analysis approaches which did not consider the nature of associations between the constructs of the studies. Due to these gaps, the present study closed the knowledge gap on the relationship between competency of revenue collection agents on the achievement of own source revenue targets.

2.2.2 Stakeholder Engagement and OSR target

Stakeholders are individuals and groups that have an interest in a certain topic even though they play no official part in the decision-making process (Park & Park, 2022). Stakeholder engagement is a process that involves two-way communication and interaction between the authority/organization/company making the decision and the individuals who wish to participate (Brown & Green, 2023). Measured in the current

context by taxpayer education alongside reports and public feedback, it is based on incorporating the public's values, wants, and concerns into decision-making. Since the participants have some degree of control or impact on the choice, it is an organized procedure whose overall purpose is to arrive at decisions that are supported by the public (Lee & Kang, 2021).

Recent literature explores the relationship between stakeholder engagement and the achievement of revenue targets across various international contexts, revealing significant insights while identifying gaps that warrant further study, especially within the context of Kenyan county governments. A study by Potoski and Prakash (2022) in the United States of America (USA) examined how local governments incorporate stakeholder engagement in revenue generation strategies. Their mixed-method approach, combining case studies and surveys, demonstrated that effective stakeholder engagement improved revenue collection by ensuring stakeholder input informed more practical policies. While their study demonstrated a positive relationship between stakeholder input and revenue collection, it lacked a clear conceptual framework for standardizing these practices across different governance structures. This gap suggests the necessity for a more robust theoretical approach to understanding how standardized engagement can consistently influence revenue outcomes.

Also in USA, Park and Park (2022) looked at the relationship between budget variation and citizen participation. According to a study conducted on 1,506 municipal and county governments, areas with higher levels of public participation tend to have budget variances that are higher on the revenue side but lower on the expenditure side. As much as the residents desire additional services, this has a direct impact on the achievement of

the own source income target because the taxpayers' contribution frequently falls short of expectations. This current study assessed this relationship in the Kenyan context to check if there was a relationship between stakeholder engagement and own source revenue target in county governments.

In the European context, Roxburgh, Merrie, Pecl and McGee (2020) investigated stakeholder engagement's influence on policy development and revenue targets within the EU's Marine Strategy Framework Directive (MSFD). Using participatory action research involving diverse sectors, they found that engagement strategies aligned sectoral interests with environmental and economic goals. Despite the success, the authors pointed out that measuring the direct impact of stakeholder engagement on revenue outcomes remains a challenge, highlighting the need for more systematic approaches. Although their research in the EU's Marine Strategy Framework Directive indicated successful alignment of sectoral interests with economic goals, the lack of systematic methods for quantifying engagement's effect on revenue targets was evident. This gap highlights the need for improved methodologies that can accurately assess the economic impact of stakeholder engagement.

Brown and Green (2023) in Canada explored the role of stakeholder engagement in municipal revenue enhancement strategies. Through case studies of ten municipalities, they found that effective engagement practices were linked to innovative revenue strategies, such as public-private partnerships. However, the study raised concerns about the long-term sustainability of these strategies, suggesting a gap in understanding how stakeholder engagement can drive enduring revenue growth. While their research linked stakeholder engagement to innovative revenue strategies, such as public-private

partnerships, it raised concerns about the long-term viability of these approaches. This gap suggests the necessity for a conceptual framework that can guide the development of sustainable, stakeholder-driven revenue strategies over time.

Lee and Kang (2021) assessed the role of stakeholder engagement in achieving sustainable financial management in South Korean municipalities. Their quantitative study used regression analysis, revealing a positive correlation between proactive stakeholder engagement and revenue targets, especially for municipalities facing budgetary constraints. Nevertheless, the authors emphasized that more qualitative research is required to understand how stakeholder engagement dynamics vary in different political environments, suggesting a gap in exploring the role of political culture in engagement success. This gap suggests that future research should explore the role of political culture in shaping the effectiveness of stakeholder engagement, particularly in regions with varying governance structures.

In South America, Gómez and Ramirez (2021) explored how stakeholder involvement in fiscal policy formulation impacted revenue targets in Colombian municipalities. The longitudinal analysis of municipal budget reports showed that continuous stakeholder involvement resulted in more accurate revenue projections and higher compliance rates. However, the study noted that marginalized communities were often left out of these engagements, pointing to a gap in stakeholder inclusivity that could affect long-term revenue sustainability. Although their study linked stakeholder involvement to improved revenue projections, the exclusion of certain groups from the engagement process suggests a critical gap in understanding how inclusivity impacts revenue outcomes. This

gap necessitates research focused on developing more inclusive stakeholder engagement strategies that ensure all voices are heard.

Johnson and Taylor (2022) in Australia evaluated the effectiveness of stakeholder engagement in public financial management within local governments. Through interviews and document analysis, the study found that stakeholder engagement was crucial for achieving revenue targets, especially in regions undergoing economic transition. However, they identified a gap in engagement with small businesses, which could be addressed by creating more inclusive strategies for diverse stakeholder groups. While their study underscored the importance of stakeholder engagement, it lacked a detailed analysis of how small businesses, as key stakeholders, are integrated into these processes. This methodological oversight suggests that future studies should focus on refining engagement strategies to include small and medium enterprises more effectively.

In the Middle East, Al-Naimi and Qasem (2020) examined stakeholder engagement in the Gulf Cooperation Council (GCC) countries and its influence on revenue optimization. Their mixed-method approach showed that stakeholder engagement played a significant role in sectors such as real estate and tourism. However, political factors often hindered effective engagement, and the study pointed out that further research is needed to explore how political dynamics affect stakeholder engagement outcomes. Although their study showed that engagement positively influenced revenue optimization, the varying political landscapes across the GCC region were not fully addressed. This gap underscores the need for research that explores how political dynamics affect stakeholder engagement and its subsequent impact on revenue generation.

Zhang and Li (2021) in East Asia analyzed the impact of stakeholder engagement on revenue mobilization across Chinese provinces. Their econometric analysis found that provinces with higher levels of stakeholder engagement in fiscal policy formulation met their revenue targets more successfully. Despite this, the study identified a gap in the role of digital platforms in facilitating stakeholder engagement, pointing to the potential for technology to enhance engagement processes. Although their study found that higher levels of stakeholder engagement correlated with successful revenue mobilization, the potential of digital platforms to enhance these engagements was not fully explored. This gap indicates the need for research into how digital tools can be leveraged to facilitate more effective stakeholder engagement.

A study conducted by Ruz (2021) in the Philippines province of Bataan for the fiscal years 2018–2019 looked at the impact of financial performance and the full transparency policy compliance that dictates statutory reporting to the government. Using a descriptive research approach, the study picked 12 city and municipal local government units and examined secondary data in financial accounts. The aim of the present research is to close the gap caused by the data source and usage of secondary techniques while trying to create relationships among different variables. The study revealed that there was no association between the factors it looked at, and the current study planned to use the same variable of statutory reports in the context of Kenya.

In Western Africa, Ayodele and Kwame (2023) investigated how stakeholder engagement influences revenue collection across five West African countries. They found that engagement was critical for improving tax compliance and broadening the tax base. However, rural areas remained significantly under-engaged, creating a gap that

posed challenges for achieving revenue targets. This finding underscores the need for targeted outreach strategies to ensure that all stakeholders, including those in marginalized areas, are included in the engagement process. Their study highlighted the critical role of stakeholder engagement in improving tax compliance but noted that rural areas remained under-engaged. This gap emphasizes the need for research focused on developing outreach strategies that ensure comprehensive engagement across both urban and rural contexts.

Nkuna (2021) undertook a study to analyze the obstacles to tax collection that affect the Maruleng local municipality's ability to remain financially viable in Limpopo province of South Africa. The emphasis of the study was to ascertain the obstacles that had a contribution to the lack of financial resources in the municipalities through a mixed research method design by inductive analysis through telephone interviews and factor analysis through questionnaires. According to the research, the challenges include inadequate service provision, incorrect accounting, metered problems, an infrastructure shortage, and ineffective execution of policies. Recommendations include improved public participation, capacity enhancement and improved policy implementation. This current study considered the broad variables of stakeholder engagement, competency of revenue collectors, regulatory compliance and revenue management in line with the reviewed study under the Kenyan context to ascertain if the same factors produce the same results.

Additionally, in order to start project activities, a large number of stakeholders must be included early. The performance of the Water Sanitation and Hygiene (WASH) project was found to be positively correlated with stakeholder participation in the planning stage,

according to research conducted in Rwanda by Paton and Andrew (2019) to examine stakeholder involvement and its relationship to the outcome of the project. The WASH project's outcome and stakeholder participation were the main topics of the study, which was carried out in Rwanda. The current study sought to establish the relationship between stakeholders' participation on the attainment of own source revenue collection by Kenyan county governments.

Obara and Nangih (2017) used a survey approach to conduct a compliance analysis of tax hurdles and domestic revenue collection in Nigeria among micro firms in Port Harcourt city. The study demonstrates that Nigeria lacks a solid tax base and that the prevalence of cash transactions has an impact on the generation of domestic income. The report stated that effective automation, regular tax payer education would lead to increase revenue collections.

Owino and Akech (2023) focused on Kenyan counties and explored the impact of stakeholder engagement on revenue collection efficiency. Using comparative case studies of five counties, the authors found that stakeholder engagement improved transparency and accountability, which, in turn, enhanced revenue collection. However, inconsistent engagement practices across counties led to varying results. This inconsistency points to a need for a conceptual framework that can guide uniform engagement practices across diverse county settings in Kenya.

Gitaru (2017) found out that tax alignment by Small and Micro Enterprises in the Nairobi Central Business District was improved whenever there is stakeholder involvement through taxpayer education. This was achieved through taxpayer education programs in both digital and print media. All these interventions have to be targeted to check that the

intended demographic understands what they are saying of the relevant tax laws. Kimutai (2017) examined income mobilization tactics in the North Rift region and their effects on county socioeconomic development. The study went one step further by looking at how the variables affected the socioeconomic growth of a larger region made up of multiple counties. Training, technology, stakeholder participation, the influence of infrastructure for mobilization of revenues and limitations experienced by county administrations when putting fundraising strategies into place were the aspects that were highlighted. According to the study, cooperation amongst stakeholders, technology, and training all had an impact on income mobilization strategies. The aim of the present research was to ascertain whether training, stakeholder engagement, and technology utilization have any impact on achieving revenue targets in the selected county governments.

In their study, which used a descriptive survey approach, Onyango, Bwisa and Orwa (2017) discovered that stakeholder participation had a substantial impact on the success of road upgrades in Kiambu County. According to the study's findings, stakeholders required to be included in project management and activity planning. This is in line with Paton and Andrew's (2019) emphasis that stakeholder involvement in planning phases is crucial when interested parties will have a big impact on project success. The application of the stakeholder participation factor in collection of revenues in County Governments and the accomplishment of objectives was the goal of this study.

Muute (2019) set out to look into how stakeholder involvement impacts building project success in Nairobi City County, Kenya. The results demonstrated that the project was being finished without too many difficulties and that the allocated funds were adequate to complete the project. The study found that stakeholder involvement significantly and

favorably influences how successfully building projects run. The study also found out that to achieve development objectives in county governments, stakeholder involvement played a significant role on the project outcome through the phases of design, implementation, monitoring and usage upon project completion. The goal of the current study was to examine how stakeholders affect own source revenue collection by agents in order to consistently meet revenue collection goals.

Ali (2019) investigated how the involvement of stakeholders affects the success of NG-CDF developments in the Wajir West Constituency. Data was gathered for the study via questionnaires and a descriptive case study of CDF-funded projects in Wajir West County. The results demonstrated that stakeholder involvement has a direct and advantageous impact on CDF success factors. In order to determine its impact on how source revenue collections are made through revenue collection agents, the Kenyan county administrations the current investigation was conducted.

According to the reviewed literature on stakeholder engagement, Local government performance studies by Park and Park (2022) in the United States of America, Tooley, et al., (2010) in Malaysian, Ruz (2021) in the Philippines, Nkuna (2021) in South Africa and Paton and Andrew (2019) in Rwanda which are foreign countries found that there is a link between high stakeholder engagement and successful outcomes. The current study considered county governments in Kenya to address the contextual gap. In addition, Onyango, et al., (2017), Muute (2019) and Ali (2019) found out that stakeholder involvement in project implementation led to success which is contextually different from own source revenue target considered in the current study. Furthermore, research on agency revenue collection and OSR target and the precise role played by government

regulatory bodies like the Commission on Revenue Allocation and the Controller of Budget in achieving own source revenue goals is limited. Although Obara and Nangih (2017) considered the variables of automation and taxpayer education in their study in Nigeria, the current study conceptually considers taxpayer education under stakeholder engagement in the Kenyan context while considering automation as a moderating variable between agency revenue collection and OSR target.

2.2.3 Regulatory Compliance and OSR Target

Regulatory compliance is defined by O'Donnell and Lewis (2021) as the adherence to laws, regulations, standards, and guidelines established by governing bodies that an organization or individual must follow in order to operate legally and ethically. Measured by operational policies and guidelines and revenue collection legislations, regulatory compliance is essential for maintaining legal and operational integrity, protecting the organization from legal risks, and ensuring the trust and confidence of stakeholders and the public.

Like many specialized organizations, revenue bodies understand that processes created specifically for this purpose are the best way to assist regulatory compliance (Lee & Kim, 2022). The European Union and the Organization for Economic Cooperation and Development (OECD) have released guidance notes on managing and improving compliance in response to this requirement. These notes define systematic procedures for managing compliance and maximizing voluntary compliance. The procedures are designed to identify, evaluate, and order systemic compliance (Bücker & Jansen, 2020).

Regulatory compliance ensures that the revenue collection process adheres to legal frameworks and enforcement of regulations (Macharia, Oluoch & Ncabira, 2021). The level of legal compliance has an impact on any tax system's revenue yield, efficiency, and fairness, according to IMF (2015). Revenue is undermined, competition is distorted, and equity is jeopardized by noncompliance. The reality that more importance is being placed taxpayer service and enforcement may have gone unnoticed because ineffective governance and management practices, as well as unwarranted legal restrictions, made it difficult for counties to respond promptly and effectively to new compliance challenges (O'Donnell & Lewis, 2021). In order to better manage taxpayer compliance, it is essential to use measures such as systematic risk assessment, automated checking, and debt management that have not yet been fully applied.

The National Policy to Support Enhancement of County's OSR (2019), which addresses many difficulties in the collection of decentralized taxes, has been prepared as a policy direction. Inadequate revenue laws and regulations, a proliferation of taxes and charges, a lack of human resource capacity, issues with enforcing tax payer compliance, a lack of automation and integration of tax-payers, as well as insufficient internal controls and audit systems are some of the concerns mentioned. In order to achieve efficiency in revenue administration, improve governance and transparency, and foster public engagement, the policy suggests upgrading the legislative frameworks for revenue collecting and aligning them to the policy objectives. The policy's goals are to improve County Government Own Source Revenue and raise county accountability. The County Governments (Revenue Raising Process) Bill 2018 is the piece of legislation that has

been written with the policy and is seeking cabinet and parliamentary approval. The criteria for evaluating county legislation policies are established by the present policy.

According to CRA (2017), a hurdle to OSR mobilization is the slow pace of creating or operationalizing efficient legal and policy frameworks to support revenue administration. In that regard, several counties lack essential legislation like the rating and valuation rules required for tax collection. By providing clear instructions and strategies for tax administration and management, the establishment of an effective policy and legal framework is anticipated to make OSR mobilization easier. This study assessed the regulatory compliance in revenue collection by county governments or their agents.

Recent literature on the relationship between regulatory compliance and the achievement of revenue targets provides valuable insights across various international contexts, revealing important conceptual, contextual, and methodological gaps that necessitate further research. These gaps are particularly relevant to the context of Kenyan county governments, where the enforcement of regulatory compliance is critical for maximizing own-source revenue (OSR).

In the United States, O'Donnell and Lewis (2021) conducted an in-depth study on the impact of regulatory compliance on local government revenue generation, focusing on municipalities across several states. The researchers utilized a mixed-methods approach, combining qualitative case studies with quantitative survey data from local government officials. Their findings indicated that rigorous regulatory compliance significantly improved revenue collection by reducing instances of tax evasion and ensuring strict adherence to financial regulations. However, a conceptual gap emerged as the study did not address the potential challenges posed by the complexity and variability of

regulations across different municipalities. Smaller municipalities, in particular, faced difficulties in navigating these regulations, which could inadvertently hinder their revenue generation efforts. This gap suggests a need for a more refined understanding of how regulation complexity affects different types of municipalities, potentially warranting differentiated compliance strategies to optimize revenue outcomes (O'Donnell & Lewis, 2021).

In Europe, Bücken and Jansen (2020) explored the influence of regulatory compliance on revenue targets within the European Union's digital services sector. This study employed a quantitative analysis of compliance data from EU member states, focusing on the relationship between regulatory adherence and revenue performance across the digital economy. The authors found that higher levels of regulatory compliance were positively correlated with improved revenue outcomes, particularly in countries with well-established digital infrastructure. However, the study identified a methodological gap in how the long-term effects of regulatory compliance were measured. The rapidly evolving nature of digital markets meant that regulations quickly became outdated, leading to inconsistencies in their effectiveness over time. This gap underscores the need for dynamic regulatory frameworks that can adapt to technological advancements and continuously support revenue generation (Bücken & Jansen, 2020).

Lee and Kim (2022) conducted a study in South Korea to assess the impact of regulatory compliance on municipal revenue targets, focusing on the differences between urban and rural municipalities. Their research employed regression analysis to evaluate the relationship between compliance and revenue collection across various administrative regions. The findings indicated that while regulatory compliance generally improved

revenue outcomes in urban municipalities, rural areas experienced significant challenges in enforcing these regulations. This discrepancy highlighted a contextual gap in how regulatory frameworks were applied and enforced in different geographic areas. Rural municipalities, with their limited administrative capacity, often struggled to maintain consistent compliance, leading to lower revenue generation. This gap points to the need for tailored regulatory strategies that consider the unique challenges faced by rural areas in enforcing compliance (Lee & Kim, 2022).

Ramirez and Gomez (2021) explored the relationship between regulatory compliance and revenue collection in Colombian municipalities, using a longitudinal study design. The researchers analyzed municipal financial data over several years to assess the impact of compliance on revenue outcomes. Their findings indicated that stricter enforcement of regulations led to more consistent revenue collection across municipalities. However, a significant contextual gap emerged in the study, particularly concerning the adaptability of regulations to local conditions. The authors noted that a one-size-fits-all approach to regulatory compliance was often ineffective in Colombia's diverse municipal environments. This gap suggests that regulatory frameworks need to be more adaptable to local contexts to optimize revenue generation (Ramirez & Gomez, 2021).

Brown and Taylor (2022) investigated the relationship between environmental regulatory compliance and revenue generation in Australian local governments. Their study, which employed a combination of interviews and document analysis, found that compliance with environmental regulations often resulted in increased costs for local governments but also created new revenue streams through fines and green initiatives. A methodological gap was identified, as the study did not provide a comprehensive analysis

of how these new revenue streams compared to traditional revenue sources. This gap highlights the need for future research to explore the financial sustainability of revenue strategies that rely on environmental regulatory compliance (Brown & Taylor, 2022).

In the Middle East, Al-Omari and Qasim (2020) examined the impact of regulatory compliance on revenue targets within the GCC countries, focusing on the real estate and construction sectors. Their mixed-method study combined qualitative interviews with quantitative analysis of compliance data from multiple GCC countries. The findings revealed that while regulatory compliance generally improved revenue outcomes, the lack of standardized regulations across the GCC created a significant contextual gap. This gap led to varying levels of revenue achievement depending on the country, suggesting the need for more harmonized regulatory frameworks within the region to ensure consistent revenue generation (Al-Omari & Qasim, 2020).

Smith and Green (2023) conducted a study in Canada to explore the relationship between regulatory compliance and municipal revenue collection, focusing on municipalities with varying levels of resources. Their case study approach highlighted that municipalities with robust compliance frameworks were more successful in achieving their revenue targets. However, the study pointed out a significant conceptual gap related to the enforcement of compliance, particularly in remote areas where resources for monitoring and enforcement were limited. This gap suggests the need for research into innovative enforcement strategies that can overcome resource constraints and ensure consistent compliance across all regions (Smith & Green, 2023).

Zhang and Liu (2021) analyzed the impact of regulatory compliance on revenue mobilization in China's manufacturing sector, using econometric modeling to assess the

relationship between compliance levels and revenue outcomes across various provinces. The study found that provinces with higher levels of regulatory compliance generally performed better in revenue generation. However, the authors identified a methodological gap in accounting for the informal sector, which often operated outside formal regulatory frameworks. This oversight potentially led to underreporting of revenue and suggests a need for more comprehensive approaches that include informal sector activities in compliance assessments (Zhang & Liu, 2021).

Ayodele and Mensah (2023) investigated the role of regulatory compliance in revenue collection in Nigeria and Ghana, focusing on the challenges posed by inconsistent enforcement and corruption. Their comparative analysis found that while regulatory compliance was critical for achieving revenue targets, the effectiveness of compliance efforts was significantly undermined by political and economic factors. The study highlighted a significant contextual gap in understanding how these challenges could be mitigated across different political and economic contexts, suggesting a need for tailored regulatory strategies that address the specific challenges of each country (Ayodele & Mensah, 2023).

An investigation was undertaken by Ewa *et al.*, (2018) on how regulatory compliance affects the capacity of Nigerian banks to evaluate fraudulent behavior by personnel way of life, and the identification of fraud. Thirteen Nigerian banks' data were surveyed using a Four Point Likert Scale employing percentages and ratios to analyze the results them. According to the study, the nature of regulatory compliance affects employees' attitudes toward fraud in such a way that strict compliance with regulatory compliance acts as a deterrent to employee fraud. In order to tackle the issues in the financial services

industry, a trustworthy and effective oversight structure is needed, according to the report. The report advised Nigerian banks to revise their plans for regulatory compliance and pay close attention to how their staff operate because it might be a symptom of fraud.

Attah-Botchwey (2018) investigated the role played by internal controls in Ghana where it was found that monitoring and evaluation played a substantial role in revenue performance. The study further recommended that internal controls have to be strengthened in the revenue function so as to be able to achieve revenue targets. The study was done in an African context and this study assessed if the findings still hold in the Kenyan context with regard to devolved units.

Ndegwa and Owino (2023) examined the effects of regulatory compliance on revenue targets among Kenyan counties, using a comparative case study approach. Their study analyzed compliance practices across five counties, revealing that counties with higher levels of compliance were more likely to meet or exceed their revenue targets. However, the authors identified a significant conceptual gap in understanding the role of political interference in regulatory enforcement. In many cases, political factors undermined compliance efforts, leading to inconsistent application of regulations and subsequent revenue shortfalls. This gap suggests a need for further research into the political dynamics that influence regulatory compliance and how these can be managed to ensure consistent revenue generation (Ndegwa & Owino, 2023).

The impact of administrative capacity on tax collection in Kenya's Nyeri County was established by Githua and Ngahu (2018). The optimal theory of taxes formed the basis of the investigation. The methodology used in the study was both descriptive and correlational. The target demographic for the study was workers in the Nyeri county

government's revenue division. From a total of 350 employees, 78 responses were picked at random to represent the sample. The results were presented using descriptive statistics, inferential statistics, and tables with important comments. The study's conclusions indicate that administrative capability has a big impact on revenue collection. According to the report, for the purpose of increasing the collection of revenues, the county administration should strengthen its ability to manage revenue. Based on this, the current study assessed the administrative, operational, and guiding principles used by revenue collection agents in an effort to help them meet their own source revenue collection goals.

The reviewed literature on the relationship between regulatory compliance and revenue target highlights several significant gaps that necessitate further research, particularly in the context of Kenyan county governments. Conceptual gaps were identified in studies from the United States, South Korea, and Canada, where challenges related to regulation complexity, enforcement variability, and political interference were not fully explored (O'Donnell & Lewis, 2021; Bücken & Jansen, 2020; Lee & Kim, 2022). Contextual gaps emerged in research conducted in Sub-Saharan Africa, Europe, and the Middle East, where differences in regulatory environments across regions, municipalities, and economic sectors revealed the need for more adaptable and localized regulatory frameworks (Ndegwa & Owino, 2023; Bücken & Jansen, 2020; Al-Omari & Qasim, 2020). Methodological gaps were evident in studies from Australia, Colombia, and China, where issues such as the dynamic nature of regulations, the underreporting of informal sector activities, and the lack of comparative analysis of new revenue streams versus traditional ones were highlighted (Brown & Taylor, 2022; Ramirez & Gomez,

2021; Zhang & Liu, 2021). These gaps underscore the need for more comprehensive and context-sensitive approaches to understanding how regulatory compliance influences revenue outcomes in diverse settings.

2.2.4 Revenue Management and OSR Target

Revenue management is conceptualized as the strategic process of optimizing revenue by analyzing and managing pricing, inventory, and demand to maximize profitability (Johnson & Müller, 2020). Measured by government budgeting base and revenue accounting, efficient revenue management acts as the loom that weaves all these threads together. This process bolsters decision-making, allowing counties to fine-tune their revenue strategies in real time. As a driving force to attain their OSR targets, county governments strategically harness agency revenue collection (Olatunji & Ayodele, 2017). This dynamic approach involves combining the various local taxes, licenses, fines, and fees, to create a viable financial composition that supports the aspirations of the community. Through meticulous record-keeping, streamlined administrative procedures, and innovative technology integration, counties amplify their capacity to generate revenue. Agency revenue collection becomes the backdrop upon which counties use to achieve their own source revenue targets (Gatta et al 2018). This endeavor empowers counties to chart a course toward self-sufficiency, enabling them to sculpt bespoke service delivery and robust infrastructure development that resonates with the pulse of their constituents' needs and dreams (Ogada & Shibairo, 2018).

The National Policy to support the enhancement of County's OSR (2019) permits the use of four structures to facilitate the administration of own source revenue. Firstly, the

policy proposes the use of internal revenue administration departments where a dedicated workforce within the department of revenue administration is in charge of revenue collection. Secondly, county governments can form autonomous county revenue authorities or corporations through legislation whereby the corporation can have autonomy on all matters related to own source revenue collection through a structured process. Thirdly, the Kenya Revenue Authority can be engaged as agents to undertake own source revenue collection whereby the county governments can benefit from cost savings and expertise of KRA among other benefits. Finally, private firms and other agents can be contracted where the county governments can benefit from expertise from the private sector firms and cost savings as the governments will not have to invest in revenue collection infrastructure.

In order to mobilize tax properly, all county governments are required to increase their administrative capabilities in the tax administrations (Shibia & Barako 2015). According to a 2021 USAID/Zambia Own source revenue Viability Assessment, 83.3% of district councils in the country keep a register of taxpayers and other payers. All companies and people who are required to pay property rates, personal levies, rentals on council properties, business licenses, business levies, for the operation of communication towers, and other fees were listed in the registers. Registers are often either kept on paper (26.7%) or on an Excel spreadsheet (33.3%). Additionally, 26.7% utilize Excel and either paper records or an accounting program. Basic taxpayer and non-taxpayer identifying information, like a person's or company's name and address, is kept on file by all district councils. However, only 13.3% and 46.7%, respectively, of district councils' registers keep track of Taxpayer Personal Identification Numbers and types of taxes and non-tax

obligations. Furthermore, the gender of each taxpayer or non-taxpayer is only kept on file by one Local Government Authority (LGA). Therefore, revenue collection agents must use methods that make it simple to analyze the money they have gathered and divide it into several categories.

The attention should be on raising property rates, particularly in urbanized areas, and on raising market fees, licenses, and permits in both urbanized and rural LGAs, according to UNICEF Malawi's report from 2022 on mobilizing local own source revenues. According to international standards for low- to middle-income nations, administrative adjustments might mainly cause the property rates to double from the present 0.075% of GDP to 0.15% of GDP. The report also stated that enhancing any of these streams would necessitate a combination of administrative and policy corrective measures. Any such improvements must be planned to maximize local tax collection while reducing potential efficiency distortions that could hinder economic growth or have unfair implications that disproportionately harm the poor. It is crucial to avoid making changes that result in higher administrative and compliance costs than the money the LGA brings in, effectively turning that local revenue stream into an annoyance tax. For long-term sustainability, all OSR improvements must prioritize increasing net income yield while reducing compliance costs, potential economic distortion costs, and administrative costs. The purpose of the current study was to examine the Kenyan setting in relation to the county governments' achievement of their own source revenue target.

Recent studies exploring the relationship between revenue management and the achievement of OSR targets across various international contexts have provided critical insights, though several gaps remain, making further research necessary. These studies,

ranging from the United States to Sub-Saharan Africa, highlight the complexities of revenue management and their impact on achieving revenue targets, but also point to significant conceptual, contextual, and methodological challenges that need to be addressed.

In the United States, Miller and Roberts (2021) examined the relationship between revenue management strategies and municipal revenue outcomes in large urban centers. Using a quantitative approach, they analyzed data from over 100 municipalities, focusing on how strategic budgeting, tax enforcement, and innovative revenue streams influence OSR achievement. The study found that municipalities with diversified revenue sources and strong enforcement mechanisms were more successful in meeting their revenue targets. However, a conceptual gap was identified in understanding the long-term sustainability of these strategies, particularly in economically volatile regions. This gap suggests a need for further research into how revenue management can be adapted to maintain revenue stability over time (Miller & Roberts, 2021).

In Europe, Johnson and Müller (2020) investigated the effects of revenue management on local government financial performance in Germany. Their study employed a mixed-methods approach, combining quantitative financial analysis with qualitative interviews from financial managers across various municipalities. The findings highlighted that effective revenue management, including rigorous financial planning and risk management, contributed significantly to achieving revenue targets. Nonetheless, a contextual gap was evident, as the study did not adequately account for the differences in revenue management between urban and rural municipalities, where financial capacities and challenges vary widely. This gap underscores the need for more context-specific

research to tailor revenue management strategies to different types of municipalities (Johnson & Müller, 2020).

In Asia, Park and Lee (2022) explored the relationship between revenue management and financial performance in South Korean local governments. Through an econometric analysis of municipal financial data, the study found that proactive revenue management, particularly in tax collection and public asset management, significantly enhanced revenue outcomes. However, the study revealed a methodological gap in its reliance on short-term financial data, which limited the ability to assess the long-term impacts of revenue management on OSR targets. This gap highlights the importance of longitudinal studies that can provide a more comprehensive understanding of how these practices influence financial performance over time (Park & Lee, 2022).

In Latin America, Diaz and Torres (2021) examined the impact of revenue management on municipal financial sustainability in Brazil. Their study utilized a combination of financial ratio analysis and case studies to assess the effectiveness of various revenue management strategies in maintaining fiscal balance. The findings indicated that municipalities with strong revenue management, particularly in expenditure control and debt management, were more likely to achieve their revenue targets. However, a conceptual gap was noted in the study's limited exploration of how external economic shocks, such as commodity price fluctuations, could affect the sustainability of these revenue management. This gap points to the need for further research into how municipalities can build resilience into their revenue management strategies to withstand economic shocks (Diaz & Torres, 2021).

In Australia, Smith and Brown (2022) investigated the role of revenue management in enhancing the financial performance of local governments. Through a comprehensive analysis of financial statements and interviews with key financial officers, the study found that municipalities that adopted innovative revenue management, such as value-based pricing and revenue forecasting, were more successful in achieving their revenue targets. However, the study revealed a methodological gap related to the lack of comparative analysis between municipalities with varying levels of resource availability, which could skew the understanding of revenue management effectiveness. This gap suggests the need for comparative studies that consider the impact of resource constraints on revenue management (Smith & Brown, 2022).

In the Middle East, Al-Mutairi and Al-Shammari (2020) explored the relationship between revenue management and revenue generation in Kuwaiti municipalities. Their study employed a mixed-methods approach, combining survey data with financial performance analysis. The findings indicated that municipalities with rigorous financial controls and revenue diversification strategies were more effective in meeting their revenue targets. However, a contextual gap was identified in the study's limited consideration of the cultural and regulatory differences across municipalities, which could influence the effectiveness of revenue management. This gap suggests the need for more nuanced research that takes into account the cultural and regulatory contexts in which these practices are implemented (Al-Mutairi & Al-Shammari, 2020).

In Canada, Clark and Mitchell (2023) conducted a study on the impact of revenue management on municipal financial health in Ontario. Using a combination of quantitative financial analysis and qualitative interviews, the study found that

municipalities that implemented comprehensive revenue management, including multi-year budgeting and performance-based budgeting, were more likely to achieve their revenue targets. However, a conceptual gap was noted in the study's limited focus on the role of citizen engagement in revenue management, which could be a critical factor in ensuring the success of these practices. This gap highlights the need for research that explores the role of public participation in enhancing the effectiveness of revenue management strategies (Clark & Mitchell, 2023).

In the context of Southeast Asia, Nguyen and Tran (2021) examined revenue management and its impact on revenue targets in Vietnamese municipalities. Through an empirical analysis of financial data from various municipalities, the study found that those with proactive revenue management, such as early tax collection initiatives and diversified revenue streams, were more successful in achieving their OSR targets. However, the study identified a methodological gap in its limited consideration of informal sector revenues, which are significant in many Southeast Asian economies. This gap suggests the need for more comprehensive research that includes the informal sector in revenue management analyses to better understand the full scope of revenue generation (Nguyen & Tran, 2021).

In a study in Sub-Saharan Africa on the success of SARAs, Jeppesen (2021) found out that by the year 2021, 23 countries in Africa had created the tax administrations with Kenya being among them. The law that created the Kenya Revenue Authority was passed in the year 1995 and in the same year the organization came into existence. According to the same study, the concern of insufficient revenue had a direct effect on the development agenda articulated by the developing countries. Another concern brought forth by the

researcher was also the viability and justifications in creation of SARAs so that independence to execute their mandates is free from political interference and the same organizations have financial and human resource autonomy.

In South Africa, Moyo and Gumede (2023) investigated the role of revenue management in achieving OSR targets in South African municipalities. Using a mixed-methods approach, the study focused on municipalities that had implemented new revenue management systems, such as electronic revenue collection platforms. The findings indicated that these systems significantly improved revenue outcomes, particularly in urban municipalities. However, a contextual gap was identified, as the study did not fully explore the challenges faced by rural municipalities in implementing these systems, where technological and infrastructural limitations were more pronounced. This gap suggests the need for research that addresses the unique challenges of rural municipalities in adopting modern revenue management (Moyo & Gumede, 2023).

In a survey on own-source revenue potential and tax gap study of Kenya's county governments, the World Bank (2019) found that existing complexity in the structure of rates, fees, and charges poses major challenges to counties aiming to enhance their OSR collections. In particular, existing structures create uncertainty and hinder the precise implementation of fiscal instruments, making it difficult for revenue collectors to charge the correct rate for each activity or product. Further, IBP Kenya (2021) uncovered evidence of heterogeneity in the definitions of fees, charges, and tax rates under different streams. In some cases, there is also substantial variation in the economic base for fees, charges, and tax rates that are categorized under the same OSR stream. According to Waddell et al. (2019), due to frequent organizational changes, individuals must develop

new knowledge, skills, and behaviors. They contend that firms will struggle to make changes if staff does not develop new competencies. Staff competency will always be improved through training in their particular job-related areas of responsibility.

According to Kiprotich, Njuguna and Kilika (2018), a formidable challenge in effective revenue management is the existence of a large informal economy in many counties. A significant portion of economic activities in the informal sector often goes unregulated and untaxed, undermining revenue collection. In a study in Nairobi City County, Naburi (2017) found out that the county government relied on reactive interest and social pressures when undertaking enforcement as a revenue management mechanism. The researcher further noted that ineffective administration and political interference as pointed by Jeppesen (2021) was the biggest contributor in low revenue collections in the county government.

On their part, Okotchi, Makokha and Namusonge (2020) note that some businesses and individuals engage in tax evasion practices, reducing the revenue base available to county governments. Tackling these challenges requires robust enforcement mechanisms, transparent taxation processes, and anti-corruption measures. It is thus deducible that overall, while devolution holds the potential for increased revenue generation and local development, addressing these revenue collection challenges is crucial to unlocking the full benefits of devolution for Kenya's counties.

Naburi (2017) looked at the enforcement and collection of property taxes. Low rates of compliance were found by the study in Nairobi. According to the research, the county government relies on reactive interest, social pressure from posting defaulters' names, punishments, and penalties. The study determined that ineffective administration and

political intervention were to blame for the low collection of property taxes, and it made recommendations for better public services, capacity building, and political support mobilization. This study sought to establish county revenue administration's impact on revenue mobilization from a holistic approach with focus on revenue management through budgeting alongside revenue accounting and the relationship with own source revenue target considering revenue automation as a moderating variable.

Kanyinga (2016) studied how tax management affected how well small businesses in a Nairobi industrial area neighborhood were complying with turnover tax(TOT). In order to boost TOT compliance among Kenya's small and medium-sized businesses, the study indicates that KRA has included information technology into its operations. SME's view of EFT, SIMBA, ITR and ITMS as the key tax management drivers of compliance and, subsequently, of enhanced collection of revenue. The goal of the current study was to regulate how the county governments' chosen revenue management techniques and automated revenue collection strategies affect their ability to meet their own source income targets. The current study covered all the OSR tax sources including property tax, rates, tolls, fines and fees.

Shibia and Barako (2015) looked into 47 counties' property tax performance factors. The findings show that urbanization, population density, and administrative capability are crucial elements in determining how well property taxes perform. The study indicates significant differences between counties and a drop in property taxes relative to the global average. It advises county governments to increase their administrative capabilities in order to mobilize tax property.

In examining the impact of international funding, impoverishment, surface area, and development on county own income collections, Khadondi (2015) investigated a distinct set of factors. The results show that, with the exception of land acreage, all other variables impacted statistics in a big way the amount of self-generated income. The study suggests that county governments prioritize poverty alleviation, enhance intergovernmental assistance, and concentrate on expanding metropolitan regions. The impact of the variables identified different from the reviewed study on the achievement of the income targets set by county governments, which collect money through agencies, was also taken into account in this study.

Karimi, Kimani and Kinyua (2017) looked at the implications of budgetary control on non-governmental organizations' performance. 7,127 non-governmental organizations made up the research target population. Using convenience judgmental sampling procedures, 30 non-governmental organizations were chosen, including both national and international groups with their main offices in Nairobi. Using questionnaires, a descriptive survey was performed to collect the data. A key element in determining success, according to the report, is budget evaluation. The organization can describe the path the review should go based on the assessment's objectives, finances, deadline, and required abilities to assess by developing an evaluation strategy. The effectiveness of budget alignment over a specific time period must be ensured by monitoring and managing the budgets after they have been implemented (Karimi et al., 2017). Effectiveness is determined by the budgeting process' monitoring and supervision.

According to Attah-Botchwey (2018), the Municipality's inefficient income mobilization was caused by poor supervision, and top executives just slightly failing to appropriately

take auditor outcomes and suggestions into account and respond accordingly. According to the study, insufficient revenue monitoring resulted in weak expenditure restrictions, raised the possibility of embezzlement, and encouraged unauthorized borrowing of money for personal use as well as other financial irregularities. In turn, this reduced municipal revenue. The study came to the conclusion that improving revenue mobilization requires the use of internal controls. In order to monitor internal controls and inform the government when revenue goals are met, this study was therefore necessary.

It can be deduced from the reviewed literature, that many studies have identified gaps in the understanding of the long-term sustainability of revenue management strategies. For instance, Miller and Roberts (2021) found that while municipalities with diversified revenue sources and strong enforcement mechanisms were more successful in meeting their revenue targets, the study did not adequately explore how these strategies might fare in economically volatile regions over time (Miller & Roberts, 2021). Similarly, Diaz and Torres (2021) noted a lack of exploration into how external economic shocks, such as commodity price fluctuations, could affect the sustainability of revenue management (Diaz & Torres, 2021). Additionally, Clark and Mitchell (2023) highlighted the need for research into the role of citizen engagement in enhancing revenue management strategies, which could be critical for their success (Clark & Mitchell, 2023).

Contextual differences often go unaddressed, affecting the applicability of revenue management. Johnson and Müller (2020) observed that their study did not sufficiently account for the different revenue management between urban and rural municipalities in Germany, where financial capacities and challenges vary significantly (Johnson &

Müller, 2020). Furthermore, Al-Mutairi and Al-Shammari (2020) identified a lack of consideration for cultural and regulatory differences across municipalities in the Middle East, which could influence the effectiveness of revenue management (Al-Mutairi & Al-Shammari, 2020).

Methodological limitations in existing studies also contribute to gaps in understanding. Park and Lee (2022) pointed out that reliance on short-term financial data restricted their ability to assess the long-term impacts of revenue management (Park & Lee, 2022). Nguyen and Tran (2021) noted the omission of informal sector revenues in their analysis, which is significant in many Southeast Asian economies (Nguyen & Tran, 2021). Smith and Brown (2022) also revealed a methodological gap due to the lack of comparative analysis between municipalities with varying resource levels, which could skew the understanding of revenue management effectiveness (Smith & Brown, 2022). Additionally, Moyo and Gumede (2023) found that the study did not fully explore the unique challenges faced by rural municipalities in adopting modern revenue management systems, where technological and infrastructural limitations are more pronounced (Moyo & Gumede, 2023).

2.2.5 Automation and OSR Target

Measured in the current study by automated taxpayer registration, automation refers to the use of technology and systems to perform tasks or processes with minimal human intervention (Smith & Johnson, 2021). According to Ivanov, Webster, Stoilova and Slobodskoy (2022), automation enhances the efficiency and accuracy of revenue collection processes. Automated systems facilitate seamless data capture and real-time transaction recording, reducing the likelihood of errors and ensuring that all revenue

streams are efficiently accounted for. This heightened precision in data management can significantly strengthen the link between agency revenue collection and the realization of revenue targets. The automated systems provide a solid foundation for transparent and dependable revenue management, potentially maximizing the positive impact of agency collection endeavors. The International Business Partnership (IBP) Kenya (2021) reports that there is a growing interest among a majority of counties in the country, in the adoption of automation technologies to enhance agency revenue collection processes within county governments (World Bank, 2019). Automation holds the promise of streamlining revenue collection, reducing leakages, improving transparency, and increasing the efficiency of revenue administration.

To address revenue collection challenges, counties adopt automated systems to streamline the entire lifecycle, from data capture to invoicing, eliminating manual bottlenecks that impede timely revenue retrieval (Azmi, Nawawi, Ab Latif & Ling, 2013). The need for automation is also exacerbated by the demand for transparency and accountability.

In terms of collecting taxes and other revenues, automation has proven crucial. The implementation of new instruments to increase company efficiency affects the way taxes and other forms of income are collected. The current financial systems are becoming obsolete due to the rapid evolution of information technology (IT) (Adams, 2013). Empirical literature suggests that the success of automation in revenue collection is contingent on several factors, including the capacity of revenue officers, the level of public awareness and acceptance, and the robustness of the underlying technology infrastructure (Otieno & Waweru, 2019). Thus, understanding the extent to which

automation impacts revenue collection and the achievement of own-source revenue targets is crucial for policy formulation and implementation in Kenyan counties. Necessitated by a range of challenges that impede the realization of OSR collection targets, counties have harnessed the power of automation as a transformative tool (Nkote & Luwugge, 2020). Cumbersome manual processes including data entry, recordkeeping, and reconciliation, often lead to errors, inefficiencies, and delayed revenue retrieval. These challenges not only hinder revenue collection but also strain county resources and compromise accuracy (Obara & Nangih, 2017).

Smith and Johnson (2021) conducted an in-depth study to evaluate the impact of revenue collection automation on municipal revenue outcomes in large urban centers across the USA. Their research adopted a mixed-methods approach, combining rigorous quantitative analysis of revenue performance data from 50 municipalities with qualitative interviews of financial managers responsible for implementing these systems. Their findings demonstrated that municipalities integrating automation into their revenue collection processes saw a marked improvement in efficiency and accuracy, which translated into better achievement of OSR targets. However, the study uncovered a conceptual gap concerning the long-term viability of automation systems, particularly in economically volatile environments. This indicates a need for further longitudinal studies to assess how automation impacts revenue stability over time and in varying economic conditions.

Miller and Roberts (2022) explored the effects of advanced technology-driven revenue collection systems on financial performance in mid-sized US municipalities. Utilizing a quantitative framework, they analyzed revenue performance data pre- and post-

implementation of automation systems to identify improvements in revenue collection and target. Their results confirmed that automation significantly enhanced efficiency and revenue outcomes. Nonetheless, the study exhibited a methodological gap as it did not include a comparative analysis with municipalities that had not adopted automation. This oversight suggests that future research should incorporate comparative elements to better isolate the impact of automation from other influencing factors.

In Europe, Johnson and Müller (2021) investigated how automated revenue collection systems affect local government financial performance in Germany. Their study used a mixed-methods approach, blending quantitative financial analysis with qualitative interviews from municipal finance officers. The research concluded that automation systems notably improved revenue collection efficiency and helped meet revenue targets. However, a contextual gap was identified due to the study's lack of differentiation between urban and rural municipalities, which may experience varying financial challenges and capacities. To address this, future research should explore how automation impacts different types of municipalities to create tailored strategies for diverse contexts.

Andersen, Johansen and Kristensen (2022) extended the investigation into Scandinavian local governments to evaluate the role of automation in revenue collection. Their study employed both quantitative analysis of municipal financial records and qualitative surveys of local government officials. Findings indicated that automation systems led to substantial improvements in revenue collection efficiency and target. Despite these positive outcomes, the researchers noted a conceptual gap related to the effects of automation on revenue volatility and stakeholder resistance. Future research should focus

on understanding these dynamics and how they influence the sustainability of automated systems over time and across various stakeholder groups.

In Asia, Park and Lee (2023) assessed the impact of revenue collection automation on financial performance in South Korean municipalities. The study utilized econometric analysis of municipal financial data alongside case studies of automation implementations. Results revealed that automation positively affected revenue collection efficiency and helped municipalities meet OSR targets. However, the study displayed a methodological gap due to its reliance on short-term financial data, limiting the assessment of long-term impacts. Longitudinal studies are essential to evaluate how automation influences financial performance over extended periods and varying economic conditions.

Nguyen and Tran (2022) examined the effectiveness of automated revenue collection systems in Vietnamese municipalities using a mixed-methods approach that included quantitative data from municipal records and qualitative interviews with local finance officials. Their findings showed that proactive automation significantly improved revenue collection efficiency and OSR target. Nevertheless, the study exposed a contextual gap by not addressing how differing levels of technological infrastructure across regions might affect automation's effectiveness. Future research should incorporate these regional variations to better understand how automation performs in diverse technological contexts.

Foster and Hope (2017) determined how Malaysia's embrace of technology has affected the country's ability to mobilize revenue. The study's findings demonstrated that, without incurring high administrative costs, the government could significantly increase its

financial capacity relative to population growth and citizen desires. In their investigation into the use of revenue technology in Malaysia collections, the researchers used the 120 questionnaires that were given to employees of the country's revenue department. They also emphasized the fact that adopting technology and automating operations was considered as essential for collecting road parking fees, which boost profits.

Moyo and Gumede (2023) explored the role of automation in achieving revenue targets in South African municipalities. Their mixed-methods study combined quantitative analysis of revenue data with qualitative surveys of municipal finance managers. They found that automation significantly improved revenue collection efficiency and the attainment of revenue targets. However, a methodological gap emerged from the study's limited consideration of technological disparities between urban and rural municipalities, which could affect the effectiveness of automation. Future research should address these disparities to understand how automation impacts different municipal settings more comprehensively.

Adama and Bakari (2022) investigated the effectiveness of automated revenue collection systems in Nigerian municipalities. Their mixed-methods approach included quantitative analysis of financial data and qualitative interviews with municipal finance officials. The findings indicated that automation improved revenue collection efficiency but identified a methodological gap due to the limited focus on informal sector revenues and rural municipalities. Future studies should include these sectors to provide a more complete understanding of automation's impact across different revenue streams and municipal contexts.

Ndonye (2018) looked at the factors affecting the income collection in Nigeria. It was discovered that consumers looking for services find it challenging to submit online applications because they do not have the appropriate technological knowledge. The research also identified a number of obstacles to revenue collection, including the lack of an automated system of revenue collecting, inadequate ICT infrastructure inside the ministry, and staff resistance to change. The study's reporting was somewhat biased because factor analysis, which may be used to separate certain characteristics, such as technological know-how, was not used.

Still in Nigeria, Abdullahi (2019) examined the impact of computer technology on the efficiency of organizations in the Nigerian banking sector. Multiple regression analysis was utilized in the study to evaluate the hypotheses that were being tested after a questionnaire was employed to collect data. The investigation's outcomes showed that network, software, and hardware components all significantly and favorably affect organizational efficiency in the Nigerian banking sector. In order to improve organization, the report advises banks to purchase or employ current, 21st-century software, hardware, and networks. There was need therefore for the county government to automate their own source revenue collections so as to be able to actualize revenue collection targets.

According to Olatunji and Ayodele (2017), automation expedites the revenue collection cycle, accelerating the conversion of collected funds into usable resources for county governments. Automated systems thus streamline administrative processes, reducing the time required for data entry, reconciliation, and fund transfer. The availability of funds for county initiatives is expedited, allowing for more immediate contributions to own

source revenue targets (Nkote & Luwugge, 2020). This timeliness ensures that the revenue collected is put to productive use swiftly, increasing the chances of reaching or surpassing the set revenue targets. Automation, in this regard, acts as a powerful catalyst in expediting the revenue realization process. The revenue system must be updated in order to promote convergence and information sharing, which will raise the system's performance and quality (Kira, 2016).

In an investigation of how e-filing and e-payments affect revenue collection in Rwanda Authority, Kamana (2016) assessed the effect of automated processes on the effectiveness of tax collection. 90 respondents were interviewed as part of the study's descriptive method research methodology, and both primary and secondary data were evaluated using the Pearson correlation model. The researcher found that despite employing e-filing and e-payment procedures, the Authority was unable to fulfill revenue goals because taxpayers were not aware of how to use the system. This current study assessed the moderating effect of revenue collection automation in the Kenyan context and use multiple correlation based on the variables that were under study.

In Kenya, Macharia et al. (2021) undertook a study in Kiambu county government to determine the variables influencing county governments' revenue growth in Kenya. 403 respondents were sampled for the study using questionnaires and a descriptive survey research design, including 19 county government policymakers and 384 registered enterprises. According to the survey, the use of technology, the enforcement of regulations, and a rise in taxation were the next most significant factors in revenue growth. The current study examined other counties included in the study's scope to see

whether the Kiambu-established parameters hold true while taking into account the moderating impact of automated revenue collection.

Nthenge (2020) undertook a study in the KRA on how automation activities affect revenue collection performance with capacity building as a moderator. The study that adopted an exploratory research design sampled 384 employees out of a target population of 4108 members of staff drawn from Domestic Taxes and Customs and Border Control departments. The investigation found out that process automation had a positive effect on revenue collection performance in the organization. In addition, the study argues that there is a decreasing effect of capability growth on the effectiveness of automated collecting revenues. The investigation proposes that all automation activities ought to be aligned to recent technological developments and the organization ought to customize their training policies to the systems being utilized in revenue collection. This study contextualized the variables under investigation to County Governments and capacity building were a construct under agency revenue collection while automation was the moderating variable against own source revenue target.

According to KRA (2021), revenue management systems used by national and county governments such as Integrated Financial Management Information System (IFMIS), the older LAIFOMS or custom solutions introduced by private developers are inadequate since the annual revenue targets set out in the County Governments are still not being achieved. The complexity of regulatory compliance compounds these issues, as counties must navigate intricate tax codes and adhere to changing legal requirements, which can result in non-compliance penalties and operational disruptions.

Sande (2023) looked on how computerized revenue collecting systems affected the connection between regional authorities' financial results and their budgeting procedures in Kenya. The study sampled 45 respondents made up of controllers of budgets in the county governments. The study found out that automated revenue collection systems had a moderating effect on the variables and recommended that the counties adopt the systems. This current study sought to determine the moderating effect of automation on the relationship between agency revenue collection and OSR target.

A study on revenue management in 24 of the county governments out of 47 was conducted by Mandala, Odhiambo and Wanga (2020) with a focus on automation, difficulties encountered, and legal viewpoints. The study also looked into if there was a model for automating revenue collecting that worked well. According to the report, county governments were struggling with insufficient income bases, a lack of internal audits, poorly qualified staff, the usage of partially automated systems, bad infrastructure, and ineffective change management. The study suggests complete revenue automation to boost productivity and enhance service delivery. A model of automated revenue collection was also offered. This current study used revenue collection automation as a moderating variable on own source revenue target.

Gitaru (2017) conducted a research on the Impact of Automation on revenue collection at the KRA. The study which adopted a descriptive research design analyzed secondary data from Customs department spanning a period of ten years from July 2007 to June 2016. The researcher found out that after automation, the number of transactions increased significantly and this was measured through the number of entries centralized Information Processing Center, where they were handled and moved through. In addition,

the revenue collected increased upon adoption of the automated Simba system. Therefore, automation can be seen to have a positive relationship with revenue collected through efficiency in the processing of declarations. The current study employed a cross sectional research design to investigate if the agencies collecting revenues in county governments could achieve revenue targets while considering automation as a moderating variable.

Madegwa, Makokha and Namusonge (2018) investigated the effect of revenue automation on the performance of county governments with a specific emphasis on Trans Nzoia County. The study sampled 62 respondents made up of managers, accountants and revenue collectors and collected data through the use of semi-structured self-administered questionnaire. The study found that automation had a positive effect on performance in the county government. This was achieved through the automation process providing saved time and costs and provision of a value-added service. Therefore, it can be concluded that revenue automation has a positive impact on organizational performance. The current study expanded the context to more county governments while using automation as a moderating variable to check the relationship between agency revenue collection and own source revenue target.

The impact of IFMIS in relation to revenue administration was investigated by Ochuodho and Ngaba (2020) in Kisumu County. The 49 senior revenue administration officers who made up the engaged target population were chosen from each of the seven sub-counties. The study suggested that the other IFMIS modules be fully implemented and that a technical staff be on standby to quickly resolve any technical issues that may arise during revenue collection. There should be plans in place to fully exploit and expand revenue

sources. In order to lower the danger of revenue collection leakage, internal control should be improved. For improved financial success, employee motivation should also be given preference. By using revenue collection automation as a moderating variable in the accomplishment of own source revenue targets, the current study tried to ascertain if counties had complied with its suggestions.

The impact of ICT on tax collection in the Kenyan county governments of Migori and Homa Bay is documented by Owino, Senaji, Eng and Ntara (2017). The target audience was 864 people, including 16 revenue officers and 848 revenue officers who worked for the Homa Bay and Migori county governments. Both secondary and primary information were employed in the investigation. The investigation discovered a notable link between revenue collection and Information Systems. The study would be advantageous for fully integrating IS in revenue collection. Bett and Yudah (2017) established that the variables had a significant contribution on revenue collection by the KRA. This current research paid specific emphasis to the County governments and checked if the factors would have the same relationship with own source revenue collection.

Maisiba and Atambo (2016) studied the effectiveness of revenue collection in the Uasin Gishu County. The KRA Office in Uasin Gishu County served as the case study for the research. Data was gathered using questionnaires with 102 respondents as its target audience, which included KRA employees and tax payers. Using SPSS, field data were examined using both descriptive and inferential statistics. It was determined that e-tax in Kenya still has built-in difficulties despite the country's effective training in e-filing technologies.

Recent public tax trends, according to Owino et al. (2017), stress the necessity of implementing an online system for services tax assessment and collection. This can be linked to a number of things, such as the potential advantages of state-building through taxation and the lack of international help. Therefore, the county government must automate its own source revenue collecting so that it can readily track whether its goals are being met in time for corrective action to be taken.

Kirimi (2015) studied the influence of automation on revenue performance in Meru County through a descriptive research design that targeted 156 staff members with a final sample of 111 respondents. The study emphasized on online process, receipting, payment and response in the revenue collection process. Although the study found out that automation affects revenue performance to a great extent, other variables to do with institutional arrangements had an effect on revenue realization. This study sought to assess if the automation of revenue collection had a moderating effect on agency revenue collection variables on the achievement of revenue targets in Meru County among other selected counties now that the county had undertaken agency revenue collection.

Owidhi (2018) investigated the influence of automation in Nakuru County which is also being considered in the current study. The study employed a survey research design with a target population of 132 employees working in revenue and finance and accounts department of the County Government. The study which sampled 69 respondents found out that the improved efficiency in revenue collection in the county government was attributed to revenue automation process. The study examined the direct effect of revenue collection automation and not the moderating effect of automation on agency revenue collection towards the achievement of revenue targets set in county governments.

In Uasin Gishu County, Kenya, Omwono, Yokobed and Owambi (2016) used an ex-post facto research approach with 105 branch managers, unit level managers, supervisors, and sales agents as the target group. A 45-person sample was chosen using a straightforward random sampling process. The major methods for gathering primary and secondary data were structured questionnaires, interview guides, and observation. According to the study, ICT use and insurance company profitability in Kenya are positively correlated. The outcomes further demonstrate that: ICT adoption is not a replacement for efficient insurance industry regulation. The county government must therefore fully use technology in their own source revenue collection.

Maisiba and Atambo (2016) found that the specific barrier modulation mechanisms used in the current investigation were not defined by the study. Descriptive research was employed by Okiro (2015) who found that the 18 government agencies in Nairobi that were in operation between 2013 and 2015 were the study's target population. The study fails to indicate if the revenue collected was as per the target set by own source revenue which this study sought to establish.

In their report, Development Initiatives (2018) found that failure to fully roll out IFMIS to counties to facilitate revenue collection has made the situation worse. Most counties struggle with a lack of necessary skills and knowledge to carry out crucial OSR mobilization responsibilities such revenue forecasting, collection, management, and assessment of revenue collecting costs. Therefore, it was necessary to assess the moderating impression of revenue collection automation on the achievement of own source revenue targets as well as on the agency revenue collection.

Ling and Nawawi (2015) studied advanced ICT integration abilities and financial education applications in Malaysia. In order for taxpayers to effectively use an online tax system, one has to have fundamental skills on how to operate it. According to the study, a person must possess three specific characteristics in order to interact with a computer-based tax system effectively. The administration of taxes must be improved and made more efficient by using cutting-edge technology like ICT to automate processes and structures for collecting money (Mugambi and Wanjohi 2018). Henry et al., (2016) conducted research on how innovation and collaboration affect the organizational performance of Thailand's automotive parts sector. 250 automotive parts business owners in Thailand were studied using a quantitative research methodology. According to the study, the following aspects ought to be considered in developing effective and efficient automated payment systems; taste and preference; the practicality, dependability, and security of the chosen payment method; and the standard of the offered services, including elements like the speed at which transactions are processed.

Every nation, especially emerging ones, has emerged as a key player in the use of modern technology for raising revenue since it offers a wide range of services that promote revenue growth. Weru et al., (2017) investigated economic growth pattern and taxes tax system automation by looking at the cases of Brazil and Japan. The findings showed that a nation does not need to wait until it has achieved a high level of growth before making a significant change in its tax structure. A new approach promotes economic expansion and enhance domestic market.

Based on the foregoing, revenue collection automation is poised to have a substantial interactive role on the relationship between agency revenue collection variables of

competency of revenue collectors, stakeholder engagement, regulatory compliance alongside revenue management and the achievement of own source revenue targets within county governments in the Kenya. As Sande, Okiro, Wanjare and Omoro (2023) found in their study, automated revenue collection system significantly moderated the link among financial success and procedures for budgeting of the 45 counties sampled. Similarly, Okumu, Olweny and Muturi (2022) found that automation significantly moderates the linkage between firm ownership, board composition and performance of initial public offering stocks on the Nairobi Securities Exchange. Further, Chege (2018) found that automation has a significant moderating role on the linkage between performance of financial intermediaries and supply chain processes in Kenya.

Whereas these studies focused on conceptually different variables from agency revenue collection and achievement of own source revenue targets, which are the focus in the present study, the significant moderating role of automation point to pertinent attributes of the concept of automation, that supports the working thesis that revenue collection automation could have a moderating role on the association between agency revenue collection and achievement of own source revenue targets.

Further, most of the reviewed literatures had investigated the direct effect of automation on revenue performance in different contexts. Ling and Nawawi (2015), Foster and Hope (2017) in Malaysia, Henry et al., (2016) in Thailand, Weru et al., (2017) in Brazil and Japan, Tsokota (2019) in Zimbabwe, Kamana (2016) in Rwanda and Ndonye (2018) in Nigeria did a research on automation and firm performance. The current study sought to investigate the relationship between agency revenue collection and OSR target while considering automation as a moderating variable. In addition, Nthenge, (2020) and Gitaru

(2017) undertook research on automation in the Kenya Revenue Authority which is contextually different from the county governments.

Methodologically, Macharia, Oluoch, and Ncabira (2021) study in Kiambu County sampled 403 respondents made up of 19 policy makers and 384 registered enterprises to ascertain the variables influencing revenue growth while the current study will sample 280 members of staff in various management cadres who will be well informed on internal factors affecting OSR target. Conceptually, Abdullahi (2019) found out that information and communication technology affect organizational efficiency in the Nigerian banking sector which is different from automated taxpayer registration which support the moderating effect that was considered in this study.

2.2.6 Own Source Revenue Target

Own source revenue target refers to the specific revenue goals or objectives set by a government, organization, or entity that are generated from its own resources or revenue streams, rather than from external sources such as grants or transfers (Miller & Roberts, 2021). In the current study, it is measured by forecasted versus actual collections and revenue arrears collections. The county government determines the amount of money to raise as own source revenue through the budgeting process. The 2010 Constitution clearly defines the sources of income as including property tax, entertainment tax, and any other fees for services provided by counties that have been authorized by act of Parliament or legislation. Then, counties must approve the methods for raising money that will help them collect the money they need to reach the revenue goals they set during the budgeting process. The proportion of money from own sources collected to quantities

projected varies and is frequently less than 100%. This implies that if the county does not meet the established targets, financial goals would be hampered (Adenya, 2017).

Miller and Roberts (2021) conceptualized OSR target as the extent to which municipalities meet their predefined revenue targets from internal sources, such as taxes, fees, and fines, excluding intergovernmental transfers. Their operationalization involved a quantitative approach, where OSR achievement was measured through financial performance metrics such as the percentage of revenue targets met annually. They utilized municipal financial data to assess how various revenue management strategies, including diversification and enforcement, impacted these metrics. This approach provides a clear, quantifiable measure of success in achieving OSR targets but does not fully capture the long-term sustainability of these strategies (Miller & Roberts, 2021).

Johnson and Müller (2020) approached OSR Target from a broader perspective, defining it as the capacity of local governments to achieve financial stability and meet revenue goals through effective management practices. They operationalized this by combining quantitative financial data with qualitative assessments from interviews with financial managers. The study measured OSR achievement based on indicators like revenue growth and budget adherence. This comprehensive approach highlights the importance of both financial metrics and managerial practices in achieving revenue targets, yet it may not account for contextual variations between different types of municipalities (Johnson & Müller, 2020).

Nguyen and Tran (2021) conceptualized OSR Target as the ability of municipalities to maximize internal revenue collections relative to their financial goals. Their operationalization involved a mixed-methods approach, using both quantitative data on

revenue collections and qualitative interviews to understand the impact of revenue management systems, particularly automation, on achieving targets. They measured success through metrics such as revenue collection efficiency and target fulfillment rates. While this approach effectively captures the role of technological systems in enhancing revenue performance, it may overlook other factors influencing OSR achievement, such as informal sector contributions (Nguyen & Tran, 2021).

Well-designed budgets can significantly contribute to inspiring managers by setting ambitious but attainable goals. The manager should take part in creating his or her own budget and the targets must be specific and attainable. Senior management can evaluate the success of their teams using the budget. But it's important to keep in mind that following the budget is only one factor in evaluating a manager's performance (Karimi et al., 2017).

Different tax forms have an impact on the amount of tax collected, while tax structure has an impact on tax collection through flexibility, neutrality, equity, and simplicity. The quantity of tax collected was significantly impacted by the diversification of revenue. The study suggested using cutting-edge technology and qualified personnel in tax administration. In a same vein, Gituma (2017) examined the factors that influence efficient tax collection in Embu County. In order to collect money as efficiently as possible in Embu County, the study evaluated how staff qualifications, corruption, technology, government policies, and legislation affected this. Gituma looked into two other factors of corruption and government regulations and found out that these have a direct relationship with amount of revenue collected.

Adenya and Muturi (2017) looked at the factors affecting tax collection in Kiambu County. Technology, internal controls, human resources, and law enforcement were the aspects looked at. According to the report, the county had competent employees who followed internal procedures, but it had weak technology and ineffective tax law enforcement. From April to July 2017, a descriptive and survey study approach was used to determine the current ability of Kiambu County to generate the desired amount of money. The findings suggest that county governments should carefully evaluate the factors involved in order to maximize income collection.

Kimutai (2017) went a step further by looking at how the variables affected the socioeconomic growth of a larger region made up of multiple counties. Interview guides and questionnaires were used as data gathering tools. The study found that collaboration amongst stakeholders, stakeholder training, and technology all positively and significantly affected revenue mobilization tactics and, in turn, the socioeconomic advancements of the counties.

According to a study by Elmirzaev and Kurbankulova (2016) titled "Tax Arrears, Tax Compliance, and Tax Debt Management in Uzbekistan: Existing Issues and Possible Solutions," Uzbekistan continues to pursue a tax reduction strategy despite the threat of a widening fiscal gap with a view to boost economic growth and increase the number of taxpayers through preferential taxation, exemptions, and tax holidays. As a result, the amount of tax debt and arrears decreased, and tax compliance procedures began to function relatively effectively. The Uzbek banking sector underwent a series of extensive structural reforms and modernization following the beginning of the transition plan to

market economy (Komolov, 2015). This investigation examined the county government context in collecting tax arrears as a measure of own source revenue target.

2.3 Theoretical Framework

This section identifies existing theories relevant to revenue collection through agencies and revenue collection automation on own source revenue achievement. It attempts to reveal the link between revenue collection agencies and OSR achievement.

2.3.1 Agency Theory

Originated by Jensen and Meckling (1976), Agency theory addresses the principle-agent relationship, in which a single individual (the principal) entrusts another individual (the agent) with making decisions on his or her behalf, often resulting in potential conflicts of interest. As part of its main tenets, agency theory explores the complexities and conflicts that arise when principals delegate authority to agents, who might not always align their interests with those of the principals (Eisenhardt, 1989). The theory emphasizes the information asymmetry between principals and agents, the potential for agents to engage in opportunistic behavior (such as shirking or pursuing personal gain), and the challenges of designing contracts and incentives that mitigate conflicts and align interests. It also highlights the role of monitoring, risk-sharing mechanisms, and the costs associated with agency relationships (Adams, 2018).

Agency theory has faced criticism for its focus on self-interested behavior, which might not accurately capture all motivations and nuances in real-world relationships (Eisenhardt, 2016). It has been noted that agency theory often simplifies human behavior by assuming individuals are solely driven by economic motives, overlooking other social

and psychological factors. Additionally, the theory's emphasis on contracts and incentives can sometimes overlook the importance of relational aspects in certain contexts (Adams, 2018).

In the context of the study on agency revenue collection, automation, and OSR target among selected county governments in Kenya, agency theory offers a relevant lens to understand the dynamic between county governments (principals) and their revenue collection agents (e.g., tax collectors). The theory's insights into information asymmetry, opportunistic behavior, and contract design align with the complexities of revenue collection processes and the need to ensure agents act in the best interest of principals. By examining how automation influences the principal-agent relationship and how it affects agents' behavior in revenue collection, the study can shed light on how technology-driven solutions might mitigate conflicts and enhance revenue realization.

The study objectives align closely with the tenets of agency theory with regard to competencies of revenue collectors, agency theory points to the importance of aligning agents' skills and incentives with the goals of the principals. In this context, the competencies of revenue collectors are crucial in ensuring that they can effectively execute their duties in a manner that aligns with the revenue targets set by the county governments. A lack of competencies could exacerbate information asymmetry and lead to suboptimal performance, thereby affecting OSR target.

With regard to stakeholder engagement, while agency theory primarily focuses on the principal-agent relationship, stakeholder engagement introduces an additional layer of complexity, as it involves multiple parties whose interests may not always align.

Effective stakeholder engagement can reduce the potential for conflict and build trust, thereby enhancing the overall revenue collection process. This aligns with the theory's emphasis on the importance of incentives and alignment of interests. Regulatory compliance is also a critical factor in ensuring that agents operate within the legal and procedural frameworks established by the principal. Agency theory suggests that clearly defined contracts and oversight mechanisms can mitigate the risks of non-compliance, thus enhancing the likelihood of achieving revenue targets.

With regard to revenue management, effective revenue management requires that agents not only collect revenues efficiently but also manage these resources in a way that supports the county government's broader objectives. Agency theory's focus on contract design and monitoring mechanisms is relevant here, as it highlights the need for clear guidelines and accountability structures to ensure that revenue management aligns with the principals' goals. With regard to the moderating effect of automation, automation plays a critical role in reducing information asymmetry and enhancing monitoring capabilities, which are central concerns in agency theory. In automating revenue collection processes, county governments can reduce the potential for opportunistic behavior, ensure more accurate reporting, and align agents' actions with the overall objectives of the principal. The study aims to establish whether automation acts as an effective moderating factor that enhances the relationship between agency efforts and OSR target.

While agency theory has been widely applied in various contexts, there is a gap in its application to the specific challenges faced by county governments in Kenya, particularly in the area of revenue collection. Previous studies have largely focused on the national

level, with limited attention to the unique dynamics at the county level, where devolved governments are directly responsible for generating their own revenue. This study fills that gap by applying agency theory to the county context, exploring how the competencies of agents, stakeholder engagement, regulatory compliance, and revenue management interact with automation to influence OSR target.

Past studies related to revenue target and agency revenue collection have provided valuable insights into the effectiveness of different revenue collection strategies and their impact on achieving financial goals. For instance, research by Tanjung, Nasution and Harahap (2020) investigated the role of revenue collection agencies in enhancing local government revenue performance in Indonesia, highlighting that well-designed agency frameworks and performance-based incentives significantly improve revenue collection efficiency and target. Similarly, the study by Khan, Ahmad and Khan (2019) explored the impact of revenue collection automation on revenue target in Pakistan, finding that automation enhanced transparency and reduced discrepancies, thereby improving the likelihood of meeting revenue targets.

Further, Gikonyo, Karanja and Mwangi (2018) examined the role of agency revenue collection models in Kenya and noted that counties with robust agency systems and clear performance metrics were more successful in achieving their revenue targets compared to those with less structured approaches. Another study by Saha and Sundaram (2021) assessed the effectiveness of revenue collection agencies in Indian municipalities, revealing that agencies with stronger oversight and accountability mechanisms were more successful in aligning their collection practices with revenue targets. These studies collectively underscore the importance of effective agency design, performance

management, and technological integration in improving revenue collection outcomes and achieving financial targets.

2.3.2 The New Public Management Theory

The New Public Management (NPM) theory emerged in the 1980s as a response to challenges facing traditional public administration models. While it does not have a single originator, Manning (2001) has been widely credited for contributed to its development alongside scholars and practitioners in various countries, including the United Kingdom, New Zealand, and Australia. NPM theory advocates for introducing management principles and practices from the private sector into the public sector to enhance efficiency, effectiveness, and accountability (Crook, 2003). Key tenets include decentralization, performance measurement, market-based approaches, customer orientation, and a focus on results. NPM emphasizes results-based management, outsourcing of services, competition among service providers, and a shift from bureaucracy to managerialism (Robert, 2014).

NPM theory has faced criticism for its potential to overlook equity and social considerations in public service provision, as well as its tendency to reduce complex societal issues to quantifiable metrics. Critics argue that market-based approaches might not always be suitable for public services that prioritize social welfare and equality.

Additionally, NPM's focus on efficiency should also consider the institutions in discussion and cultural factors across the different countries (Belhassan & Azegagh, 2020). The NPM hypothesis is pertinent to comprehending the results of the present investigation how modern administrative principles influence public revenue

management. The theory's emphasis on efficiency, customer orientation, and performance measurement resonates with the study's exploration of how automation enhances revenue collection processes. By examining how automation streamlines revenue collection, enhances accountability, and improves performance measurement, the study can illustrate the extent to which NPM principles are being applied in revenue management within county governments.

Furthermore, NPM's focus on results aligns with the study's goal of assessing how automation impacts as a moderating variable in the achievement of OSR targets, shedding light on whether technology-driven reforms contribute to improved revenue outcomes. The theory's broader implications for public sector management offer a framework to analyze how counties balance efficiency and equity while pursuing revenue collection targets through automation.

The study's specific objectives align with the principles of NPM. With regard to competencies of revenue collectors, NPM advocates for performance measurement and the professionalization of public service roles. In examining the relationship between the competencies of revenue collectors and the achievement of OSR targets, the study taps into NPM's focus on enhancing efficiency and effectiveness within the public sector. Competent revenue collectors are better equipped to implement efficient processes, thereby contributing to improved revenue outcomes.

With regard to stakeholder engagement, while NPM places significant emphasis on customer orientation and stakeholder involvement, it also highlights the importance of decentralization and market-based approaches. The study's focus on stakeholder

engagement reflects NPM's tenet of involving citizens and other stakeholders in the public management process, ensuring that revenue collection practices are aligned with the needs and expectations of the public. Effective stakeholder engagement can lead to better compliance and cooperation, thus improving OSR performance.

On regulatory compliance, NPM supports a results-based approach to public management, where regulatory compliance is not just about adhering to rules but achieving measurable outcomes. By assessing the relationship between regulatory compliance and OSR target, the study aligns with NPM's principle of accountability, where public entities are held responsible for meeting their objectives, and performance is closely monitored and measured.

On revenue management, NPM's focus on managerialism and market-based approaches underscores the importance of efficient revenue management. The study's exploration of how revenue management influences OSR targets reflects NPM's call for decentralization and the application of private sector management practices in the public sector. Efficient revenue management, driven by principles of NPM, can lead to better resource allocation, streamlined processes, and ultimately, higher revenue collection.

With regard to the moderating effect of automation, one of the central tenets of NPM is the adoption of modern management tools and technologies to enhance public sector performance. Automation, as a technology-driven reform, embodies NPM's emphasis on improving efficiency, accountability, and performance measurement in public service delivery. The study's examination of how automation moderates the relationship between agency revenue collection and OSR targets is directly aligned with NPM's focus on

results-based management and the use of technology to streamline operations and achieve better outcomes.

While NPM has been widely adopted in various public sector reforms globally, there is a gap in understanding how its principles are being applied at the county government level in Kenya, particularly in the context of revenue collection and automation. The study addresses this gap by applying NPM theory to the specific challenges of county revenue management, providing insights into how NPM-driven reforms—such as automation—impact the achievement of OSR targets.

Past studies on revenue target and agency revenue collection offer valuable insights into the impact of management reforms and automation. Wang and Wang (2020) examined the influence of NPM reforms on revenue collection efficiency in Chinese local governments, finding that performance measurement and decentralization improved revenue targets. Barker and Boxall (2019) analyzed the role of revenue collection agencies in Australian municipalities, highlighting that agency reforms significantly impacted revenue target. Zhang and Xu (2021) explored how performance measurement systems under NPM principles enhanced revenue outcomes in Singapore. Additionally, Ndiaye and Moustier (2022) investigated the role of automation in Senegalese municipalities, demonstrating that automation significantly improved revenue collection efficiency and target. These studies collectively illustrate how NPM-driven reforms and technological advancements impact revenue collection and target attainment across various contexts.

2.3.3 Resource Based View Theory

Penrose (1959) is credited as originating the resource-based view theory (RBV), arguing that an organization's resources—rather than its industry structure—are extremely significant. RBV theory was further developed by economists and management scholars Wernerfelt (1984) and Barney (1991) and asserts that a firm's sustainable competitive advantage lies in its unique and valuable assets and expertise which are challenging to imitate or substitute. These substances may consist of assets that are both physical and intangible including processes, intellectual property, organizational culture, and human capital. RBV emphasizes that a firm's ability to exploit these resources strategically can lead to better performance and market positioning. The theory highlights the importance of aligning resources with the firm's strategy and creating a competitive advantage through resource heterogeneity and immobility.

While RBV theory offers insights into how firms can leverage their unique resources for competitive advantage, it has been criticized for its vague definition of what constitutes a "valuable" resource and the challenge of determining causality between resources and performance. Critics argue that the theory may overlook external factors and competitive dynamics that impact firm success (Wade & Hulland, 2004). In addition, the theory has been criticized as it discusses more on competition than cooperation. It is proposed that the RBV can be more comprehensive if it considers proponents of stakeholder theory by incorporating normativity, checking on sustainability, having a different perspective of people and considering the positive effect of cooperation among all the stakeholders (Freeman, Dmytriiev & Phillips, 2021).

The RBV theory is relevant to the current study in understanding how counties can leverage their resources, including technological capabilities, for competitive advantage in revenue collection. The theory's focus on unique and valuable resources resonates with the study's exploration of how automation can moderate on other variables to enable county governments with distinctive capabilities to achieve set revenue targets. By investigating how counties strategically deploy technology resources, organizational structures, and expertise in revenue collection, the study can shed light on how these resources contribute to achieving OSR targets.

Additionally, RBV's emphasis on alignment between resources and strategy is pertinent to understanding how automation strategies need to be congruent with counties' broader revenue generation objectives. Furthermore, RBV's consideration of resource immobility aligns with the study's exploration of how lack of automation in other counties may be a barrier to revenue collection success witnessed selected counties.

The study's specific objectives align with the principles of RBV. On competencies of revenue collectors, RBV theory underscores the importance of human capital as a critical resource that can drive an organization's competitive advantage. In the context of county governments, the competencies of revenue collectors represent a valuable resource that, when effectively developed and leveraged, can lead to better revenue collection outcomes. The study's exploration of the relationship between revenue collectors' competencies and OSR targets aligns with RBV by highlighting how human capital contributes to the county's financial performance.

On stakeholder engagement, RBV theory can be extended to include relational resources, such as the relationships and networks that an organization maintains with its stakeholders. Effective stakeholder engagement can be seen as a strategic resource that enhances trust, cooperation, and compliance, thereby improving revenue collection. The study's focus on stakeholder engagement resonates with RBV by considering how county governments can utilize their relationships with various stakeholders as a resource to achieve better OSR performance.

With regard to regulatory compliance, in line with RBV, regulatory compliance can be considered an intangible resource that strengthens a county's legitimacy and operational stability. By ensuring adherence to legal frameworks, county governments can avoid penalties and enhance their reputation, which can, in turn, facilitate more efficient revenue collection. The study's examination of the relationship between regulatory compliance and OSR target reflects RBV's emphasis on leveraging organizational resources—such as compliance systems and expertise—to achieve strategic objectives.

On revenue management, RBV theory also considers processes and organizational capabilities as key resources. Efficient revenue management, which include effective budgeting, forecasting, and financial reporting, can be viewed as organizational capabilities that provide a competitive advantage. The study's exploration of how revenue management influences OSR targets is directly aligned with RBV by focusing on how county governments can optimize these internal processes to enhance their financial performance.

On the moderating effect of automation, RBV theory asserts that technological resources, such as automation systems, can provide a sustainable competitive advantage by improving efficiency, reducing costs, and enhancing accuracy in operations. The study's examination of how automation moderates the relationship between agency revenue collection and OSR targets is consistent with RBV, as it investigates how counties can leverage automation—a valuable and potentially rare resource—to enhance their revenue collection capabilities and achieve better financial outcomes.

The RBV theory provides a framework for understanding how county governments can leverage their internal resources, such as human capital, technological systems, and organizational processes, to achieve their OSR targets. However, there is a gap in the existing literature regarding how these resources interact with each other, particularly in the context of revenue collection and automation in the public sector.

Past studies related to revenue target and agency revenue collection within the context of RBV theory highlight the significance of leveraging unique organizational resources for improving financial performance. For example, Wang and Huang (2019) examined how the strategic deployment of human capital and technological resources within local governments can enhance revenue collection efficiency and achievement of targets in China. Similarly, Kipp and Zeng (2020) explored how organizations in the public sector utilize their intangible assets, such as expertise and process capabilities, to achieve revenue goals, emphasizing the role of organizational competencies in performance outcomes. Additionally, Kumar and Gupta (2021) investigated the impact of automated systems on revenue collection, illustrating how technological resources can offer a competitive advantage by improving accuracy and efficiency. These studies align with

RBV theory by focusing on how internal resources and capabilities contribute to achieving revenue targets, providing a comprehensive understanding of how strategic resource management impacts revenue collection.

2.4 Conceptual Framework

A conceptual framework is a research instrument that demonstrates both the relationships between the many study variables and the overall direction of a study. According to Adom, Dickson and Hussein (2018), it also aids the researcher in increasing their understanding of the situation under study. It is an outline of the research variables in a diagrammatical format that is based on the prior literature in the area of interest and tries to analyze the variables in a systematic manner (Dag & Andreas, 2022).

The conceptual framework outlines the theoretical relationship between the independent and dependent variables (Eriksson & Kovalainen, 2015). As per Figure 2.1, total revenue collected and revenue arrears realized served as indicators of this study's outcome variable of own source revenue target. The independent variable of agency revenue collection indicators was; competency of revenue collectors, stakeholder engagement, regulatory compliance and revenue management. The moderating variable was revenue collection automation.

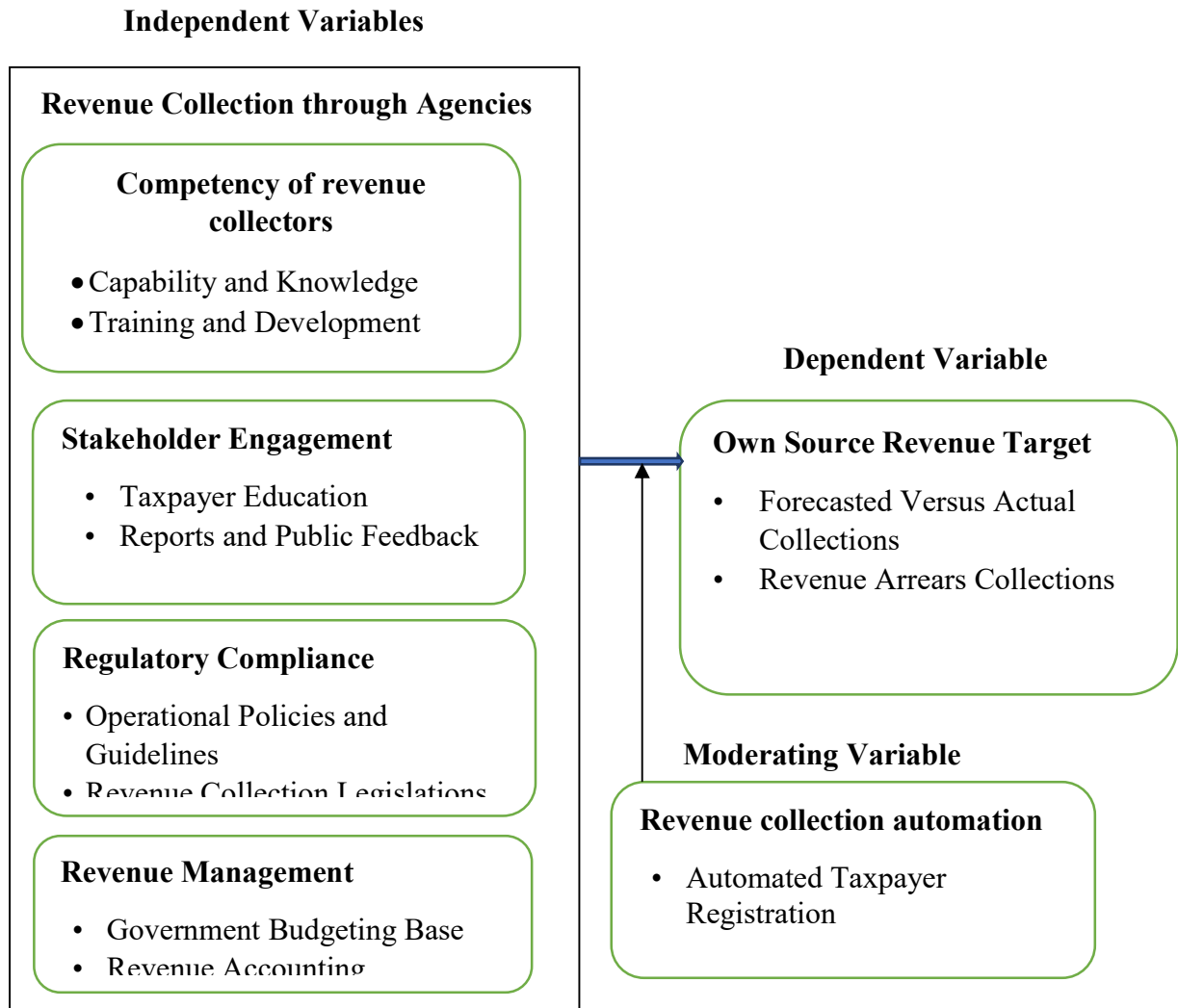


Figure 2.1 Conceptual Framework

Source: Adopted and modified from the Tax Administration Diagnostic Assessment Tool (TADAT)

The measures of the variables in the conceptual framework were derived from the Tax Administration Diagnostic Assessment Tool (TADAT), which is designed to objectively assess the strengths and weaknesses in key components of a country's tax administration system. TADAT covers nine key performance outcome areas (POAs) that address critical tax administration functions, processes, and institutions. For the independent variables,

competency of revenue collectors is evaluated through capability and knowledge as well as training and development; stakeholder engagement is assessed through taxpayer education and public feedback; regulatory compliance is measured by operational policies and revenue collection legislation; and revenue management is analyzed via government budgeting base and revenue accounting. The moderating variable, revenue collection automation, includes automated taxpayer registration, while the dependent variable, own source revenue targets, is measured by forecasted versus actual collections and revenue arrears collections.

2.5 Identification of Knowledge Gap

The reviewed literature reveals several gaps relevant to the study of revenue collection competencies. While past research has explored various human resource factors such as training, motivation, and staff competency, none specifically addressed the competency of revenue collectors with a focus on capability, knowledge, and training and development. Additionally, much of the research was conducted in foreign contexts, such as the UK, Malaysia, and Canada, which differ significantly from the county government settings in Kenya. Studies on staff competency in chartered universities are not directly comparable to public sector revenue collection. Furthermore, previous studies often relied on small sample sizes and cross-sectional methods, which limited their ability to explore the dynamic relationships between variables. The current study addresses these gaps by examining a larger sample of 280 respondents and considering the specific aspects of competency and their impact on achieving own source revenue targets.

Recent literature on stakeholder engagement and revenue targets reveals several key gaps that warrant further exploration. While studies have demonstrated that stakeholder engagement can positively impact revenue collection, they often lack a standardized conceptual framework for applying these practices across different governance structures. Additionally, the relationship between stakeholder engagement and revenue outcomes is not always systematically quantified, and there is a need for more robust methodologies to measure this impact. Existing research frequently overlooks the inclusivity of marginalized communities and small businesses, which can affect long-term revenue sustainability. Furthermore, the role of political dynamics and the potential of digital platforms to enhance engagement processes are underexplored. These gaps suggest a need for a more comprehensive understanding of how stakeholder engagement strategies can be uniformly applied and measured, particularly in diverse and evolving contexts such as Kenyan county governments.

Recent literature on regulatory compliance and revenue targets reveals several important gaps that need to be addressed. Studies often lack a nuanced understanding of how regulatory complexity and variability impact different types of municipalities, suggesting a need for differentiated compliance strategies. Methodological gaps include inadequate measurement of the long-term effects of compliance and insufficient consideration of the informal sector's role. Contextual gaps include challenges faced by rural areas and the need for adaptable regulatory frameworks that cater to local conditions. Additionally, political interference and corruption frequently undermine compliance efforts, highlighting the need for research on managing political dynamics. There is also a need

for more comprehensive approaches that account for the financial sustainability of compliance-related revenue strategies.

Recent studies on revenue management and the achievement of OSR targets reveal several critical gaps. Many studies lack a comprehensive understanding of how long-term sustainability of revenue strategies can be maintained amidst economic volatility and external shocks. There is also a need for more context-specific research that differentiates between urban and rural municipalities, particularly in terms of financial capacities and challenges. Methodological gaps include inadequate consideration of informal sector revenues, short-term data limitations, and insufficient comparative analysis between municipalities with varying resource levels. Additionally, issues such as the impact of political interference, cultural and regulatory differences, and the effectiveness of modern revenue management systems in rural or technologically challenged areas remain underexplored. Addressing these gaps could enhance the effectiveness and sustainability of revenue management strategies in diverse contexts.

Empirical literature on revenue collection automation reveals several gaps. There is a lack of longitudinal studies to assess the long-term impacts of automation on revenue stability and sustainability, particularly in economically volatile environments. Methodological gaps include insufficient comparative analysis between municipalities with and without automation and limited focus on informal sector revenues and rural municipalities. Contextual gaps are evident in the failure to differentiate between urban and rural municipalities and varying levels of technological infrastructure, which can affect automation's effectiveness. Additionally, there is a need for research addressing stakeholder resistance and the impact of automation on revenue volatility.

Table 2.1 Summary of Literature Gaps

Author	Objective	Methodology	Findings	Gaps	How the gaps were addressed in the current study
Potoski and Prakash (2022)	Examined how local governments incorporate stakeholder engagement in revenue generation strategies in the USA	Mixed-method approach, combining case studies and surveys	Effective stakeholder engagement improved revenue collection	The study broadly focused on revenue collection, overlooking the more refined OSR	Focused on stakeholder engagement and OSR targets among selected counties in Kenya
Roxburgh et al. (2020)	Investigated stakeholder engagement's influence on policy development and revenue targets within the EU's MSFD	Participatory action research	Engagement strategies aligned sectoral interests with environmental and economic goals	The study focused on national governments in the EU, which may operate differently from county governments in Kenya	Focused on selected county governments in Kenya
Zhang and Li (2021)	The impact of stakeholder engagement on revenue mobilization across Chinese provinces	Econometric analysis	Provinces with higher levels of stakeholder engagement in fiscal policy formulation met their revenue targets more successfully	The potential of automation to enhance these engagements was not fully explored	Explored the moderating role of automation
Ayodele and	How stakeholder	Desktop review	Engagement was	The study focused	Focused on selected

Kwame (2023)		engagement influences revenue collection across five West African countries			critical for on national counties in Kenya and OSR targets	improving tax compliance and broadening the tax base	for on national counties in Kenya and OSR targets	critical for on national counties in Kenya and OSR targets
Onyango et al. (2017)	Effect of stakeholder participation on the success of road upgrades in Kiambu County	of	Descriptive survey approach	Stakeholder participation had a substantial impact on the success of road upgrades in Kiambu County	The study narrowly focused on one county, which may not be indicative of other counties			Focused on six selected counties in Kenya that improves on generalizability of findings
O'Donnell and Lewis (2021)	Impact of regulatory compliance on local government revenue generation, focusing on municipalities across several states	of	Mixed-methods approach, combining qualitative case studies with quantitative survey data from local government officials	Rigorous regulatory compliance significantly improved revenue collection by reducing instances of tax evasion and ensuring strict adherence to financial regulations	The study broadly focused on revenue collection, overlooking the more nuanced OSR			Focused on regulatory compliance and OSR among selected counties in Kenya
Ayodele and Mensah (2023)	Investigated the role of regulatory		Descriptive survey design	While regulatory compliance was	The study focused on national			Focused on selected devolved

	compliance in revenue collection in Nigeria and Ghana		critical for achieving revenue targets, the effectiveness of compliance efforts was significantly undermined by political and economic factors	contexts, overlooking subnational contexts	governments in Kenya
Githua and Ngahu (2018)	Impact of administrative capacity on tax collection in Kenya's Nyeri County	Both descriptive and correlational designs	Administrative capability has a big impact on revenue collection	The study narrowly focused on one county, which may not be indicative of other counties	Focused on selected counties in Kenya
Miller and Roberts (2021)	Relationship between revenue management strategies and municipal revenue outcomes in large urban centers	Quantitative approach	Municipalities with diversified revenue sources and strong enforcement mechanisms were more successful in meeting their revenue targets.	Focused on large urban centers, which may not be reflective of Kenyan counties	Focused on six selected counties in Kenya with distinct characteristics but undertaking revenue collection
Moyo and Gumede (2023)	The role of revenue management in achieving revenue targets in South African municipalities	Mixed-methods approach	Electronic revenue collection platforms significantly improved revenue outcomes, particularly in urban municipalities.	Focused on South African municipalities, which may not be reflective of Kenyan counties	Focused on selected counties in Kenya
Smith and Johnson	The impact of	Mixed-methods	Municipalities	Focused on USA	Focused on selected

(2021)	revenue collection approach automation on municipal revenue outcomes in large urban centers across the USA.		integrating automation into their revenue collection processes saw a marked improvement in efficiency and accuracy	municipalities which is contextually different from Kenya	devolved governments in Kenya
Adama and Bakari (2022)	Effectiveness of automated revenue collection systems in Nigerian municipalities.	Mixed-methods approach	Automation improved revenue collection efficiency	Broadly focused on the effectiveness of automated revenue collection systems, without linking it to OSR	Focused on automation and OSR among selected counties in Kenya and used cross sectional research design methodology
Kamana (2016)	The effect of automated processes on the effectiveness of tax collection	Descriptive design	Despite employing e-filing and e-payment procedures, the Authority was unable to fulfill revenue goals because taxpayers were not aware of how to use the system	Broadly focused on the effectiveness of tax collection without specific reference to OSR and used descriptive design that is a challenge for generalization of findings	Focused on automation and OSR among selected counties in Kenya and used inferential statistics to draw conclusions

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The approach used in the research is described in this section. It gives a general summary of the investigation's region, the population to be investigated, the samples, and method of sampling that were employed. The chapter covers gathering information methods, tools for gathering data, analysis of information, and ethical issues.

3.2 Research Design

The study is grounded in Positivism philosophy, which emphasizes empirical evidence and objective measurement, aligning well with the theoretical formation underpinning the research. This philosophy is particularly suited for examining theories such as Agency Theory, NPM Theory, and RBV Theory. Agency Theory focuses on the relationship between principals and agents, highlighting how agency revenue collection practices can impact the achievement of OSR targets (Jensen & Meckling, 1976). This theoretical framework supports the Positivist approach by using measurable variables to assess the alignment of incentives and performance outcomes. The NPM Theory, which emphasizes efficiency and effectiveness in public sector management, aligns with the Positivist focus on quantifiable outcomes and the role of automation in improving performance (Hood, 1991). Applying NPM principles, the study examines how modern management practices influence revenue collection and target. In addition, the RBV Theory, which posits that organizational resources and capabilities are crucial for achieving competitive advantage, complements the Positivist approach by focusing on the measurable impact of automation

and resource utilization on revenue performance (Barney, 1991). Together, these theories provide a robust theoretical foundation for analyzing how revenue collection practices and automation interact, grounded in the Positivist philosophy's emphasis on empirical and objective analysis.

In this study, a cross-sectional research design was adopted to explore the influence of agency revenue collection on the achievement of OSR targets, with a focus on how automation moderates this relationship. The cross-sectional design was chosen because it allows for the examination of relationships between variables at a single point in time, providing a snapshot of how agency revenue collection practices impact OSR target and how automation plays a role in this dynamic (Creswell, 2014). This design is particularly useful for assessing the current state of revenue collection systems and their effectiveness in achieving revenue targets, facilitating a comprehensive analysis of the factors influencing performance.

To gather and analyze data, the study employed a mixed-methods approach, combining both primary and secondary sources of data. These methods enabled the collection of first hand information on revenue collection practices, automation levels, and their direct impact on revenue target. Secondary data were sourced from existing records, reports, and relevant literature to supplement and validate the primary data, offering additional context and historical insights (Johnson & Onwuegbuzie, 2004). The combination of primary and secondary data enhances the reliability and depth of the study's findings by integrating empirical evidence with contextual background.

This mixed-methods approach supports a robust analysis by triangulating diverse data sources, which helps in validating results and providing a more nuanced understanding of the research problem (Tashakkori & Teddlie, 2010). Leveraging both primary and secondary data, the study captured the complexities of how automation moderates the relationship between revenue collection and OSR target. This methodological strategy aligns with best practices in research, ensuring that the findings are comprehensive and grounded in both empirical data and contextual understanding (Creswell & Clark, 2018).

3.3 Location of the Study

The location of this investigation includes selected county governments in Kenya of Nairobi, Meru, Kakamega, Nakuru, Narok and Kericho. The study focused on six selected Kenyan devolved units of government out of the 47 county governments as detailed in the Constitution of Kenya, 2010. The investigation's focus on select county governments was strategically chosen to provide a representative and comprehensive analysis of the factors influencing revenue collection and OSR target within diverse contexts of Kenya's devolved units. These counties were selected based on several key criteria that align with the study's objectives.

Firstly, the selected counties represent a range of geographic and demographic profiles, encompassing urban (Nairobi), semi-arid (Narok), and agricultural regions (Kericho, Meru, Kakamega, and Nakuru). This diversity allows for a thorough examination of how varying regional characteristics impact revenue collection and target, providing insights into both urban and rural contexts (Cheeseman, Griffin & Kinuthia, 2016). Nairobi, as the capital city, presents a unique case due to its economic and administrative significance,

while counties like Meru and Kakamega offer perspectives from more agriculturally focused regions.

Secondly, these counties have been chosen due to their varying levels of automation and resource allocation in revenue collection, which will facilitate a fresh understanding of how automation moderates the relationship between revenue collection practices and target (Wang’ombe, 2018). In including both high and low-performing counties in terms of revenue collection and automation, the study analyzed the differential impacts and identify best practices or challenges unique to each context. Lastly, the study excludes other counties to maintain a manageable scope and depth of analysis. Including all 47 counties would require an extensive number of resources and time, which might dilute the focus and depth of the investigation. In concentrating on these six counties, the study ensures a detailed and focused examination, providing actionable insights while still capturing a representative cross-section of Kenya’s diverse county governments (Kanyinga, 2014).

3.4 Target Population

In research, distinguishing between the target population and the accessible population is crucial for defining the scope and feasibility of a study. Target population, as per Saunders et al., (2019), is the entire collection of people or things with the same qualities that the researcher is looking at. For this study, the target population comprises all 47 county governments in Kenya, as outlined in the Constitution of Kenya, 2010. This broader population represents the full spectrum of devolved units that the research seeks to understand in terms of revenue collection and OSR target (Mwaura, 2015).

The accessible population, on the other hand, consists of those individuals or entities within the target population that are actually reachable and available for the study. In this case, the accessible population comprises 738 employees from the chosen county governments, as detailed in Table 3.1. These are distributed into various job cadres, including County Executive Committees (CECs) members for Finance, Chief Executive Officers (CEOs) of County revenue corporations, County Chief Officers (CCOs) responsible for revenue administration, Directors of revenue in the county governments and corporations and revenue officers in the county governments. The performance contracts that mandate that all staff to participate in revenue collection led to the selection of employees based on their contributions to the service delivery described in those contracts. Including CEC members for Finance and CCOs in the study, despite their contractual tenure and potentially shorter time in the system, is justified by their critical roles in shaping and implementing revenue policies and strategies. These positions are pivotal in overseeing revenue collection processes, setting financial priorities, and ensuring compliance with regulations (Public Finance Management Act, 2012). Their insights into the strategic and operational aspects of revenue management are invaluable for understanding the broader impact of revenue collection practices and automation. Additionally, their involvement provides a comprehensive perspective on how policy decisions and administrative oversight influence revenue outcomes, thus contributing to a more nuanced analysis of the factors affecting own source revenue targets and management practices in county governments (Otieno & Waweru, 2019).

Additionally, the PFM Act of 2012 mandates that, following their appointment as revenue receivers by the CEC members for Finance and Economic Planning, the

receivers' appointments may be followed by the appointment of revenue collectors from the public service, which comprises the workforce in the county government or with the revenue agent. This implies that all the county government staff had a probable chance of being appointed as collectors and thus contribute towards attainment of own source revenue target. Members of staff in county governments were drawn from the immediate community and since they were in social groups, this made them ideal.

Table 3.1 Target Population Per Category

Category	Nairobi	Meru	Kakamega	Kericho	Narok	Nakuru	Total
CECs	1	1	1	1	1	1	6
CEOs	1	1	1	1	1	1	6
CCOs	1	1	1	1	1	1	6
Directors	1	1	1	1	1	1	6
Revenue officers	205	95	88	100	76	144	708
Total	210	100	93	105	81	149	738

Source: Selected County Governments (2023)

3.5 Sample Size and Sampling Procedure

The target population was used to create the framing sample for this study, which included a list of staff members in the chosen county governments according to employment data kept by the county governments. The study used a combination of census and the stratified random sampling technique. The sample consisted of senior management which is the CECs for Finance, Chief Executive Officers (CEOs) of County

revenue corporations, CCOs in charge of revenue administration, Directors of revenue in the county governments and corporations. The strata was made up of revenue officers who are the collectors in the county governments starting from the Sub-County revenue officers, revenue officers and revenue officers . Stratification made sure that the data accurately represented county governments, which collect their revenue through agents and have equally undertaken automation of the process. Owing to the relatively low population sizes, comprising one CEC for Finance, one CEO of revenue collection agencies, one CCO in charge of revenue administration and one Director of revenue each from the respective county revenue collection units, a census was conducted whereby all 24 of them were included in the sample. A sample was however drawn from the 708 revenue officers who were then randomly sampled. The Yamane (1967) formula, which was adopted by Israel (2013), was employed to arrive at the desired sample size.

$$n = \frac{N}{1 + N(e)^2} \dots\dots\dots$$

(3.1)

Where:

“n = the desired sample size; N = the target population; e= the error term (0.05)”

Using the above formulae, the sample size to be sampled is calculated as below.

Therefore:

$$n = \frac{708}{1+708(0.05)^2}$$

$$= 256 + 24 = 280$$

The Neyman (1970) assignment algorithm was used in the investigation to stratify the people who participated. Assuming an established population size, the technique's goal is to increase survey accuracy. The ideal number of samples for strata h under Neyman assignment would correspond to:

$$n_h = \left(\frac{N_h}{N} \right) n \dots\dots\dots (3.2)$$

Where, n_h - The sample size for stratum h, n - Total sample size, N_h -The population size for stratum h, N - The total population. Consequently, the number of samples is going to be dispersed as indicated in Table 3.2.

Table 3.2 Sample Size Per Category

Category	Nairobi	Meru	Kakamega	Kericho	Narok	Nakuru	Total
CECs	1	1	1	1	1	1	6
CEOs	1	1	1	1	1	1	6
CCOs	1	1	1	1	1	1	6
Directors	1	1	1	1	1	1	6
Revenue officers	74	34	32	36	28	52	256
Total	78	38	36	40	32	56	280

Source: Researcher (2023)

The researcher split the population into a number of mutually exclusive sub-populations or strata using a stratified sample design. This design helped to boost the empirical effectiveness of the data set by giving sufficient information for sub-population analysis

and enabling the investigator to employ a variety of research techniques and procedures in various strata. To choose the participants from the stratum, a straightforward random sampling procedure was used in the investigation.

3.6 Data Collection Instruments

Data collection tools are the devices that are utilized to gather the investigation's data (Oso and Onen, 2008). Creswell (2013) characterized gathering of information as the method of acquiring knowledge from predetermined participants in studies. The individual conducting the study formulated inquiries for research to collect primary information. Structured questionnaires were used by the study's data collection team to gather information on revenue collection, and data extraction software was used to gather secondary data.

The study utilized both primary and secondary sources of data to ensure a comprehensive analysis of the research questions. Primary data were collected directly from respondents using structured questionnaires, targeting employees involved in revenue collection across selected county governments in Kenya. This approach allowed for firsthand insights into the competency of revenue collectors and stakeholder engagement, providing empirical evidence to support the study's findings (Creswell, 2014).

Secondary data were obtained from existing records, reports, and publications related to county revenue collection, including official documents from county governments, academic journals, and government reports. These sources offered contextual background and supported the triangulation of data, ensuring that the findings were well-grounded and reflective of both current practices and established knowledge in Public Finance

Management (Mugenda & Mugenda, 2003). The combination of primary and secondary data enriched the study, enabling a robust analysis and interpretation of the factors influencing the achievement of OSR targets.

By removing interviewer bias, questionnaires guarantee that respondents have enough information to provide thoughtful responses (Kothari, 2004). Since it is a cost-effective strategy, the study will use closed-ended questionnaires for data collection. The study utilized the designed and tested questions from earlier studies for the variables of interest. However, the language and presentational style were changed to meet the situation and the study's objectives. The instrument was made simpler so that the target responders may easily understand the questions and provide accurate information. Since each item has a possible alternative answer, closed-ended questions are simpler to administer and evaluate than open-ended ones.

To triangulate the results of the dependent variable, secondary data was gathered using a data extraction tool. Secondary data was gathered from various, discrete sources that are printed, typewritten, or electronically accessible and are gathered from the Independent Offices and Commissions in Government and various knowledge sources. Publications that were linked to the study variables were considered secondary data, along with financial statements and published literature.

3.7 Data Collection Procedures

An introductory letter from the University of Kabianga's Board of Graduate Studies and a research license from the National Commission for Science, Technology, and Innovation

(NACOSTI) were used by the researcher to request approval to go ahead with the investigation.

Within the selected county administrations, the investigator carried out an initial survey ahead of beginning the actual gathering of information procedure to determine the study region, become familiar with it, and set up appointments with the respondents. The questionnaires were given to the chosen county government employee on the day of the appointment by the researcher and the research assistant, who also collected them once they have been completed. To improve clarification and the pursuit of more information that may become necessary, the drop and pick technique was employed in data collecting. The self-administered questionnaire was accompanied by a covering letter that described the study's objectives, assured respondents of strict anonymity, and stated that solely academic purposes was served by their responses.

3.7.1 Validity of the research instrument

Saunders, Lewis and Thornhill (2019) posits that validity is dependent on the measures that were utilized in the study and the accuracy of the research tool. Validity in quantitative research denotes the level at which a measuring tool achieves its intended purpose (Thatcher, 2010). It is defined in qualitative research as the process through which a researcher verifies the validity of the research findings (Creswell, 2013).

The degree to which the tool appropriately covered the subject being studied is known as the instrument's content validity. The test items in the study were checked by professionals, including research supervisors, financial colleagues, and other specialists in public finance management. The variables in the study were also the subject of a

thorough literature analysis on the pertinent literature as a technique to check on content validity.

Reviewing the questions to make sure they represent the intended objectives established face validity. The researcher also made sure that the instructions for completing the questionnaire were the same for each participant and that the questions were written in plain language that the respondents could understand (Taherdoost, 2016). The experts who were engaged to verify the content validity of the items also evaluated the study's measurement items critically.

The extent to which one measure reveals links with another measure can be evaluated using criteria regarding validity. Both regression analysis and discriminant analysis were used to measure this. The degree to which measures link to one another and highlight relationships that have previously been seen in the past was revealed by correlation analysis, which was used to assess for concurrent and postdictive validity.

The variables were checked using factor analysis to assess the construct validity of the instrument. Construct validity, according to Mugenda (2003), is the degree to which a test measures an intended variable. As recommended by Koh and Nam (2005), Principal Component Analysis (PCA) were combined with varimax rotation. Items with cross-loading more than 0.40 were eliminated, while items loaded beyond the minimum 0.40 were regarded acceptable for study and therefore taken into consideration. The following statistical outputs were generated from factor analysis: Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of sphericity, total variance explained and rotated component matrix.

3.8.1.1 Competency of Revenue Collectors

Bartlett's and KMO tests were aimed at measuring sphericity and sampling adequacy respectively. The purpose of this was to test how well items under Competency of Revenue Collectors were correlated, and therefore determined the suitability of the questionnaire to proceed with factor analysis.

Table 3.3 KMO and Bartlett's Test for Competency of Revenue Collectors

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.681
Bartlett's Test of Sphericity	Approx. Chi-Square	76.315
	Df	21
	Sig.	0.000

Source: Research Data (2023)

As presented in Table 3.3, the study established KMO test statistics of 0.681. According to Kaiser (1974), KMO values greater than 0.5 indicates adequate sampling. As such, the value of 0.681 indicated that there was sampling adequacy. Bartlett's Test of Sphericity produced a p value of 0.000 indicating that the items in the dataset were significantly correlated and that the variable, is thus fit for factor analysis.

The PCA method was used to flag the main dimensions in the dataset, based on the variance explained. This method was considered desirable since it permitted the dataset reduction to a more controllable size at the same time maintaining a lot of the original information. To this end, the study used the Kaiser's criterion to seek variables equal to

or greater than 1 eigen value. Table 3.4 presents the results for the total variance explained.

Table 3.4 Total Variance Explained for Competency of Revenue Collectors

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
	1	2.877	41.099	41.099	2.877	41.099	41.099	2.185	31.219
2	1.358	19.397	60.497	1.358	19.397	60.497	2.049	29.277	60.497
3	.864	12.350	72.847						
4	.736	10.514	83.360						
5	.495	7.068	90.429						
6	.399	5.694	96.122						
7	.271	3.878	100.000						

Extraction Method: Principal Component Analysis.

Source: Research Data (2023)

A total of 7 components were established as Table 3.4 shows. Out of the 7 components, 60.497 percent of the variations were explained by 2 components. A total of 41.099 percent of the variations were accounted for by component 1, while 19.397 percent of the variations were explained by component 2. As such, from the combined data set, a maximum of 2 components were extracted from the variable based on the total variance.

As further presented in Table 3.5, two components were also extracted from the combined data from the rotated component matrix, using a factor loading cutoff point of 0.4 (Mertens, 2020). As indicated, four items loaded under component 1, while three

items loaded under component 2. This confirms that the two components, that is capability and knowledge and training and development are adequate indicators of competency of revenue collectors.

Table 3.5 Component Matrix for Competency of Revenue Collectors

	Component	
	1	2
Achievement of county revenue targets would be possible if all revenue collection employees are trained on methods of revenue collection.	.629	
Having many years of revenue collection experience will help one achieve revenue collection target	.766	
Attainment of revenue collection targets result from revenue collection officer effective public relations techniques.	.654	
Achievement of revenue collection targets would result through training and development in revenue collection techniques.		.821
Training of staff on technology used in revenue collection would lead to achievement of revenue targets		.758
Having a code of conduct would lead to achievement of revenue targets		.711
Sensitization of staff on the rules and regulations governing revenue collections would lead to achievement of revenue targets	.837	

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Source: Research Data (2023)

The dimensionality of the dataset, as determined by the PCA and the results presented, is two. The KMO value of 0.681 indicates adequate sampling, and Bartlett's Test of Sphericity with a p-value of 0.000 shows that the items are significantly correlated, making the dataset suitable for factor analysis. According to Table 3.4, the PCA revealed a total of 7 components. However, the Kaiser's criterion (eigenvalue ≥ 1) was used to determine the number of meaningful components. The first two components had eigenvalues greater than 1, with component 1 explaining 41.099% of the variance and component 2 explaining 19.397% of the variance. Together, these two components accounted for 60.497% of the total variance, suggesting they capture the majority of the information in the dataset. As indicated in Table 3.5, after rotation, the items loaded primarily onto two components. Component 1 includes items related to "capability and knowledge," while Component 2 includes items related to "training and development." This further supports that the dataset's dimensionality is effectively captured by two components.

3.8.1.2 Stakeholder Engagement

Bartlett's and KMO tests were aimed at measuring sphericity and sampling adequacy respectively. The purpose of this was to test how well items under stakeholder engagement are correlated, and therefore determine the suitability of the questionnaire to proceed with factor analysis.

Table 3.6 KMO and Bartlett's Test for Stakeholder Engagement

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.868
Bartlett's Test of Sphericity	Approx. Chi-Square	1307.557
	df	78
	Sig.	.000

Source: Research Data (2023)

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity are key tests used to assess the suitability of data for factor analysis. In this case, the KMO value is 0.868, which is well above the commonly accepted threshold of 0.6, indicating that the data is appropriate for factor analysis and that the sampling is adequate. Bartlett's Test of Sphericity yielded a significant Chi-Square value (1307.557) with a significance level of 0.000, confirming that the correlation matrix is not an identity matrix. This suggests that the variables are sufficiently correlated to justify the use of factor analysis.

Table 3.7 Total Variance Explained for Stakeholder Engagement

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	5.348	41.139	41.139	5.348	41.139	41.139	4.463
2	1.508	11.600	52.739	1.508	11.600	52.739	4.199
3	.944	7.263	60.002				
4	.806	6.202	66.204				
5	.794	6.110	72.314				
6	.676	5.199	77.513				
7	.538	4.137	81.650				
8	.524	4.033	85.683				
9	.497	3.825	89.508				
10	.430	3.311	92.819				
11	.358	2.754	95.573				
12	.326	2.508	98.081				
13	.249	1.919	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Source: Research Data (2023)

The table summarizing the component extraction reveals that two components were identified as significant, based on their eigenvalues. The first component has an eigenvalue of 5.348, explaining 41.139% of the variance, while the second component has an eigenvalue of 1.508, accounting for an additional 11.600% of the variance. Together, these two components explain 52.739% of the total variance. The remaining components have eigenvalues less than 1 and do not contribute significantly to explaining the variance, hence were not retained in the analysis. The rotation sums of squared loadings further reveal that the two extracted components provide a clearer, more interpretable structure, with the first component explaining a slightly larger portion of the variance after rotation.

Table 3.8 Component Matrix for Stakeholder Engagement

	Component	
	1	2
Taxpayer sensitization on their need to pay county taxes would lead to achievement of revenue targets		.442
Consultation with Commission on Revenue Allocation when setting taxes and levies would lead to achievement of revenue targets	.604	
Consultation with the Office of the Controller of Budget for review of targets would lead to the achievement of revenue targets		.527
Consultation with The National Treasury on target setting and forecasting would lead to achievement of revenue targets		.438
Communication with taxpayers through simple and easy to access channels of communication like SMS, public notices and barazas would lead to achievement of revenue targets	.612	
Sensitization to taxpayers on county levies upon amendment of the Finance Act would lead to achievement of revenue targets	.634	
Preparation of statutory reports to CRA, OCOB and National Treasury within timelines would lead to achievement of revenue targets	.702	
Submission of statutory reports to CRA, OCOB and National Treasury within timelines would lead to achievement of revenue targets	.728	
Scheduled public participations and consultative meetings before amendment of Finance Act would lead to achievement of revenue targets	.715	
Incorporating taxpayers inputs when amending the Finance Act would lead to revenue target	.626	
Commission on Revenue Allocation and Office of the Controller of Budget feedback on proposals on revenue raising measures would lead to achievement of revenue targets	.729	
Direct communication by taxpayers to the county government would lead to achievement of revenue targets	.571	
Complaint handling procedure for tax disputes would lead to achievement of revenue targets	.677	

Extraction Method: Principal Component Analysis.
a. 2 components extracted.

Source: Research Data (2023)

In the component matrix, different stakeholder engagement activities load onto two distinct components. The first component is heavily loaded with items related to the preparation and submission of statutory reports, public participation, and feedback from regulatory bodies like the Commission on Revenue Allocation (CRA) and the Office of the Controller of Budget (OCOB). This suggests that this component represents formalized, structured engagement with regulatory and statutory bodies. The second component is loaded with items related to taxpayer communication and sensitization, indicating that this component likely represents direct interaction and engagement with taxpayers. The clear differentiation between these two types of engagement highlights the importance of both structured regulatory engagement and direct taxpayer communication in achieving revenue targets.

3.8.1.3 Regulatory Compliance

Bartlett’s and KMO tests were aimed at measuring sphericity and sampling adequacy respectively. The purpose of this was to test how well items under regulatory compliance were correlated, and therefore determined the suitability of the questionnaire to proceed with factor analysis.

Table 3.9 KMO and Bartlett's Test for Regulatory Compliance

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.676
Bartlett's Test of Sphericity	Approx. Chi-Square	160.457
	Df	36
	Sig.	.000

Source: Research Data (2023)

As presented in Table 3.9, the study established KMO test statistics of 0.676. As per Kaiser (1974), the value of 0.676 indicates that there was sampling adequacy. Bartlett's Test of Sphericity produced a p value of 0.000 indicating that the items in the dataset were significantly correlated and that the variable, regulatory compliance, is thus fit for factor analysis. The PCA method was then used to flag the main dimensions in the dataset, based on the variance explained. To this end, the study used the Kaiser's criterion to seek variables equal to or greater than 1 eigenvalue. Table 3.10 presents the results for the total variance explained.

Table 3.10 Total Variance Explained for Regulatory Compliance

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
	1	3.390	37.668	37.668	3.390	37.668	37.668	3.036	33.729
2	2.210	24.552	62.220	2.210	24.552	62.220	2.564	28.491	62.220
3	.897	9.966	72.186						
4	.806	8.959	81.145						
5	.643	7.139	88.284						
6	.368	4.094	92.378						
7	.318	3.538	95.916						
8	.253	2.811	98.727						
9	.115	1.273	100.000						

Extraction Method: Principal Component Analysis.

Source: Research Data (2023)

A total of 9 components were established as Table 3.10 shows. Out of the 9 components, 62.220 percent of the variations were explained by 2 components. A total of 37.668 percent of the variations were accounted for by component 1, while 24.552 percent of the variations were explained by component 2. As such, from the combined data set, a maximum of 2 components were extracted from the variable based on the total variance.

As further presented in Table 3.11, two components were also extracted from the combined data from the rotated component matrix, using a factor loading cutoff point of 0.4 (Mertens, 2020). As indicated, four items loaded under component 1, and two items loaded under component 2. This confirms that the two components, that is operational policies and guidelines and revenue collection legislations are adequate indicators of competency of regulatory compliance.

Table 3.11 Component Matrix for Regulatory Compliance

	Component	
	1	2
Presence of approved policies, rules and regulations governing revenue collection would lead to achievement of revenue targets		.733
Amendments to the County Finance Acts to comply with legislations governing specific revenue streams like Trade Licensing Act would lead to achievement of revenue targets		.742
Adherence to legislation setting up the structures of revenue sections or agencies with regard to human resource and financial autonomy of the agencies or boards would lead to achievement of revenue targets		.600
Presence of primary revenue administration laws for all revenue streams would lead to achievement of revenue targets	.761	
Primary revenue administration laws drafted in consultation and collaboration with the National Government would lead to achievement of revenue targets	.734	
Consultative legislative drafting and review of revenue administration laws before approval would lead to achievement of revenue targets		.567
Publishing of revenue administration laws in the local media and notice boards would lead to achievement of revenue targets	.924	
Publicizing of the revenue laws before implementation in local radio stations and county websites would lead to achievement of revenue targets	.858	
Annual review of the Finance Act to capture changes in the economic outlook in the County would lead to achievement of revenue targets		.731

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Source: Research Data (2023)

3.8.1.4 Revenue Management

Bartlett's and KMO tests were aimed at measuring sphericity and sampling adequacy respectively. The purpose of this was to test how well items under revenue management are correlated, and therefore determine the suitability of the questionnaire to proceed with factor analysis.

Table 3.12 KMO and Bartlett's Test for Revenue Management

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.791
Bartlett's Test of Sphericity	Approx. Chi-Square	362.663
	Df	45
	Sig.	.000

Source: Research Data (2023)

As presented in Table 3.12, the study established KMO test statistics of 0.791. As per Kaiser (1974), this is an indication of sampling adequacy. Bartlett's Test of Sphericity produced a P value of 0.000 indicating that the items in the dataset are significantly correlated and that the variable, regulatory compliance, is thus fit for factor analysis. The PCA method was then used to flag the main dimensions in the dataset, based on the variance explained. To this end, the study used the Kaiser's criterion to sought variables equal to or greater than 1 eigenvalue. Table 3.13 presents the results for the total variance explained.

Table 3.13 Total Variance Explained for Revenue Management

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of	Cumulative	Total	% of	Cumulative	Total	% of	Cumulative
		Variance	%		Variance	%		Variance	%
1	5.820	58.198	58.198	5.820	58.198	58.198	4.661	46.614	46.614
2	1.350	13.499	71.697	1.350	13.499	71.697	2.083	20.834	67.448
3	1.096	10.957	82.653	1.096	10.957	82.653	1.521	15.205	82.653
4	.643	6.432	89.085						
5	.408	4.083	93.168						
6	.278	2.779	95.947						
7	.178	1.777	97.724						
8	.106	1.057	98.781						
9	.095	.950	99.732						
10	.027	.268	100.000						

Extraction Method: Principal Component Analysis.

Source: Research Data (2023)

A total of 10 components were established as Table 3.13 shows. Out of the 10 components, 82.653 percent of the variations were explained by 3 components. A total of 58.198 percent of the variations were accounted for by component 1, while 13.499 percent of the variations were explained by component 2 and 10.957 percent of the variations were explained by component 3. As such, from the combined data set, a maximum of 3 components were extracted from the variable based on the total variance.

As further presented in Table 3.14, three components were also extracted from the combined data from the rotated component matrix, using a factor loading cutoff point of

0.4 (Mertens, 2020). As indicated, six items loaded under component 1, two items under component 2 and three items loaded under component 3. This implies that in addition to the two initially identified factors, that is government budgeting base and revenue accounting, there is a third indicator of revenue management. Upon assessment of the respective items, this was labeled regular auditing.

Table 3.14 Component Matrix for Revenue Management

	Component		
	1	2	3
Daily Reconciliations of revenue collected would lead to achievement of revenue targets		.852	
Scheduled Internal audit and checks on revenue collected would lead to achievement of revenue targets			.757
Weekly analysis on key revenue streams performance would lead to achievement of revenue targets		.788	
Maintenance of separate revenue collection accounts for revenue streams would lead to achievement of revenue targets	.708		
Trend analysis on revenue collected used in budget forecasting would lead to achievement of revenue targets	.932		
Special audits on under-performing revenue streams would lead to achievement of revenue targets	.832		
Scheduled Rapid Results Initiatives on revenue collection would lead to achievement of revenue targets	.856		
Revenue accounting system capable of analyzing revenue performance trends would lead to achievement of revenue targets			.833
Revenue accounting system capable of revenue reconciliation through third party confirmation would lead to achievement of revenue targets	.899		
Compatible revenue accounting and county government financial reporting system like IFMIS would lead to achievement of revenue targets	.751		

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 8 iterations.

Source: Research Data (2023)

3.8.1.5 Automation

Bartlett's and KMO tests were aimed at measuring sphericity and sampling adequacy respectively. The purpose of this was to test how well items under automation are correlated, and therefore determine the suitability of the questionnaire to proceed with factor analysis.

Table 3.15 KMO and Bartlett's Test for Automation

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.631
Bartlett's Test of Sphericity	Approx. Chi-Square	163.918
	Df	36
	Sig.	.000

Source: Research Data (2023)

As presented in Table 3.15, the study established KMO test statistics of 0.631. As per Kaiser (1974), the value of 0.631 indicates that there was sampling adequacy. Bartlett's Test of Sphericity produced a P value of 0.000 indicating that the items in the dataset are significantly correlated and that the variable, Automation, is thus fit for factor analysis. The PCA method was then used to flag the main dimensions in the dataset, based on the variance explained. To this end, the study used the Kaiser's criterion to seek variables equal to or greater than 1 eigenvalue. Table 3.16 presents the results for the total variance explained.

Table 3.16 Total Variance Explained for Automation

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of	Cumulative	Total	% of	Cumulative	Total	% of	Cumulative
		Variance	%		Variance	%		Variance	%
1	4.010	44.561	44.561	4.010	44.561	44.561	3.068	34.085	34.085
2	1.445	16.054	60.615	1.445	16.054	60.615	1.922	21.360	55.445
3	1.032	11.465	72.080	1.032	11.465	72.080	1.497	16.635	72.080
4	.864	9.596	81.676						
5	.637	7.073	88.749						
6	.409	4.542	93.292						
7	.359	3.994	97.285						
8	.134	1.491	98.776						
9	.110	1.224	100.000						

Extraction Method: Principal Component Analysis.

Source: Research Data (2023)

A total of 9 components were established as Table 3.16 shows. Out of the 9 components, 72.080 percent of the variations were explained by 3 components. A total of 44.561 percent of the variations were accounted for by component 1, while 16.054 percent of the variations were explained by component 2 and 11.465 percent of the variations were explained by component 3. As such, from the combined data set, a maximum of 3 components were extracted from the variable based on the total variance.

As further presented in Table 3.17, three components were also extracted from the combined data from the rotated component matrix, using a factor loading cutoff point of 0.4 (Mertens, 2020). As indicated, five items loaded under component 1, three items

under component 2 and one item loaded under component 3. This implies that in addition to the two initially identified factors, that is automated taxpayer registration and e-filing and e-payment, there is a third indicator of Automation. Upon assessment of the respective items, this was labeled ‘activity alerts.’

Table 3.17 Component Matrix for Automation

	Component		
	1	2	3
Web Based systems for revenue automation would lead to achievement of revenue targets	.708		
Automated system for taxpayer registration would lead to achievement of revenue targets	.713		
Automated registration that alerts the county government on dormant accounts that are not compliant would lead to achievement of revenue targets			.913
Automated system for taxpayer filing of tax obligation for structured revenue streams like property rates would lead to achievement of revenue targets		.721	
Automated system for payment of tax obligation through use of USSD or mobile money would lead to achievement of revenue targets	.708		
Technological upgrade for revenue collection to include emerging revenue sources and streams would lead to achievement of revenue targets	.823		
Scheduled software reviews and updates would lead to achievement of revenue targets		.699	
Electronic receipting of all revenues collected would lead to achievement of revenue targets	.694		
E-government strategy governing revenue collection would lead to achievement of revenue targets		.729	

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 11 iterations.

Source: Research Data (2023)

3.8.1.6 Own Source Revenue Target

Bartlett's and KMO tests were aimed at measuring sphericity and sampling adequacy respectively. The purpose of this was to test how well items under own source revenue target were correlated, and therefore determined the suitability of the questionnaire to proceed with factor analysis.

Table 3.18 KMO and Bartlett's Test for Own Source Revenue Target

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.759
Bartlett's Test of Sphericity	Approx. Chi-Square	178.313
	Df	28
	Sig.	.000

Source: Research Data (2023)

As presented in Table 3.18, the study established KMO test statistics of 0.759. As per Kaiser (1974), this indicates sampling adequacy. Bartlett's Test of Sphericity produced a P value of 0.000 indicating that the items in the dataset are significantly correlated and that the variable, own source revenue target, is thus fit for factor analysis. The PCA method was then used to flag the main dimensions in the dataset, based on the variance explained. To this end, the study used the Kaiser's criterion to seek variables equal to or greater than 1 eigenvalue. Table 19 presents the results for the total variance explained.

Table 3.19 Total Variance Explained for Own Source Revenue Target

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
	1	3.929	49.109	49.109	3.929	49.109	49.109	2.899	36.237
2	1.725	21.568	70.676	1.725	21.568	70.676	2.755	34.439	70.676
3	.819	10.233	80.909						
4	.573	7.159	88.068						
5	.349	4.357	92.425						
6	.302	3.772	96.198						
7	.175	2.188	98.386						
8	.129	1.614	100.000						

Extraction Method: Principal Component Analysis.

Source: Research Data (2024)

A total of 8 components were established as Table 3.19 shows. Out of the 8 components, 70.676 percent of the variations were explained by 2 components. A total of 49.109 percent of the variations were accounted for by component 1, while 21.568 percent of the variations were explained by component 2. As such, from the combined data set, a maximum of 2 components were extracted from the variable based on the total variance.

As further presented in Table 3.20, two components were also extracted from the combined data from the rotated component matrix, using a factor loading cutoff point of 0.4 (Mertens, 2020). As indicated, four items loaded under component 1, and two items loaded under component 2. This confirms that the two components, that is forecasted

versus actual collections and revenue arrears collections were adequate indicators of own source revenue target.

Table 3.20 Component Matrix for Own Source Revenue Target

	Component	
	1	2
The county government forecasted revenue for every financial cycle covering all revenue streams would lead to achievement of revenue targets	.870	
The county government has a structured method of forecasting the revenue targets	.884	
The forecasted revenues are used in the preparation of the county budget		.758
Revenue collected is reviewed daily and weekly to check on progress towards achievement of revenue targets		.616
Monitoring and evaluation has been done annually to check on revenues collected would lead to achievement of revenue targets	.760	
The county government maintains a revenue arrears register for all revenue streams would lead to achievement of revenue targets	.607	
The county government offering waivers on penalties and interest on outstanding amounts of property rates would lead to achievement of revenue targets		.879
Revenue arrears collected is part of the revenue target every year		.864

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Source: Research Data (2024)

3.7.2 Reliability of Research Instrument

Reliability in research, according to Bryman and Bell (2011), entails whether the findings of the study would hold true if it were conducted again using the same information and methodology. According to Downing (2004), dependability values over 0.8 are regarded as high. Statistical tests of correlation are used to determine reliability in the test-retest and alternative forms (Traub and Rowley, 1991).

The County Government of Bomet was selected for the pilot investigation to assess the reliability of the research instruments due to its representativeness and relevance, despite not being one of the primary counties under study. Bomet was chosen because it reflects similar administrative and operational characteristics to the selected counties, thereby providing valuable insights into the effectiveness of the research tools without affecting the primary study's integrity (Mugenda & Mugenda, 2003). The pilot study involved 10% of the sample population from Bomet, including CEC members for Finance, CEOs of revenue corporations, CCOs responsible for revenue administration, and revenue officers. This diverse group was targeted to ensure that the instruments were comprehensive and relevant across various job cadres, allowing for a thorough evaluation of the tools' reliability and alignment with the research questions (Creswell, 2014). The feedback from this pilot study helped refine the instruments, ensuring their validity and reliability for the main study.

When analyzing the results of the pilot study, a Cronbach Alpha value of at least 0.70 was considered reliable (Sekaran & Bougie, 2013). On their part, Tashakkori and Teddlie (2010) aver that an instrument is deemed highly reliable if it records a Cronbach Alpha coefficient of between 0.82 and 1.00; sufficient reliability if between 0.64 and 0.82; has

low reliability of between 0.46 and 0.64; and not reliable if between 0.10 and 0.46. Cronbach Alpha was established for every objective in order to determine if each scale (objective) would produce consistent results should the research be done on the same respondents at a different point in time. In the present study, the 0.7 Cronbach alpha threshold was used. Results are presented on Table 3.21.

Table 3.21 Reliability Coefficients

Scale	Initial Items	Final Items	Initial Cronbach Alpha	Final Cronbach Alpha
Competency of Revenue Collectors	9	7	0.620	0.711
Stakeholder Engagement	13	13	0.751	0.751
Regulatory Compliance	9	9	0.745	0.745
Revenue Management	11	10	0.583	0.905
Automation	9	9	0.742	0.742
Own Source Revenue Target	8	8	0.793	0.793

Source: Research Data (2024)

As presented in Table 3.21, all scales were found to be reliable, having Cronbach alpha coefficients above thresholds prescribed by Tashakkori and Teddlie (2010). The first independent variable, Competency of Revenue Collectors, recorded an initial coefficient of 0.620 with 9 items. It was however revised by deleting two items from the scale, that is *“Background knowledge of the employees in accounting would lead to achievement of revenue targets”* and *“Use of non-financial rewards like recognition, inclusivity in decision-making and flexible working hours would lead to achievement of revenue*

targets”. The final questionnaire thus contains 7 items under the variable Competency of Revenue Collectors, which was reliable at a coefficient of 0.711.

The second independent variable, Stakeholder Engagement was found reliable, at a coefficient of 0.751 with 13 items. No item was thus deleted from the scale. Similar results were obtained under the third independent variable, Regulatory Compliance, which recorded a coefficient of 0.745 with 9 items. No item was deleted from the scale. In the fourth independent variable however, that is Revenue Management, the item *“Presence of a standard operating procedures manual for revenue collection would lead to achievement of revenue targets”* was deleted. This resulted in a coefficient of 0.905, from the initial 0.583. Items under the moderating variable, Automation, were found reliable at a coefficient of 0.742. None of the 9 items was thus deleted. The dependent variable scale, that is Own Source Revenue Target, was also found reliable at a coefficient of 0.793. None of the 8 items was therefore deleted.

3.8 Data Analysis and Presentations

The Statistical Package for Social Scientists (SPSS) Version 27 was used to code, clean, and input the field data into the computer for analysis. The information was condensed to identify new concerns and trends related to particular topics that depend on the variables and objectives. To acquire the appropriate scores, the study combined scores from indicators for the factors.

Descriptive statistical techniques were utilized to give comparisons and contrasts between revenue collection through agencies, revenue collection automation, and achieving own source revenue targets. Multiple regression analysis was utilized in testing the hypotheses

and look at the correlation between study variables. (Hair *et al.*, 2005). To address the multi-collinearity issue, the study made use of the Variable Inflation Factor (VIF). The model's beta (β) coefficients for each independent variable were produced in order to examine each of the research's hypotheses.

Quantitative approaches were utilized for data analysis, leveraging both primary and secondary data sources. Descriptive statistics, including frequency, mean, and standard deviation, were employed to summarize and describe the characteristics of the data (Creswell, 2014). Inferential statistics, such as regression and correlation analysis, were applied to explore relationships and test hypotheses within the data (Field, 2013). Descriptive statistics provide a foundational understanding of the data set by summarizing key features, while inferential statistics allow for the examination of patterns and predictions, offering deeper insights into the data's implications (Bryman, 2016; Pallant, 2020). The use of these statistical methods ensures a comprehensive analysis of the data, aligning with best practices in quantitative research methodology (Cooper & Schindler, 2014).

Without using a moderator, the parameter that is dependent was initially regressed against each of the factors that were independent. Regression model 1 was employed.

$$Y = \beta_0 + \beta_1 X_1 \dots \dots \dots (3.3)$$

$$Y = \beta_0 + \beta_2 X_2 \dots \dots \dots (3.4)$$

$$Y = \beta_0 + \beta_3 X_3 \dots \dots \dots (3.5)$$

$$Y = \beta_0 + \beta_4 X_4 \dots \dots \dots (3.6)$$

The factor that is dependent was projected on each predictor factor in combination, in the second stage.

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon \dots\dots\dots (3.7)$$

The factor that is dependent was projected against each of the factors that were predictor in the third phase, and an interaction was added in a moderated model.

$$Y = \beta_0 + \beta_1X_1 + \beta_2M + \beta_3X_1 * M + \varepsilon \dots\dots\dots(3.8)$$

$$Y = \beta_0 + \beta_4X_2 + \beta_5M + \beta_6X_2 * M + \varepsilon \dots\dots\dots(3.9)$$

$$Y = \beta_0 + \beta_7X_3 + \beta_8M + \beta_9X_3 * M + \varepsilon \dots\dots\dots(3.10)$$

$$Y = \beta_0 + \beta_{10}X_4 + \beta_{11}M + \beta_{12}X_4 * M + \varepsilon \dots\dots\dots(3.11)$$

Where;

Y is Own Source revenue target measured by forecasted versus actual collections and revenue arrears collections;

β_0 is Constant Term;

$\beta_1, \beta_2, \beta_3, \beta_4$ are Beta coefficients;

X_1 is Competency of revenue collectors (measured by Capability and Knowledge and Training and Development);

X_2 is Stakeholder engagement (measured by Taxpayer Education and Reports and Public Feedback);

X_3 is Regulatory compliance (measured by Operational Policies and Guidelines and Revenue Collection Legislations);

X_4 is Revenue management (measured by Government Budgeting Base and Revenue Accounting);

M is Revenue collection automation which is the interaction measured by Automated Taxpayer Registration.

ε is the “error term”

The regression models generated several key statistics that were interpreted to understand the relationships and moderating effects. The regression coefficients indicate the strength and direction of the relationships between variables. For instance, the coefficient for agency revenue collection quantified the change in own source revenue target associated with a unit change in agency revenue collection. A positive coefficient suggests a positive relationship, while a negative coefficient implies a negative relationship. The coefficient for the interaction term (automation * agency revenue collection) helped understand the moderating effect of automation.

The p-values associated with the coefficients provide information about the statistical significance of the relationships. A p-value below a predetermined threshold (e.g., 0.05) indicates that the relationship is statistically significant. In the context of the study, a significant p-value for the interaction term indicates that automation moderates the relationship between agency revenue collection and revenue target.

The R-squared value represents the percentage of the variance associated with the dependent variable that can be accounted for by the equation's variables that are independent. A greater R-squared value suggests that the model fits the data more accurately. In this study, R-squared helped determine how well the combined variables

(agency revenue collection and automation) explain the variance in own source revenue target.

The interaction term between automation and agency revenue collection provided insights into the moderating effect. If the coefficient of the interaction term is significant and positive, it suggests that automation strengthens the relationship between agency revenue collection and revenue target. If the coefficient is significant and negative, it implies that automation weakens this relationship.

Overall model fit statistics, such as the F-statistic and associated p-value, provide information about the goodness of fit of the entire regression model. A low p-value for the F-statistic suggests that at least one independent variable in the model significantly contributes to explaining the variance in the dependent variable.

Interpreting these statistics collectively helped draw conclusions about how agency revenue collection and automation interact to influence own source revenue target. The regression model's results offered valuable insights into whether and how automation acts as a moderating factor in the relationship between revenue collection and revenue target in the context of selected Kenyan county governments.

Thematic content analysis was then employed whereby the qualitative data obtained from secondary sources including discrete sources that are printed, typewritten, or electronically accessible and are gathered from a market, future product uses, and various knowledge sources. As per Sekaran and Bougie (2013), thematic content analysis is a flexible and powerful method for distilling valuable insights from diverse qualitative data sources. It allowed the study to identify and interpret key themes, patterns, and trends that

can inform decision-making and contribute to a deeper understanding of the research topic, whether it pertains to market dynamics, future product uses, or knowledge acquisition. Table 3.22 operationalizes the study variables:

Table 3.22 Operationalization of Variables

Variable	Indicators	Type of data	Measurement scale	Expected outputs
Competency of revenue collectors	-Capability and knowledge -Training and development	Quantitative	Likert (Ordinal)	scale Means and standard deviations
Stakeholder Engagement	-Taxpayer Education -Reports and public feedback	Quantitative	Likert (Ordinal)	scale Means and standard deviations
Regulatory Compliance	-Operational Policies and Guidelines -Revenue collection legislations	Quantitative	Likert (Ordinal)	scale Means and standard deviations
Revenue Management	-Government Budgeting Base Revenue -Accounting	Quantitative	Likert (Ordinal)	scale Means and standard deviations
Revenue collection automation	-Automated taxpayer registration -E-filing and e-payment	Quantitative	Likert (Ordinal)	scale Means and standard deviations
Own Source Revenue Target	-Forecasted versus actual collections -Revenue arrears collections	Quantitative	Likert (Ordinal)	scale Means and standard deviations

3.8.1 Multicollinearity Test

Multicollinearity arises when a number of variables in the model of regression have a moderately or strongly correlated relationship. Unfortunately, when it does, it can ruin analysis and limit the conclusions of research. When the t-tests for each individual slope in this study are non-substantial ($P > 0.05$), while the total F-test for evaluating all slopes simultaneously is substantial ($P < 0.05$), it can be determined that multicollinearity is present using VIF.

To check for multicollinearity, a correlation test was used. Correlation coefficients often fall between a negative and a positive one. The direction in which the variables move is implied by the correlation coefficient, which can be positive or negative. A positive correlation coefficient indicates that the variables move in the same direction.

There is no link between any two variables if the correlation coefficient is zero. A correlation coefficient of one, whether positive or negative, denotes close to perfect connection. This results in a multicollinearity issue. Perfectly multicollinear variables should be omitted in favor of the other to prevent multicollinearity. However, the multicollinearity issue is not serious and is disregarded if the pair-wise correlation coefficient is less than 0.8 (Gujarati, 2003). On the other hand, multicollinearity arises if the coefficient of correlation is larger than 0.8, and a corrective action should be done.

Multicollinearity tests detect high correlations between independent variables, which can undermine the model's interpretability and predictive power. As per Cooper and Schindler (2018), multicollinearity can undermine the interpretability and predictive power of a statistical model, making it challenging to isolate the individual effects of each independent variable on the dependent variable. It can lead to inflated standard

errors, making it difficult to assess the statistical significance of the coefficients, and may result in unstable parameter estimates. Additionally, multicollinearity can make it challenging to discern the true relationships within the data, potentially leading to misleading or erroneous conclusions (Kothari, 2019). In this study, both Tolerance Variable Inflation Factor (VIF) were used to check for multicollinearity. As a rule of thumb, tolerance values less than 0.1 and VIF values beyond the range of -10 to 10 are generally symptomatic of crossovers (Sekaran & Bougie, 2019).

Table 3.23 Tests for Multicollinearity

	Tolerance	VIF
Competency of Revenue Collectors	.453	2.206
Stakeholder Engagement	.347	2.879
Regulatory Compliance	.267	3.751
Revenue Management	.298	3.354
Revenue Collection Automation	.447	2.237

Source: Research Data (2023)

Results indicated no multicollinearity in the dataset with acceptable tolerance and VIF values recorded in all predictor variables. Each predictor had tolerance values significantly greater than 0.1, and the VIF scores within the allowed range of -10 to 10: competency of revenue collectors (Tolerance=.453; VIF=2.206); stakeholder engagement (Tolerance=.347; VIF=2.879); Regulatory Compliance (Tolerance=.267; VIF=3.751); revenue management (Tolerance=.298; VIF=3.354); and revenue collection automation (Tolerance=.447; VIF=2.237). The absence of multicollinearity enhances the model's interpretability and the reliability of inferences, ensuring that the study's conclusions

about the relationships between these predictors and the dependent variable are robust and trustworthy.

The absence of multicollinearity, as indicated by acceptable tolerance and VIF values for all predictor variables, is a reassuring finding in the context of the statistical analysis. Multicollinearity can complicate the interpretation of regression models and affect the stability of parameter estimates, potentially leading to unreliable results. In this study, the predictor variables, including competency of revenue collectors, stakeholder engagement, regulatory compliance, revenue management, and revenue collection automation, all exhibited tolerance values significantly greater than the threshold of 0.1 and VIF scores well within the commonly accepted range of -10 to 10. These results indicate that there is no substantial overlap or redundancy among the predictors, and each variable contributes distinct information to the model.

3.8.2 Normality Test

It is a requirement of the normality assumption that the error term has a normal distribution with constant variance. That is, the errors in the distribution of the predicted value of Y (the dependent variable) are in the neighborhood of the normal distribution. The premise of normality is crucial for constructing ranges of reference for parameters. It is challenging to draw accurate and reliable judgments regarding actuality if this premise is broken (Bryman, 2017). Normality tests assessed whether the residuals or the dependent variable follow a normal distribution, a crucial assumption for many statistical techniques. According to Clark et al. (2021), normality tests play a pivotal role in statistical analysis, especially in the context of parametric statistical techniques like

regression and hypothesis testing. When data or residuals follow a normal distribution, it means that the values are symmetrically distributed around the mean, and extreme values are rare. This allows for the application of powerful statistical methods, such as t-tests, ANOVA, and linear regression, which rely on the normality assumption to make accurate inferences.

A test for normalcy was performed using both the Shapiro Wilk Test and the Quantile-Quantile (Q-Q) plots advocated by Alejo et al., (2015). The Shapiro-Wilk test is a formal statistical test specifically designed to assess the normality of data. It is particularly powerful for small to medium sample sizes and is widely used because it is sensitive to departures from normality. The test generates a test statistic and a corresponding p-value, which indicates whether the null hypothesis (that the data is normally distributed) can be rejected. In this study, as shown in Table 3.21, the Shapiro-Wilk test results for all the variables—Own Source Revenue Target, Competency of Revenue Collectors, Stakeholder Engagement, Regulatory Compliance, and Revenue Management—indicate a p-value of .000. This p-value is below the typical significance level of 0.05, suggesting a violation of the normality assumption for each variable. Given these results, the Shapiro-Wilk test effectively identifies non-normal distributions, making it a critical tool in the initial assessment of data normality.

Table 3.24 Normality Test

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Own Source Revenue Target	.130	238	.000	.910	238	.000
Competency of Revenue Collectors	.130	238	.000	.889	238	.000
Stakeholder Engagement	.086	238	.000	.949	238	.000
Regulatory Compliance	.100	238	.000	.932	238	.000
Revenue Management	.123	238	.000	.942	238	.000

a. Lilliefors Significance Correction

Source: Research Data (2023)

While the Shapiro-Wilk test provides a quantitative measure of normality, it does not offer visual insight into how the data deviates from a normal distribution. This is where Q-Q plots become particularly useful. Q-Q plots graphically display the relationship between the observed quantiles of the data and the expected quantiles of a normal distribution. By plotting the data on a Q-Q plot, one can visually inspect the alignment of the data points with the reference line (which represents a perfectly normal distribution). Deviations from this line indicate departures from normality. Visual inspection using Q-Q plots is advocated by researchers like Alejo et al. (2015) as a complementary method to formal statistical tests because it can provide more detailed insight into the nature of any deviations, such as skewness or kurtosis, that might not be fully captured by the Shapiro-Wilk test.

Given the significant p-values from the Shapiro-Wilk test, indicating a violation of the normality assumption, the study resolved to visually inspect the data using Q-Q plots. This approach is beneficial because, while the Shapiro-Wilk test suggests non-normality,

the Q-Q plots allow for a more informed understanding of how the data deviates from normality. The visual inspection can reveal patterns, such as slight skewness or heavy tails, that might inform the choice of subsequent statistical analyses. For instance, if the data shows only minor deviations from normality, parametric tests might still be justified with caution. However, significant departures might suggest the need for non-parametric tests or data transformations.

This visual method is particularly advantageous because it allows for the identification of deviations from normality, such as skewness or kurtosis, that might not be readily apparent through numerical tests alone (Wilk & Gnanadesikan, 1968). The error term's distribution being normally distributed is the null hypothesis in this test. The t tests and standard errors did not check the significance of the regression coefficients if the null hypothesis is rejected, which is implied by the statement. Figure 3.1 presents the Q-Q plot for competency of revenue collectors.

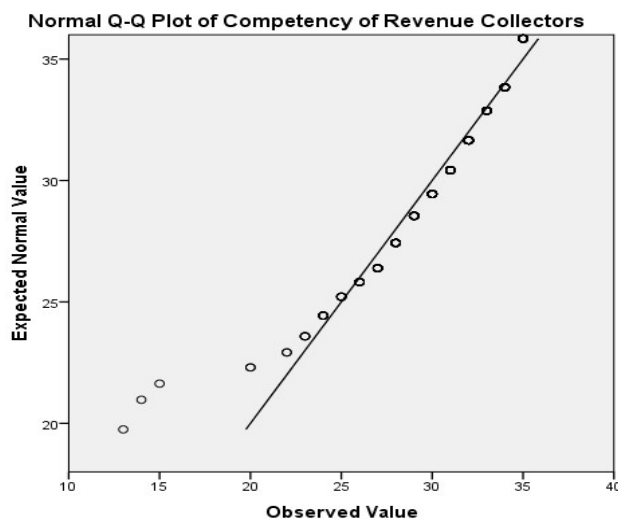


Figure 3.1 Q-Q Plot for Competency of Revenue Collectors

Source: Research Data (2023)

A majority of data points fell within the line of best fit, implying that data on the competency of revenue collectors was normally distributed. This is a critical assumption for various statistical analyses. The deviation of data points from the line of best fit at the beginning of the Q-Q plot, particularly in the tails, suggests that there are some minor departures from normality, often referred to as heavy tails or outliers. This typically occurs in real-world data, where extreme values do not perfectly follow the expected normal distribution. However, the fact that the majority of the data points are aligned along the line indicates that the overall distribution of the data closely approximates normality, especially in the central part of the distribution.

These minor deviations at the tails can be attributed to natural variability in the dataset or the presence of a few extreme values that do not significantly impact the overall analysis. In many practical applications, such deviations are acceptable, especially if the central tendency of the data still conforms to the assumptions of normality, which is critical for most parametric tests (Ghasemi & Zahediasl, 2012). Therefore, while these deviations are noted, they do not undermine the validity of using statistical methods that assume normality, as the majority of the data still closely follows the expected distribution.

This finding enhances the credibility of results and conclusions drawn from statistical tests and models based on the competency data, reinforcing the reliability and interpretability of the study's findings related to revenue collection and management within county governments in Kenya. A Q-Q diagram for stakeholder engagement was developed as well, with the results shown in Figure 3.2.

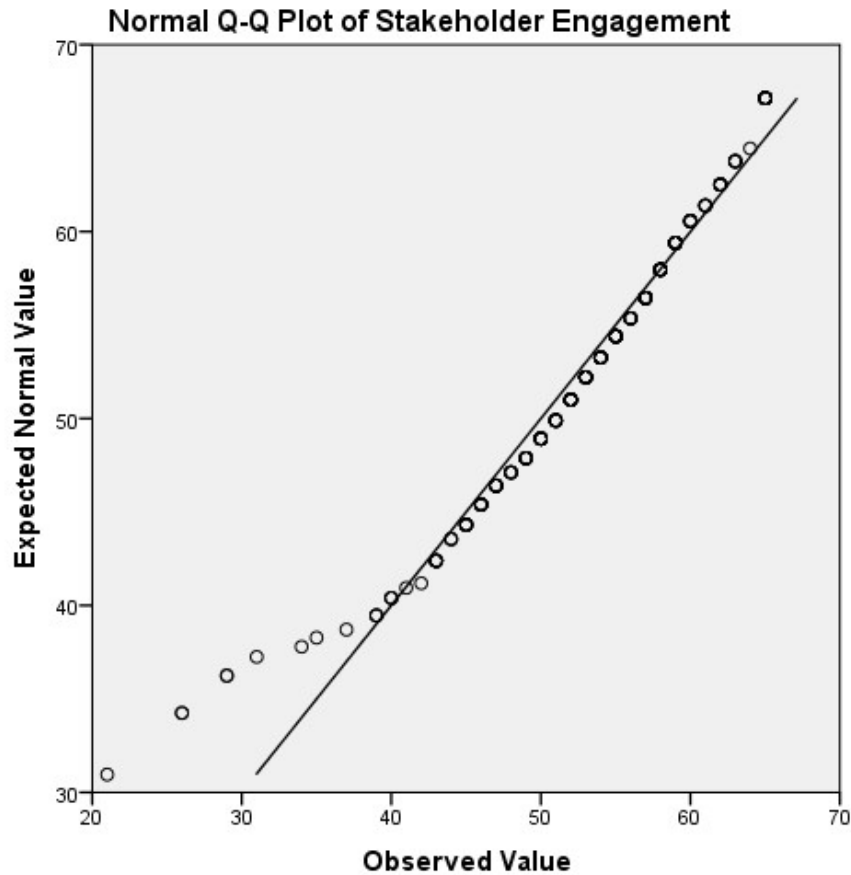


Figure 3.2 Q-Q Plot for Stakeholder Engagement

Source: Research Data (2023)

A majority of data points fell within the line of best fit, implying that data on the stakeholder engagement was normally distributed. These minor deviations at the tails can be attributed to natural variability in the dataset or the presence of a few extreme values that do not significantly impact the overall analysis. In the context of stakeholder engagement, normality is crucial for making valid inferences and drawing accurate conclusions about the relationship between stakeholder engagement and other variables. This finding reinforces the reliability and robustness of the study's analyses, enabled the study to apply statistical methods confidently to better understand the dynamics of

stakeholder engagement within county governments in Kenya. A Q-Q diagram for regulatory compliance was developed as well, with the results shown in Figure 3.3.

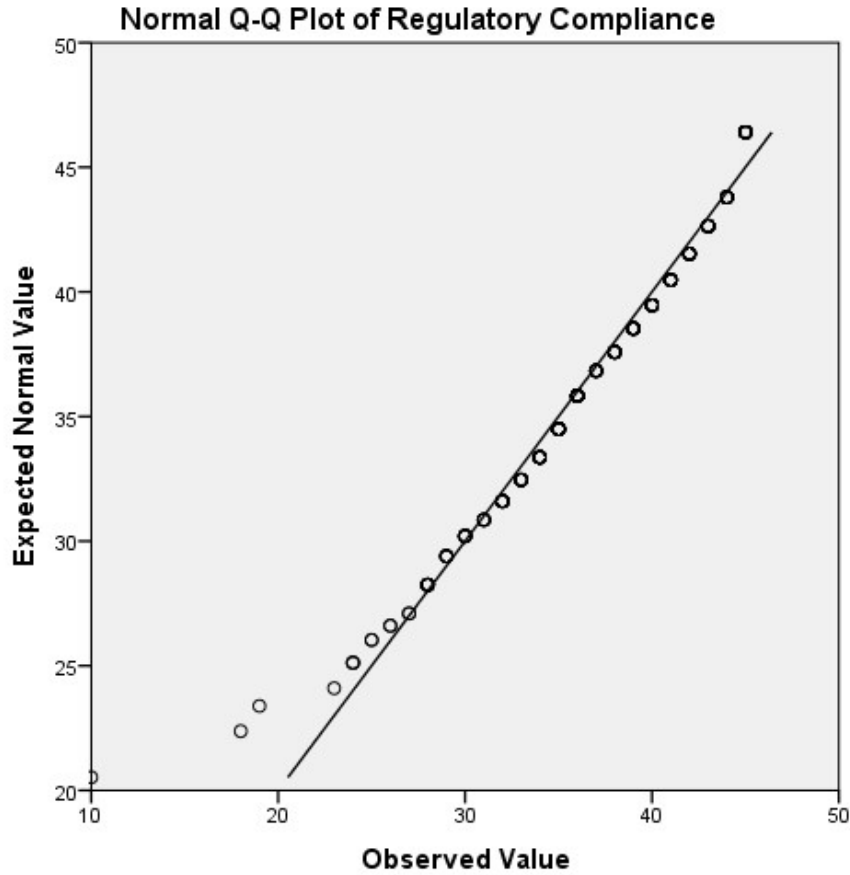


Figure 3.3 Q-Q Plot for Regulatory Compliance

Source: Research Data (2023)

A majority of data points fell within the line of best fit, implying that data on the regulatory compliance was normally distributed. These minor deviations at the tails can be attributed to natural variability in the dataset or the presence of a few extreme values that do not significantly impact the overall analysis. In the context of regulatory compliance, normality is crucial for accurate and reliable statistical analyses, as it enabled the study to apply parametric tests with confidence, make valid inferences, and draw

meaningful conclusions about the impact of regulatory compliance on various aspects of the study. This finding enhances the credibility of the study's results, reinforcing the soundness and validity of the analyses pertaining to regulatory compliance within the selected county governments in Kenya. A Q-Q diagram for revenue management was developed as well, with the results shown in Figure 3.4.

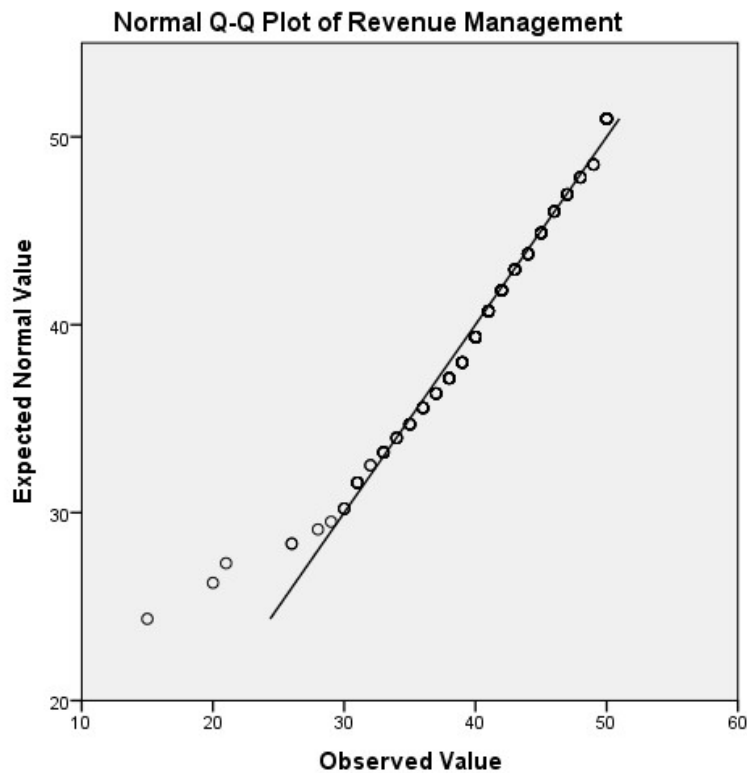


Figure 3.4 Q-Q Plot for Revenue Management

Source: Research Data (2023)

A majority of data points fell within the line of best fit, implying that data on the revenue management was normally distributed. These minor deviations at the tails can be attributed to natural variability in the dataset or the presence of a few extreme values that do not significantly impact the overall analysis. In the context of revenue management,

normality is essential for the validity and reliability of statistical analyses. It enables the study to apply parametric tests confidently, make accurate inferences, and draw meaningful conclusions regarding the relationship between revenue management and their impact on revenue targets. This finding adds to the robustness of the study's analyses, reaffirming the credibility and interpretability of the results and contributing to a better understanding of revenue management within the context of the selected county governments in Kenya. A Q-Q diagram for revenue collection automation was developed as well, with the results shown in Figure 3.5.

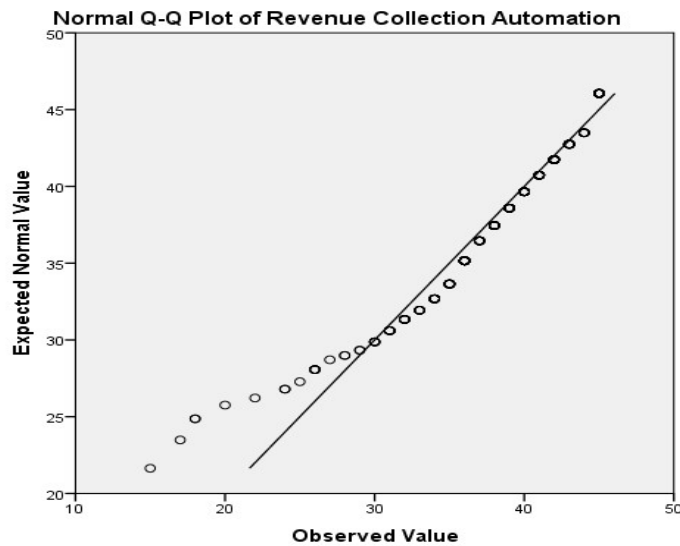


Figure 3.5 Q-Q Plot for Revenue Collection Automation

Source: Research Data (2023)

A majority of data points fell within the line of best fit, implying that data on the revenue collection automation was normally distributed. These minor deviations at the tails can be attributed to natural variability in the dataset or the presence of a few extreme values that do not significantly impact the overall analysis. In the context of revenue collection

automation, normality is crucial for the validity and reliability of statistical tests and models. It indicates that the data is amenable to parametric statistical techniques, enabling the study to confidently apply these methods to assess the impact of automation on revenue collection and revenue target. This finding reinforces the credibility of the study's analyses, ensuring that the results accurately reflect the relationship between revenue collection automation and the achievement of own source revenue targets among the selected county governments in Kenya. A Q-Q diagram for own source revenue target was developed as well, with the results shown in Figure 3.6.

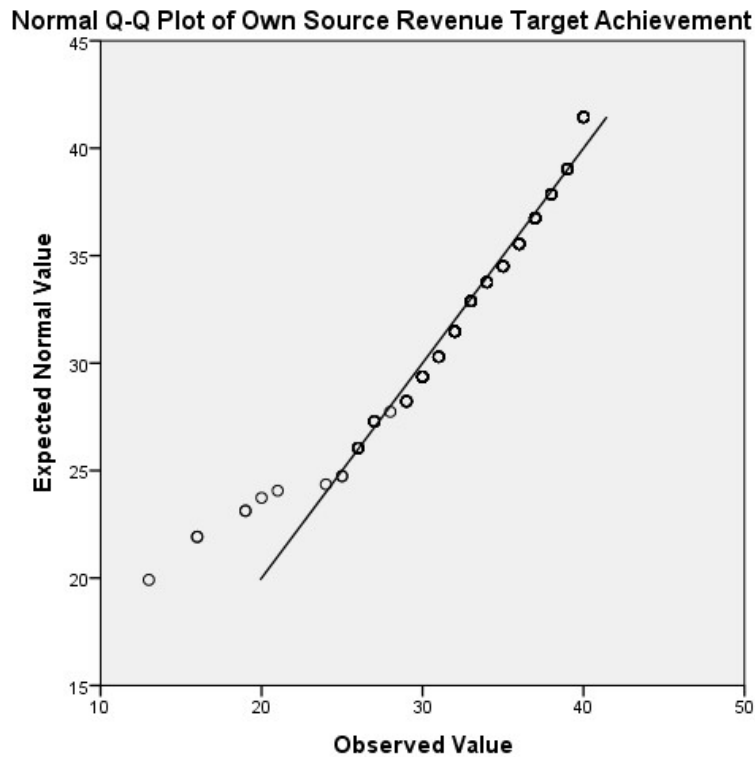


Figure 3.6 Q-Q Plot for Own Source Revenue Target

Source: Research Data (2023)

A majority of data points fell within the line of best fit, implying that data on own source revenue target was normally distributed. In the context of own source revenue target, normality is essential for robust and valid statistical tests and models. It suggests that the data can be effectively and confidently analyzed using parametric statistical techniques, allowing researchers to make accurate inferences and draw meaningful conclusions about the factors influencing the achievement of revenue targets within the context of the selected county governments in Kenya. This finding points to the reliability and interpretability of the study's results, enhancing our understanding of the factors contributing to own source revenue target.

3.8.3 Autocorrelation test

According to Huitema (1986), autocorrelation is the extent to which a specific time series resembles an extended version of oneself over succeeding periods of time. Regression makes the premise that no error related to one observation is related to any other observation's error. The likelihood of autocorrelation was examined using Durbin Watson (DW) statistics.

Autocorrelation tests are critically important in statistical analysis, particularly in time series data and regression modeling (Bryman & Bell, 2017). They help identify and assess the presence of autocorrelation, which is a condition where data points or residuals are correlated with their own past values. Autocorrelation violates the assumption of independent and identically distributed residuals, which underpins many statistical techniques. It can lead to incorrect parameter estimates, inflated standard errors, and unreliable hypothesis tests.

In this study, autocorrelation was tested using the Durbin-Watson test. As per Kumar (2018), the importance of the Durbin-Watson statistic lies in its ability to detect autocorrelation, which, if present, can render regression results unreliable and biased. The Durbin-Watson statistic always ranges from 0 to 4. According to Brooks (2008), numbers close to 0 suggest positive autocorrelation, values toward 4 imply negative autocorrelation, and a value of 2 indicates that there is no autocorrelation in the sample.

Table 3.25 Test for Autocorrelation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.756 ^a	.572	.562	3.10065	2.102

a. Predictors: (Constant), Revenue Collection Automation, Stakeholder Engagement, Competency of Revenue Collectors, Revenue Management, Regulatory Compliance

b. Dependent Variable: Own Source Revenue Target

The study established a Durbin-Watson statistic of 2.102, indicating no autocorrelation. This implies that there are no disturbances in the data, which would possibly lead to inefficiency of the least squares estimates. This means that the dataset has the smallest variance among all linear unbiased estimators and that there are no wrong standard errors for the regression coefficient estimates. The finding is significant because autocorrelation can lead to inefficient parameter estimates, incorrect standard errors, and unreliable hypothesis tests, ultimately undermining the integrity of the statistical analysis. The confirmation of no autocorrelation ensures that the least squares estimates are efficient and that the regression coefficient estimates have accurate standard errors. This finding strengthens the validity of the study's results and supports the researchers in making

accurate inferences about the factors influencing own source revenue target in the context of the selected county governments in Kenya.

3.8.4 Heteroscedasticity Test

With the remainder exceeds the term's variability is heteroscedastic, it means that it fluctuates in response to changes in the explanatory factors rather than being constant. Homoscedasticity, which is the opposite of heteroscedasticity and denotes that the variability of a DV is constant for all values of an IV, was first introduced in 2003 by Gujarati. Heteroscedasticity was minimized or, if feasible, avoided in this study by making sure that the information utilized for the testing of hypotheses are basically typical, converted properly, and operational regression equations are applied in the right ways, and that the variables are available. For every dimension of the predictive variable(s), the amount of variation of the remainder terms has to stay consistent. The study used Levine's test to check for heteroscedasticity.

Homogeneity of variance tests, such as the Breusch-Pagan and White tests, assess whether the variance of the residuals is consistent across different levels of the independent variables, an assumption crucial for the reliability of regression results. According to Kumar (2018), the assumption that the variance of the residuals is consistent across different levels of the independent variables, known as homoscedasticity, is fundamental in regression analysis. When this assumption is violated, it can lead to problems such as heteroscedasticity, where the spread of residuals varies systematically across different levels of the predictors. Heteroscedasticity can seriously compromise the accuracy and interpretability of regression results. Specifically,

it can lead to incorrect standard errors of coefficients, affecting hypothesis testing and confidence intervals (Creswell & Guetterman, 2019). In this study, the standardised residue and anticipated values were plotted to check for homoscedasticity. Figure 3.7 depicts the discovery.

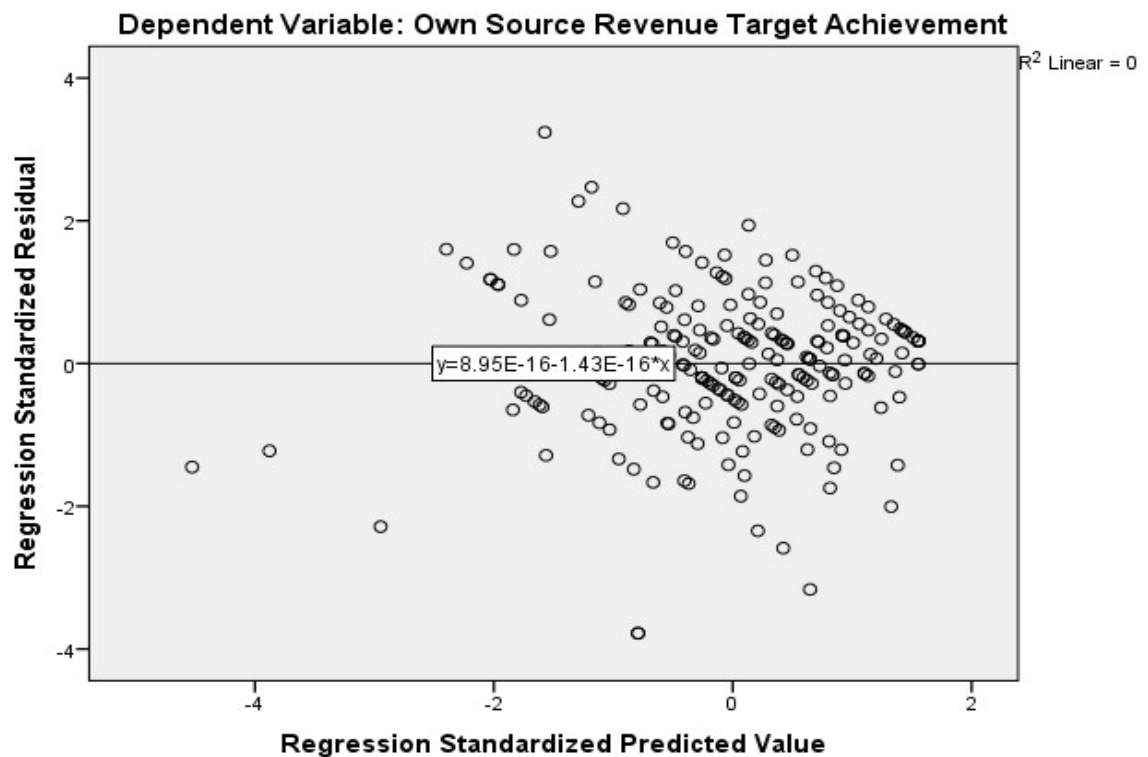


Figure 3.7 Homogeneity of Variances

Source: Research Data (2023)

Results show a generally balanced representation of the standardized residual and predicted values, having a large number of residual data points near to 0 on each side of the line that was fitting. This suggests that the typical residual error rate for every dimension is close to zero meaning there is absolutely no heteroskedasticity (homoscedasticity infringement). As a result, homoscedasticity can be assumed in the

dataset, and regression analysis may thus be carried out. The finding of a generally balanced representation of standardized residuals and predicted values, with a large number of residual data points clustering near zero on both sides of the fitted line, is a highly favorable result. This pattern suggests that the typical residual errors across the range of predicted values are close to zero, indicating the absence of heteroskedasticity, which is a violation of the homoscedasticity assumption. This is a crucial assumption for regression analysis, and the confirmation of homoscedasticity in the dataset signifies that the model is more robust and trustworthy. The absence of heteroskedasticity ensures that the standard errors of coefficients are reliable, and inferences drawn from the analysis are accurate, reinforcing the credibility of the study's findings and enabling more confident interpretations of the relationships between variables.

3.8.5 Linearity

Fitting a linear regression model between two variables when linear correlation exists is worthless. As a result, the t-Test is used to identify whether or not the independent and dependent variables have a meaningful linear connection (Hansen, 2016). The computed value of the t distribution and its critical value were compared in a two-tailed test to establish the null hypothesis. The crucial score and calculated score whenever T_r are less than $-\alpha/2$ or more than $\alpha/2$, the null hypothesis is rejected at a level of significance of $\alpha \times 100\%$. Rejecting the null hypothesis indicates that the variables have a meaningful linear connection. The correlation between the independent and dependent variables is thought to be linear. This determination was made using scatter plots of the variables.

Linearity tests evaluate the linearity assumption, ensuring that the relationship between the independent and dependent variables is adequately captured. Ensuring the linearity assumption is met is essential for the reliability and validity of regression results. If this assumption is violated, the model may fail to adequately capture the true nature of the relationships, leading to biased or misleading conclusions. Linearity tests help researchers confirm that the chosen functional form is appropriate for their data and that the model accurately reflects the relationships between variables. Figure 3.8 illustrates the finding.

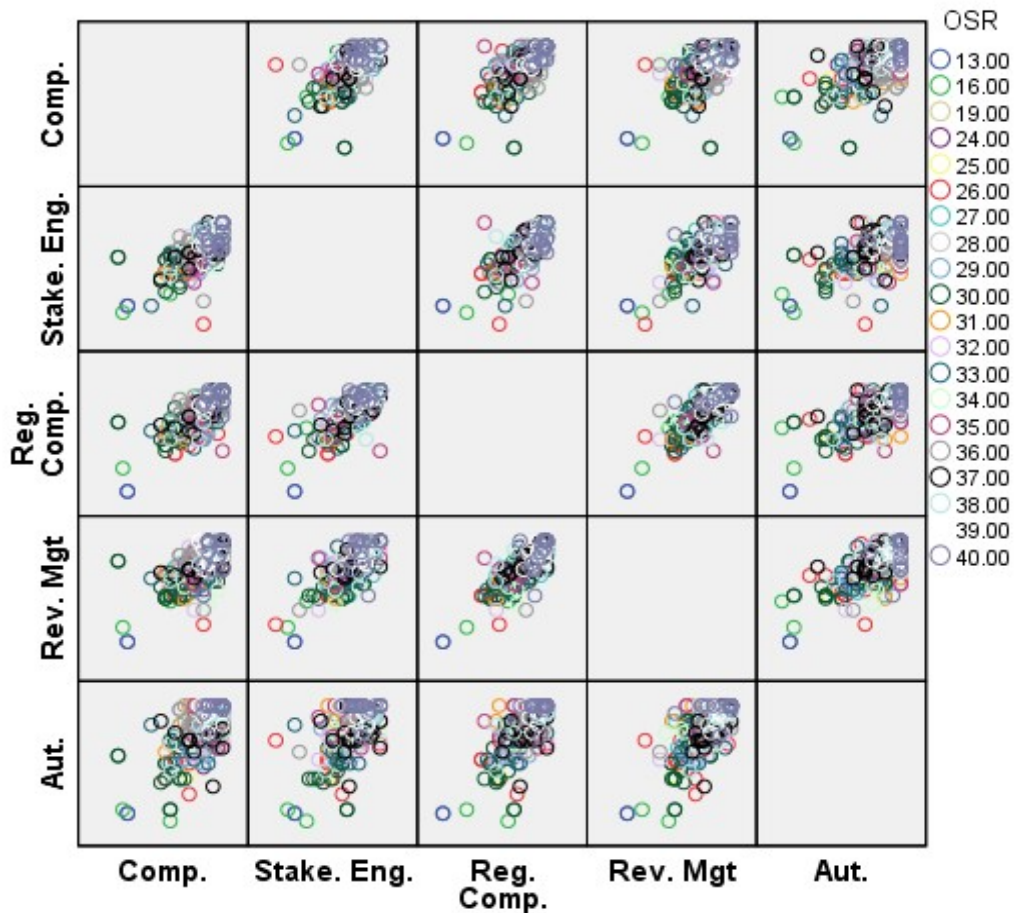


Figure 3.8 Linearity Diagnostics

Source: Research Data (2023)

It was established that all the predictor variables including competency of revenue collectors, stakeholder engagement, regulatory compliance, revenue management and revenue collection automation were linearly fitted against own source revenue target, meeting the condition for linearity. The data can thus be deemed fit for regression analysis. The finding that all predictor variables is a highly encouraging outcome. Linearity is a fundamental assumption in regression analysis, ensuring that the relationship between independent and dependent variables can be adequately captured by a linear function. The confirmation of linearity means that the chosen model is suitable for the data, and the relationships between the predictors and the dependent variable are well-represented. This finding is pivotal because it indicates that the dataset is amenable to regression analysis, allowing for the valid application of statistical techniques to examine the impact of these predictors on own source revenue target.

3.9 Ethical Considerations

The study adhered to rigorous ethical standards, ensuring that the research process was conducted with integrity and respect for the participants' rights. Approval for the study was first obtained from the Board of Graduate Studies at the University of Kabianga, which provided an official letter of introduction. This letter was instrumental in securing a research permit from the National Commission for Science, Technology, and Innovation (NACOSTI), a mandatory requirement for conducting research in Kenya. The NACOSTI permit was then used to request permission from the selected county governments, thereby ensuring that the research was legally and ethically sanctioned by all relevant authorities.

In alignment with ethical research practices, the researcher clearly communicated the study's objectives to all participants, emphasizing that their participation was entirely voluntary and that the information provided would be used exclusively for academic purposes. Participants were assured of their anonymity and the confidentiality of their data, with strict measures in place to protect their identities and the information they shared. Additionally, participants were informed of their right to withdraw from the study at any point without facing any consequences, reinforcing the voluntary nature of their involvement.

Further, the researcher demonstrated academic integrity by diligently citing all sources of information, including peer-reviewed journals, books, published and unpublished theses, and other relevant research materials. This practice not only respected intellectual property rights but also contributed to the transparency and credibility of the research. These ethical considerations were crucial in building trust with participants, ensuring the accuracy of the data collected, and upholding the overall integrity of the study.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

In this chapter, the research findings and discussions are presented. With the aid of version 27 of SPSS, two main quantitative analysis techniques were conducted, that is both descriptive and inferential. Descriptive analysis involved the computation of frequency counts, means, percentage proportions, standard deviations as well as skewness and kurtosis. Inferential analysis on the other hand included the calculation of independent sample t-tests, Pearson correlation as well as regression analysis. Prior to regression analysis, a number of preliminary diagnostic tests were conducted, including tests for normality, homogeneity of variance, linearity as well as multicollinearity. The established findings are then placed within the empirical body of knowledge, in which they are discussed in reference to extant literature. Accordingly, the chapter is structured into two main sections, that is the presentation of results and discussions.

4.2 General and Background information

The section presents the general and demographic information of respondents;

4.2.1 Response Rate

As per the established sample size, a total of 280 structured questionnaires were administered both in person and through email, to five (5) respondent categories, including CECs, CEOs, CCOs, Directors and Revenue officers. Table 4.1 breaks down the return rate for the questionnaires across the different respondent categories.

Table 4.1 Response Rate

Category	Administered	Response	Non-response	Percentage (%)
CECs	6	6	0	100.0
CEOs	6	5	1	83.3
CCOs	6	6	0	100.0
Directors	6	6	0	100.0
Revenue clerks	256	239	17	93.4
Total	280	262	18	93.6

Source: Selected County Governments (2023)

As broken down, the study recorded an overall response rate of 93.6%, which was deemed excellent and adequate for inference. This is in line with Collis and Hussey (2021) who consider a return rate of 70% or higher as excellent, a rate of 60% as good and a rate of 50% as adequate. The exceptional return rate can be attributed to the hiring and training of ten research assistants who helped administer the questionnaires according to the researcher's direction and guidance. It is also attributed to the adherence to data collection protocol across the selected counties, including the presentation of both the authorization letter from the university and the NACOSTI research permit.

4.2.2 Respondent Profile

In this sub-section, the study analyzed respondents' demographic profiles, including gender, age, job titles and length of service in respective positions. Analyzing demographic profiles helps ensure that the study captures a wide range of perspectives.

Gender, age, and job titles can significantly influence how individuals perceive and interact with revenue collection and automation processes. For example, younger employees might be more tech-savvy and open to automation, while older employees might have more traditional views on revenue collection methods. Gender diversity can also bring different approaches to problem-solving and decision-making within the agencies, potentially affecting the implementation and outcomes of revenue collection strategies.

Also, by considering demographic profiles, the study can ensure that the findings are representative of the broader population within county governments. This is important for generalizability, as it increases the likelihood that the results and recommendations will be applicable across different counties and contexts. Understanding the demographic makeup of respondents also helps in interpreting the results, as certain findings may be influenced by the specific characteristics of the sample population. Two pertinent descriptive statistics are employed in this regard, including frequency counts and percentage proportions. Table 4.2 presents the results.

Table 4.2 Respondent Profile

Gender	N	Percent	Valid Percent	Cumulative Percent
Male	137	52.3	52.3	52.3
Female	125	47.7	47.7	100.0
Total	262	100.0	100.0	
Age	N	Percent	Valid Percent	Cumulative Percent
20-29 years	82	31.4	31.4	31.4
30-39 years	75	28.6	28.6	59.9
40-49 years	63	24.0	24.0	84.0
Above 50 years	42	16.0	16.0	100.0
Total	262	100	100	
Title	N	Percent	Valid Percent	Cumulative Percent
CECs	6	2.3	2.3	2.3
CEOs	5	1.9	1.9	4.2
CCOs	6	2.3	2.3	6.5
Directors	6	2.3	2.3	8.8
Revenue clerks	239	91.2	91.2	100.0
Total	262	100.0	100.0	
Years in current position	N	Percent	Valid Percent	Cumulative Percent
1-5 years	126	48.1	48.1	48.1
6-10 years	56	21.4	21.4	69.5
11-15 years	26	9.9	9.9	79.4
15 and above years	54	20.6	20.6	100.0
Total	262	100.0	100.0	

Source: Research Data (2023)

A rather split response rate was recorded between male (52.3%) and female (47.7%) respondents implying that the study findings are equally representative of the diverse perspectives and insights pertinent to the relationship between agency revenue collection, automation and own source revenue target among selected county governments in Kenya, based on gender. The finding is in line with existing literature on gender disparities in various sectors, including governance and public administration.

King (2022) and Kabeer (2019) highlighted the importance of gender diversity in decision-making and governance, as it can lead to a more comprehensive understanding of complex issues and better policy outcomes. In this context, the nearly equal

representation of male and female respondents suggests that the study findings are more likely to reflect a holistic and balanced view of the challenges and opportunities related to revenue collection and automation in county governments. This gender balance aligns with the principles of inclusivity and equitable decision-making, which are essential in fostering effective governance and revenue management. However, further analysis should explore whether gender-specific perspectives or challenges emerge from the data to inform more targeted policy recommendations.

A diverse age demography was also reached in the study, with a majority falling between 20-29 years (31.4%), closely followed by 28.6% aged between 30 and 39 years while 24% were aged between 40 and 49 years. A further 16% were aged above 50 years. The age diversity implies a range of experiences and expectations that should be considered when implementing automation strategies, as different age groups may have varying comfort levels and adaptability to new technologies, which is critical for successful automation initiatives. Accordingly, research in the field of public administration and governance (Rainey & Steinbauer, 2019; Pitts, et al., 2019) has highlighted how generational differences can influence perspectives on technology adoption, attitudes toward change, and work-related values. The dominance of the 20-29 years age group suggests a higher likelihood of receptiveness to technology and automation, which may be beneficial for revenue collection processes in county governments.

As per the sample distribution, a majority of respondents (91.2%) were revenue officers, distantly followed by the three other job titles who recorded rather similar response rates at between 1.9% and 2.3% for CECs, CCOs, Directors and CEOs. The predominance of revenue officers in the study sample, comprising 91.2 % of the respondents, points to the

significance of understanding the perspectives of frontline staff in the context of revenue collection and automation within county governments. Existing literature in the field of public administration and local government (Frederickson & Smith, 2020; Andrews & Moynihan, 2021) has highlighted the pivotal role of lower-level employees in implementing government policies and innovations. Revenue officers, as frontline workers directly involved in revenue collection and its associated processes, can provide invaluable insights into the practical challenges and opportunities related to automation and meeting revenue targets. The smaller percentages of respondents from higher-level positions such as CECs, CCOs, Directors, and CEOs still hold significance, as their input may reflect strategic decision-making and policy perspectives, which can complement and inform the experiences and recommendations of frontline staff. Therefore, this distribution of job titles in the study sample offers a comprehensive view of how various levels of employees within county governments perceive and engage with revenue collection and automation.

A majority of respondents affirmed to having served in current respective positions for less than 5 years (48.1%), quite distantly followed by 21.4% affirming to between 6 and 10 years; then 20.7% having served for 15 years and above. Only 9.9 % had served for between 11 and 15 years. The distribution of respondents based on the length of their service in their respective positions, with a majority (48.1%) having served for less than 5 years, reflects the importance of considering organizational tenure in the context of assessing revenue collection and automation. This finding resonates with research in public administration and organizational behavior (Rainey, 2021; Podsakoff et al., 2022),

which highlights the potential impact of tenure on employees' attitudes, adaptability to change, and understanding of organizational processes.

Those with shorter tenures may offer fresh perspectives and enthusiasm for technological innovations, potentially driving the adoption of automation in revenue collection. In contrast, the 20.6% who have served for 15 years or more may bring valuable experience and historical context to the study, aiding in the assessment of long-term trends and policy implications. The distribution thus ensures a balance of insights from both newer entrants and long-standing employees, enriching the study's understanding of the relationship between agency revenue collection, automation, and own source revenue attainment within county governments in Kenya.

4.3 Presentation of Descriptive Results

This section presents the descriptive results which are presented thematically as per the study objectives.

4.3.1 Competency of Revenue Collectors

The study sought to assess the competencies of revenue collectors among selected county governments in Kenya. To this end, respondents were asked to rate their individual levels of agreement with items posed in reference to competency of revenue collectors as applies in their respective county governments. Responses were given on a five-point Likert scale, where 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly Agree. A mean of between 0.0 and 2.5 meant strongly disagreed while a mean of between 2.6 and 5.0 meant strongly agree. The results are as presented in Table 4.3.

Table 4.3 Competency of Revenue Collectors

	Mean	Std.	Skewness	Kurtosis		
	Statistic	Statistic	Statistic	Std.	Statistic	Std.
				Error		Error
Achievement of county revenue targets would be possible if all revenue collection employees are trained on methods of revenue collection.	4.4821	.83797	-2.207	.146	5.661	.290
Having many years of revenue collection experience will help one achieve revenue collection target	4.0504	1.01130	-.924	.146	.130	.291
Attainment of revenue collection targets result from revenue collection officer effective public relations techniques.	4.3018	.83699	-1.482	.147	2.981	.293
Achievement of revenue collection targets would result through training and development in revenue collection techniques.	4.4638	.70489	-1.502	.147	3.069	.292
Training of staff on technology used in revenue collection would lead to achievement of revenue targets	4.3273	.79077	-1.271	.146	1.975	.291
Having a code of conduct would lead to achievement of revenue targets	4.1795	.88742	-1.314	.147	2.489	.294
Sensitization of staff on the rules and regulations governing revenue collections would lead to achievement of revenue targets	4.2107	.87286	-1.368	.146	2.319	.290
Overall	4.288	0.849	-1.438		2.661	

Source: Research Data(2023)

An overall mean of 4.288 was established at a standard deviation of 0.849, implying that a majority of participants highly approve of the competency of revenue collectors in their respective counties. The data was also found to be normally distributed, with both skewness (-1.438) and kurtosis (2.661) falling within the acceptable thresholds of

between -1.96 and 1.96 ; and between -3 and 3 as per Saunders et al. (2019). A majority of participants particularly affirmed that achievement of county revenue targets would be possible if all revenue collection employees are trained on methods of revenue collection (4.4821); achievement of revenue collection targets would result through training and development in revenue collection techniques (4.3018); training of staff on technology used in revenue collection would lead to achievement of revenue targets (4.3273); attainment of revenue collection targets result from revenue collection officer effective public relations techniques (4.4638); and that sensitization of staff on the rules and regulations governing revenue collections would lead to achievement of revenue targets (4.2107).

The study findings regarding the high approval of revenue collectors' competencies in selected county governments in Kenya, with an overall mean of 4.288 and a relatively low standard deviation of 0.849, underscore the significance of skilled and competent revenue collection employees in achieving own source revenue targets. The findings contradict Salman et al., (2020) who discovered that self-competence had a considerable detrimental impact on performance, but are in line with previous research in the field of public administration and revenue management (Haryono et al., 2020; Manik & Syafrina, 2018), which emphasizes the importance of human capital and training in enhancing the effectiveness of revenue collection. The participants' strong agreement that training in revenue collection methods, techniques, technology, public relations, and regulatory compliance are critical factors for achieving revenue targets aligns with the idea that competent and well-trained revenue collectors are better equipped to adapt to changing revenue collection methods, foster positive relationships with taxpayers, and ensure

compliance with relevant regulations, ultimately leading to improved revenue collection outcomes.

4.3.2 Stakeholder Engagement

The study also set out to assess stakeholder engagement among selected county governments in Kenya. To realize this objective, respondents were required to rate their individual levels of agreement with items posed in reference to stakeholder engagement as applies in their respective county governments. Responses were given on a five-point Likert scale, where 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly Agree. A mean of between 0.0 and 2.5 meant strongly disagreed while a mean of between 2.6 and 5.0 meant strongly agree. Results are as presented in Table 4.4.

Table 4.4 Stakeholder Engagement

	Mean	Std. Dev	Skewness	Std. Error	Kurtosis	Std. Error
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
Taxpayer sensitization on their need to pay county taxes would lead to achievement of revenue targets	4.3827	.80180	-1.694	.146	3.869	.292
Consultation with Commission on Revenue Allocation when setting taxes and levies would lead to achievement of revenue targets	3.9422	.94231	-.879	.146	.586	.292
Consultation with the Office of the Controller of Budget for review of targets would lead to the achievement of revenue targets	3.8602	.98468	-.741	.146	.166	.291
Consultation with The National Treasury on target setting and forecasting would lead to achievement of revenue targets	3.8917	.95696	-.656	.146	-.004	.292
Communication with taxpayers through simple and easy to access channels of communication like SMS, public notices and barazas would lead to achievement of revenue targets	4.3237	.79453	-1.343	.146	2.252	.291
Sensitization to taxpayers on county levies upon amendment of the Finance Act would lead to achievement of revenue targets	4.1942	.89020	-1.598	.146	3.739	.291
Preparation of statutory reports to CRA, OCOB and National Treasury within timelines would lead to achievement of revenue targets	3.8917	1.01929	-1.125	.146	1.318	.292
Submission of statutory reports to CRA, OCOB and National Treasury within timelines would lead to achievement of revenue targets	3.6942	1.11603	-.818	.146	.070	.291
Scheduled public participations and consultative meetings before amendment of Finance Act would lead to achievement of revenue targets	4.1362	.91121	-1.394	.146	2.324	.291
Incorporating taxpayers inputs when amending the Finance Act would lead to revenue target	4.2059	.94199	-1.783	.148	4.463	.294
Commission on Revenue Allocation and Office of the Controller of Budget feedback on proposals on revenue raising measures would lead to achievement of revenue targets	3.9527	.95975	-.853	.147	.532	.293
Direct communication by taxpayers to the county government would lead to achievement of revenue targets	3.9821	1.06093	-1.147	.146	.824	.291
Complaint handling procedure for tax disputes would lead to achievement of revenue targets	4.1769	.84341	-.966	.146	.861	.292
Total	4.049	0.940	-1.154		1.615	

An overall mean of 4.049 was established at a standard deviation of 0.940, implying that a majority of participants highly approve of stakeholder engagement in their respective counties. The data was also found to be normally distributed, with both skewness (-1.154) and kurtosis (1.615) falling within the acceptable thresholds of between -1.96 and 1.96; and between -3 and 3 as per Saunders et al. (2019). A majority of participants particularly affirmed that taxpayer sensitization on their need to pay county taxes would lead to achievement of revenue targets (4.3827); communication with taxpayers through simple and easy to access channels of communication like SMS, public notices and barazas would lead to achievement of revenue targets (4.3237); and that sensitization to taxpayers on county levies upon amendment of the Finance Act would lead to achievement of revenue targets (4.1942).

The study's findings, with an overall mean of 4.049 and a standard deviation of 0.940, indicate that a significant majority of participants highly value stakeholder engagement in the context of achieving own source revenue targets in selected Kenyan county governments. These results align with the growing body of literature on the importance of stakeholder engagement in public administration and revenue management (Mulgan, 2020; Osborne, 2020). The participants' strong agreement that taxpayer sensitization, effective communication channels, and awareness of changes in county levies play a crucial role in revenue target supports the notion that active engagement with stakeholders, particularly taxpayers, can foster compliance, transparency, and trust.

This, in turn, can enhance revenue collection by promoting cooperation and ensuring that stakeholders are well-informed about their tax obligations, ultimately contributing to the achievement of revenue targets.

4.3.3 Regulatory Compliance

The study further examined regulatory compliance among selected county governments in Kenya. To this end, respondents were asked to rate their individual levels of agreement with items posed in reference to regulatory compliance as applies in their respective county governments. Responses were given on a five-point Likert scale, where 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly Agree. A mean of between 0.0 and 2.5 meant strongly disagreed while a mean of between 2.6 and 5.0 meant strongly agree. Results are as presented in Table 4.5.

Table 4.5 Regulatory Compliance

	Mean	Std. Dev	Skewness	Kurtosis		
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Presence of approved policies, rules and regulations governing revenue collection would lead to achievement of revenue targets	4.2122	.83359	-1.169	.146	1.723	.291
Amendments to the County Finance Acts to comply with legislations governing specific revenue streams like Trade Licensing Act would lead to achievement of revenue targets	4.1362	.83714	-1.373	.146	3.518	.291
Adherence to legislation setting up the structures of revenue sections or agencies with regard to human resource and financial autonomy of the agencies or boards would lead to achievement of revenue targets	4.0179	.88579	-.876	.146	.838	.290
Presence of primary revenue administration laws for all revenue streams would lead to achievement of revenue targets	4.0681	.85601	-.686	.146	-.132	.291
Primary revenue administration laws drafted in consultation and collaboration with the National Government would lead to achievement of revenue targets	3.7814	1.02076	-.838	.146	.353	.291
Consultative legislative drafting and review of revenue administration laws before approval would lead to achievement of revenue targets	4.0036	.94849	-1.149	.146	1.324	.290
Publishing of revenue administration laws in the local media and notice boards would lead to achievement of revenue targets	4.0536	.97311	-1.189	.146	1.433	.290
Publicizing of the revenue laws before implementation in local radio stations and county websites would lead to achievement of revenue targets	4.0071	1.01598	-1.130	.146	1.042	.290
Annual review of the Finance Act to capture changes in the economic outlook in the County would lead to achievement of revenue targets	4.1964	.93555	-1.459	.146	2.599	.290
Overall	4.053	0.923	-1.097		1.411	

Source: Research Data (2023)

An overall mean of 4.053 was established at a standard deviation of 0.923, implying that a majority of participants highly approve of regulatory compliance in their respective counties. The data was also found to be normally distributed, with both skewness (-1.097) and kurtosis (1.411) falling within the acceptable thresholds of between -1.96 and 1.96; and between -3 and 3 as per Saunders et al. (2019). A majority of participants particularly affirmed that annual review of the Finance Act to capture changes in the economic outlook in the County would lead to achievement of revenue targets (4.2290); presence of approved policies, rules and regulations governing revenue collection would lead to achievement of revenue targets (4.2122); amendments to the County Finance Acts to comply with legislations governing specific revenue streams like Trade Licensing Act would lead to achievement of revenue targets (4.1362); Presence of primary revenue administration laws for all revenue streams would lead to achievement of revenue targets (4.0681); and that Publishing of revenue administration laws in the local media and notice boards would lead to achievement of revenue targets (4.0536).

The study's findings, with an overall mean of 4.053 and a standard deviation of 0.923, reflect the strong endorsement of regulatory compliance in the context of achieving own source revenue targets in selected Kenyan county governments. These results resonate with the extensive literature emphasizing the critical role of regulatory frameworks and compliance in public revenue management (Bird & Zolt, 2022; Shah, 2021).

The participants' agreement that elements such as regular review of finance acts, approved policies and regulations, compliance with relevant legislations, and transparent dissemination of revenue administration laws contribute to revenue target aligns with the idea that a clear and well-regulated fiscal environment fosters tax compliance, reduces

tax evasion, and bolsters revenue collection. This points to the importance of a robust legal and regulatory framework in optimizing revenue collection for local governments.

4.3.4 Revenue Management

The study set out to assess revenue management among selected county governments in Kenya. To address this objective, participants were asked to rate their individual levels of agreement with items posed in reference to regulatory compliance as applies in their respective county governments. Responses were given on a five-point Likert scale, where 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly Agree. A mean of between 0.0 and 2.5 meant strongly disagreed while a mean of between 2.6 and 5.0 meant strongly agree. Results are as presented in Table 4.6.

Table 4.6 Revenue Management

	Mean	Std. Deviation	Skewness	Std. Kurtosis	Std. Kurtosis	
	Statistic	Statistic	Statistic	Error	Statistic	Error
Daily Reconciliations of revenue collected would lead to achievement of revenue targets	4.1864	.89826	-1.366	.146	2.221	.291
Scheduled Internal audit and checks on revenue collected would lead to achievement of revenue targets	4.1913	.96845	-1.718	.146	3.934	.292
Weekly analysis on key revenue streams performance would lead to achievement of revenue targets	4.2982	.73383	-1.091	.147	1.791	.293
Maintenance of separate revenue collection accounts for revenue streams would lead to achievement of revenue targets	3.7849	1.10117	-.884	.146	.356	.291
Trend analysis on revenue collected used in budget forecasting would lead to achievement of revenue targets	3.9607	.98841	-1.132	.146	1.414	.290
Special audits on under-performing revenue streams would lead to achievement of revenue targets	3.9821	.97617	-1.132	.146	1.257	.291
Scheduled Rapid Results Initiatives on revenue collection would lead to achievement of revenue targets	4.0935	.92998	-1.462	.146	3.253	.291
Revenue accounting system capable of analyzing revenue performance trends would lead to achievement of revenue targets	4.1227	.85089	-1.268	.146	2.668	.292
Revenue accounting system capable of revenue reconciliation through third party confirmation would lead to achievement of revenue targets	4.0072	.88551	-.922	.146	.955	.291
Compatible revenue accounting and county government financial reporting system like IFMIS would lead to achievement of revenue targets	3.9713	.98509	-1.239	.146	1.664	.291
Overall	4.060	0.932	-1.221		1.951	

Source: Research Data (2023)

An overall mean of 4.060 was established at a standard deviation of 0.932, implying that a majority of participants highly approve of revenue management in their respective counties. The data was also found to be normally distributed, with both skewness (-1.221) and kurtosis (1.951) falling within the acceptable thresholds of between -1.96 and 1.96; and between -3 and 3 as per Saunders et al. (2019). A majority of participants particularly affirmed that weekly analysis on key revenue streams performance would lead to achievement of revenue targets (4.2982); daily reconciliations of revenue collected would lead to achievement of revenue targets (4.1864); scheduled internal audit and checks on revenue collected would lead to achievement of revenue targets (4.1913); revenue accounting system capable of analyzing revenue performance trends would lead to achievement of revenue targets (4.1227); and that scheduled rapid results initiatives on revenue collection would lead to achievement of revenue targets (4.0935).

The findings of the study, showed that majority of participants strongly affirm the importance of various revenue management in achieving own source revenue targets in Kenyan county governments, align with the existing literature on effective revenue management and fiscal administration (Shibia & Barako, 2015; Kanyinga, 2016). The participants' agreement on the significance of weekly revenue stream analysis, daily reconciliations, internal audits, advanced revenue accounting systems, and rapid results initiatives highlights the crucial role of efficient revenue management techniques. These practices are known to enhance transparency, accountability, and the ability to identify and address revenue leakage, all of which are essential for achieving revenue targets. The study's results underscore the importance of adopting best practices in revenue

management to optimize revenue collection and ensure fiscal sustainability within local government contexts.

4.3.5 Revenue Collection Automation

The study set out to assess revenue collection automation among selected county governments in Kenya. To this end, participants were asked to rate their individual levels of agreement with items posed in reference to revenue collection automation as applies in their respective county governments. Responses were given on a five-point Likert scale, where “1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly Agree.” A mean of between 0.0 and 2.5 meant strongly disagreed while a mean of between 2.6 and 5.0 meant strongly agree. Results are as presented in Table 4.7.

Table 4.7 Revenue Collection Automation

	Mean	Std. Deviation	Skewness	Std. Kurtosis	Std. Error	Std. Error
	Statistic	Statistic	Statistic	Error	Statistic	Error
Web Based systems for revenue automation would lead to achievement of revenue targets	4.1115	.90235	-.935	.146	.620	.291
Automated system for taxpayer registration would lead to achievement of revenue targets	4.2509	.87004	-1.468	.146	2.940	.291
Automated registration that alert the county government on dormant accounts that are not compliant would lead to achievement of revenue targets	4.0968	1.02204	-1.315	.146	1.517	.291
Automated system for taxpayer filing of tax obligation for structured revenue streams like property rates would lead to achievement of revenue targets	4.1254	.94185	-1.164	.146	1.070	.291
Automated system for payment of tax obligation through use of USSD or mobile money would lead to achievement of revenue targets	4.1326	.85682	-.949	.146	.806	.291
Technological upgrade for revenue collection to include emerging revenue sources and streams would lead to achievement of revenue targets	4.2437	.80784	-1.338	.146	2.544	.291
Scheduled software reviews and updates would lead to achievement of revenue targets	4.1898	.76108	-.736	.147	.272	.293
Electronic receipting of all revenues collected would lead to achievement of revenue targets	4.2294	.86357	-1.035	.146	.620	.291
E-government strategy governing revenue collection would lead to achievement of revenue targets	4.0538	1.04261	-1.374	.146	1.839	.291
Overall	4.159	0.896	-1.146		1.359	

Source: Research Data (2024)

An overall mean of 4.159 was established at a standard deviation of 0.896, implying that a majority of participants highly approve of revenue collection automation in their respective counties. The data was also found to be normally distributed, with both skewness (-1.146) and kurtosis (1.359) falling within the acceptable thresholds of between -1.96 and 1.96; and between -3 and 3 as per Saunders et al. (2019). A majority of participants particularly affirmed that automated system for taxpayer registration would lead to achievement of revenue targets (4.2509); technological upgrade for revenue collection to include emerging revenue sources and streams would lead to achievement of revenue targets (4.2437); electronic receipting of all revenues collected would lead to achievement of revenue targets (4.2294); scheduled software reviews and updates would lead to achievement of revenue targets (4.1898); and that automated system for taxpayer filing of tax obligation for structured revenue streams like property rates would lead to achievement of revenue targets (4.1254).

The study's findings, with an overall mean of 4.159 and a standard deviation of 0.896, suggest strong support among participants for the moderating effect of revenue collection automation on achieving own source revenue targets in Kenyan county governments. Similarly, Ndonye (2018) discovered that consumers looking for services find it challenging to submit online applications because they do not have the appropriate technological knowledge. The research also identified a number of obstacles to revenue collection, including the lack of an automated system of revenue collecting, inadequate ICT infrastructure inside the ministry, and staff resistance to change. The participants' agreement that automated systems for taxpayer registration, technological upgrades, electronic receipting, software reviews, and taxpayer filing for structured revenue streams

can contribute to revenue target highlights the transformative potential of technology in enhancing efficiency, reducing administrative burdens, and improving compliance. The study's results emphasize the importance of embracing automation as a valuable tool in optimizing revenue collection processes and achieving fiscal objectives in county governments.

4.3.6 Own Source Revenue Target

The study finally sought to evaluate own source revenue target across the counties surveyed. To this end, participants were asked to rate their individual levels of agreement with items posed in reference to own source revenue target as applies in their respective county governments. Responses were given on a five-point Likert scale, where 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly Agree. A mean of between 0.0 and 2.5 meant strongly disagreed while a mean of between 2.6 and 5.0 meant strongly agree. Results are as presented in Table 4.8.

Table 4.8 Own Source Revenue Target

	Mean	Std. Deviation	Skewness	Std. Error	Kurtosis	Std. Error
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
The county government forecasted revenue for every financial cycle covering all revenue streams would lead to achievement of revenue targets	4.1223	.86204	-1.226	.146	2.079	.291
The county government has a structured method of forecasting the revenue targets	4.1159	.79610	-.995	.147	1.514	.292
The forecasted revenues are used in the preparation of the county budget	4.0945	.94665	-1.204	.147	1.277	.293
Revenue collected is reviewed daily and weekly to check on progress towards achievement of revenue targets	4.2924	.77393	-1.125	.146	1.481	.292
Monitoring and evaluation has been done annually to check on revenues collected would lead to achievement of revenue targets	4.2222	.84014	-1.319	.146	2.331	.291
The county government maintains a revenue arrears register for all revenue streams would lead to achievement of revenue targets	4.1295	.88578	-1.512	.146	4.097	.291
The county government offering waivers on penalties and interest on outstanding amounts of property rates would lead to achievement of revenue targets	4.0288	.98686	-1.057	.146	.844	.291
Revenue arrears collected is part of the revenue target every year	4.1367	.96660	-1.413	.146	2.067	.291
Overall	4.143	0.882	-1.231		1.961	

Source: Research Data (2023)

An overall mean of 4.143 was established at a standard deviation of 0.882, implying that a majority of participants highly approve of own source revenue target in their respective counties. The data was also found to be normally distributed, with both skewness (-1.231)

and kurtosis (1.961) falling within the acceptable thresholds of between -1.96 and 1.96 ; and between -3 and 3 as per Saunders et al. (2019). A majority of participants particularly affirmed that revenue collected is reviewed daily and weekly to check on progress towards achievement of revenue targets (4.2924); monitoring and evaluation has been done annually to check on revenues collected (4.2222); Revenue arrears collected is part of the revenue target every year (4.1367); the county government maintains a revenue arrears register for all revenue streams (4.1295); and that the county government forecasted revenue for every financial cycle covering all revenue streams (4.1223). The study's findings, with an overall mean of 4.143 and a standard deviation of 0.882, indicate strong approval among participants regarding the achievement of own source revenue targets in the surveyed counties.

The study further employed a secondary data extraction tool to determine OSR performance across the selected counties, by assessing the budgeted vis-à-vis the actual OSR collections across the three-year period (FY 2019/2020 TO 2021/2022). Table 4.9 summarizes the results.

Table 4.9 Budgeted Versus Actual Own Source Revenue Collection (Kshs M)

Financial year	2019/2020			2020/2021			2021/2022		
County Government	Target	Actual	% score	Target	Actual	% score	Target	Actual	% score
Nairobi	17,002	8,523	50.1	16,209	9,958	61.4	17,505	10,237	58.5
Meru	705	383	54.3	600	435	72.5	600	418	69.8
Kakamega	1,666	1,180	70.8	1,656	1,118	67.5	1,942	1,309	67.4
Kericho	711	473	66.5	654	595	91.0	1,019	501	49.2
Narok	2,397	2,345	97.8	1,405	618	44.0	4,204	3,061	72.8
Nakuru	2,100	1,354	64.5	1,800	1,628	90.4	2,280	1,611	70.7

Source: Office of Controller of Budget (2023)

As presented in Table 4.9, overall, the performance of these counties varied significantly over the three years. Some counties, like Narok and Nakuru, demonstrated strong performance in specific years but faced challenges in others. Kericho showed a dramatic decline in performance in FY 2021/2022 after a strong performance in FY 2020/2021. Meanwhile, Nairobi, Meru, and Kakamega counties exhibited moderate performance, with gradual improvements or stability in their scores. These fluctuations highlight the need for counties to identify and address the factors influencing their OSR collection performance to achieve more consistent results

Over the three-year period, Nairobi County consistently underperformed in meeting its OSR targets. In FY 2019/2020, the county achieved only 50.1% of its target, collecting Kshs 8,523 million against a target of Kshs 17,002 million. There was a slight improvement in FY 2020/2021, with the county achieving 61.4% of its target after

collecting Kshs 9,958 million. However, this progress was not sustained, as the percentage score slightly dropped to 58.5% in FY 2021/2022, despite an increase in the target to Kshs 17,505 million. Overall, while there were efforts to improve, Nairobi struggled to meet its revenue targets consistently.

Meru County exhibited moderate performance across the three years. In FY 2019/2020, the county achieved 54.3% of its OSR target, collecting Kshs 383 million against a target of Kshs 705 million. The following year, FY 2020/2021, saw a significant improvement with a 72.5% score, as actual collections reached Kshs 435 million against a slightly reduced target of Kshs 600 million. However, in FY 2021/2022, the performance slightly declined to 69.8%, with actual collections of Kshs 418 million. Although there was a noticeable improvement from the first year, Meru County faced challenges in maintaining higher levels of OSR target.

Kakamega County showed relatively stable performance in meeting its OSR targets, though with slight fluctuations. In FY 2019/2020, the county collected Kshs 1,180 million against a target of Kshs 1,666 million, resulting in a 70.8% score. The following year, FY 2020/2021, saw a slight decline, with the county achieving 67.5% of its target after collecting Kshs 1,118 million. This trend continued in FY 2021/2022, with a marginally lower score of 67.4%, despite an increased target of Kshs 1,942 million. Overall, Kakamega maintained a consistent performance, though it faced challenges in improving its revenue collection outcomes.

Kericho County's performance in OSR collection was marked by significant fluctuations. In FY 2019/2020, the county achieved a 66.5% score, collecting Kshs 473 million against a target of Kshs 711 million. There was a substantial improvement in FY 2020/2021, with

the county nearly meeting its target, achieving a 91.0% score after collecting Kshs 595 million. However, this progress was not sustained, as performance dramatically declined in FY 2021/2022 to 49.2%, with the county collecting only Kshs 501 million against a target of Kshs 1,019 million. This decline underscores the volatility in Kericho's revenue collection.

Narok County experienced both high and low performance levels over the three years. In FY 2019/2020, the county almost met its OSR target, achieving a 97.8% score with actual collections of Kshs 2,345 million against a target of Kshs 2,397 million. However, FY 2020/2021 saw a significant drop in performance, with the county collecting only Kshs 618 million, resulting in a 44.0% score. The situation improved in FY 2021/2022, with the county achieving a 72.8% score after collecting Kshs 3,061 million against a much higher target of Kshs 4,204 million. Narok's performance illustrates a recovery after a sharp decline, though it did not reach the levels of the first year.

Nakuru County demonstrated a mix of moderate and strong performance across the three years. In FY 2019/2020, the county collected Kshs 1,354 million against a target of Kshs 2,100 million, achieving a 64.5% score. Performance significantly improved in FY 2020/2021, with the county reaching 90.4% of its target after collecting Kshs 1,628 million. However, in FY 2021/2022, the performance slightly declined to 70.7%, with actual collections of Kshs 1,611 million against an increased target of Kshs 2,280 million. Nakuru showed strong progress in the second year but faced challenges in maintaining that momentum in the subsequent year.

These results align with the extensive literature on effective revenue management and fiscal administration, emphasizing the importance of robust financial planning and

monitoring (Shah, 2021; McLure & Martinez-Vazquez, 2022). The participants' agreement that regular reviews of revenue collection progress, annual monitoring and evaluation, inclusion of revenue arrears in revenue targets, maintenance of comprehensive revenue arrears registers, and accurate revenue forecasting are key to achieving revenue targets points to the significance of sound fiscal management practices. These findings highlight the critical role of effective revenue target setting, tracking, and evaluation in local government fiscal sustainability and underscore the importance of aligning revenue management with best practices in public financial management.

4.4 Inferential Statistics

This section discusses the findings of the inferential statistic obtained from the study.

4.4.1 Pearson Correlation Analysis

According to Creswell and Guetterman (2019), Pearson correlation analysis is a fundamental statistical technique for assessing the strength, direction, and significance of the linear association between two continuous variables. The importance of Pearson correlation analysis lies in its ability to provide valuable insights into the nature and magnitude of these associations (Saunders et al., 2019). By quantifying the degree of correlation, researchers can gauge the strength of the relationships between variables, helping them identify which predictors have a more substantial impact on own source revenue target. Moreover, the analysis informs about the direction of the relationships, whether they are positive or negative (Sekaran & Bougie, 2019). In this study, Pearson correlation analysis was conducted at 95% confidence level, with a view to establish the

strength, direction and significance of the association between own source revenue target and each of the five predictors, that is competency of revenue collectors, stakeholder engagement, regulatory compliance, revenue management and revenue collection automation.

Table 4.10 Pearson Correlation Analysis

		Own Source Revenue Target	Competency of Revenue Collectors	Stakeholder Engagement	Regulatory Compliance	Revenue Management	Revenue Collection Automation
Own Source Revenue Target	Pearson Correlation	1	.545**	.608**	.703**	.669**	.690**
	Sig. (2- tailed)		.000	.000	.000	.000	.000
Competency of Revenue Collectors	Pearson Correlation	.545**	1	.660**	.675**	.577**	.605**
	Sig. (2- tailed)	.000		.000	.000	.000	.000
Stakeholder Engagement	Pearson Correlation	.608**	.660**	1	.763**	.734**	.593**
	Sig. (2- tailed)	.000	.000		.000	.000	.000
Regulatory Compliance	Pearson Correlation	.703**	.675**	.763**	1	.767**	.687**
	Sig. (2- tailed)	.000	.000	.000		.000	.000
Revenue Management	Pearson Correlation	.669**	.577**	.734**	.767**	1	.672**
	Sig. (2- tailed)	.000	.000	.000	.000		.000
Revenue Collection Automation	Pearson Correlation	.690**	.605**	.593**	.687**	.672**	1
	Sig. (2- tailed)	.000	.000	.000	.000	.000	

** . Correlation is significant at the 0.01 level (2-tailed).
Source: Survey Data (2023)

The study established strong, positive and significant relationship between own source revenue target and agency revenue collection as indicated by competency of revenue collectors, stakeholder engagement, regulatory compliance and revenue management; and revenue collection automation. The strongest correlation was established between own source revenue target and regulatory compliance ($r=0.703$; sig. <0.05); followed by Revenue Collection Automation ($r=0.690$; sig. <0.05); revenue management ($r=0.669$; sig. <0.05); stakeholder engagement ($r=0.608$; sig. <0.05); and competency of revenue collectors ($r=0.545$; Sig. <0.05). While the study noted high correlation coefficients between independent variables, including Regulatory Compliance and Revenue Management (.767); Stakeholder Engagement and Regulatory Compliance (.763); and Stakeholder Engagement and Revenue Management (.734), multicollinearity diagnostics confirmed no problem of multicollinearity in the dataset.

The study's findings, which reveal strong, positive, and significant relationships between own source revenue target and various predictors, align with established literature on revenue management, public finance, and governance. The positive correlations are indicative of the potential effectiveness of these factors in improving own source revenue target among county governments, which is essential for fiscal sustainability and public service delivery. The strongest correlation observed with revenue collection automation points to the growing importance of technology in enhancing revenue collection processes, in line with modernization trends in public finance (Bird & Smart, 2022). Additionally, the significant relationships identified between regulatory compliance and revenue management with own source revenue achievement support the notion that adherence to legal and regulatory frameworks and effective financial planning are key

contributors to revenue success (Jain, 2019; Besley & Persson, 2019). The findings also highlight the relevance of stakeholder engagement in local revenue collection, reinforcing the idea that building positive relationships with taxpayers is essential for compliance and revenue generation (Mookerjee, 2022). The study's strong correlations between these factors and own source revenue target emphasize their practical significance and provide valuable insights for policymakers and administrators in county governments seeking to enhance their revenue performance.

4.5 Test of Hypotheses

Regression analysis is a powerful statistical method that was employed in this study to test hypotheses and explore the relationships between multiple predictor variables and the dependent variable, own source revenue target, within the context of selected county governments in Kenya. This rigorous analysis was conducted at a 95% confidence level, a commonly accepted threshold for statistical significance. It allowed the researcher to investigate how variations in competency of revenue collectors, stakeholder engagement, regulatory compliance, revenue management, and revenue collection automation influence the achievement of revenue targets; as the interactive effect of revenue collection automation with agency revenue collection variables and its effect thereof on the relationship between agency revenue collection and own source revenue targets. By applying regression analysis, the study aimed to provide a deeper understanding of the factors that drive revenue collection efficiency and effectiveness, offering valuable insights for decision-makers in the public sector and contributing to the body of knowledge in the field of public finance and governance. Regression analysis was also used to test the stated hypotheses.

4.5.1 Competency of Revenue Collectors and own source revenue targets

The first null hypothesis stated that there is no statistically significant relationship between competencies of revenue collectors and own source revenue targets among selected county governments in Kenya (H_{01}). To test this hypothesis, a simple linear regression was conducted, producing three outputs including model summary, ANOVA and coefficients.

Table 4.11 Model Summary for Model I

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.545 ^a	.297	.294	3.92633

a. Predictors: (Constant), Competency of Revenue Collectors

b. Dependent Variable: Own Source Revenue Target

Source: Research Data (2023)

A correlation coefficient of 0.545 was established, implying a strong linear relationship between competency of revenue collectors and own source revenue target. An R square of 0.297 was also established, implying that competency of revenue collectors accounts for a notable 29.7% of the variance in own source revenue target while the balance of 70.3% is accounted for by factors excluded in the regression model.

The strong positive correlation between the competency of revenue collectors and OSR target aligns with findings from existing studies that emphasize the critical role of human capital in public finance management. The R square value of 0.297 suggests that while competency is an important factor, it is not the sole determinant of OSR target. This finding is consistent with the literature that recognizes multiple determinants of revenue

collection performance. Johnson and Müller (2020), for example, found that factors such as the adoption of technology, stakeholder engagement, regulatory frameworks, and institutional governance also play significant roles in determining revenue outcomes. Their research on local governments in Germany indicated that even with highly competent revenue collectors, OSR targets could be undermined by weak governance structures or poor technological integration. Studies like those by Park and Lee (2022) in South Korea have demonstrated that integrating advanced revenue management systems, enhancing stakeholder participation, and ensuring regulatory compliance are crucial in complementing the efforts of competent revenue collectors. Their research indicated that comprehensive strategies that combine human capital development with technological and regulatory enhancements tend to yield better revenue outcomes.

Table 4.12 ANOVA Statistics for Model I

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1658.795	1	1658.795	107.602	.000 ^b
	Residual	3931.088	255	15.416		
	Total	5589.883	256			

a. Dependent Variable: Own Source Revenue Target

b. Predictors: (Constant), Competency of Revenue Collectors

Source: Research Data (2024)

ANOVA statistics was found to be significant ($F=107.602$, $\text{Sig.} < 0.05$), implying that the regression model adopted was statistically significant, and can be relied upon to make further inferences. The regression Sum of Squares was recorded at 1658.795 out of 5589.883, further confirming that competency of revenue collectors accounts for a notable 29.7% of the variance in own source revenue target while the balance of 70.3% is

accounted for by factors excluded in the regression model as indicated by the residual sum of squares (3931.088).

Table 4.13 Coefficients for Model I

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	14.258	1.859		7.672	.000
	Competency of Revenue Collectors	.635	.061	.545	10.373	.000

a. Dependent Variable: Own Source Revenue Target

Source: Research Data (2024)

A beta coefficient of .635 was recorded in competency of revenue collectors, implying that keeping other factors constant, a unit change in competency of revenue collectors would result in .635 change in own source revenue target. The finding was also significant at 95% confidence level (Sig. <0.05), indicating that competency of revenue collectors has a statistically significant relationship with own source revenue target. The study thus rejects the first null hypothesis that states that there is no statistically significant relationship between competencies of revenue collectors and own source revenue targets among selected county governments in Kenya (H_01).

Taking the regression model: $Y = \beta_0 + \beta_1 X_1$; the model can be rewritten as follows, based on the regression analysis:

Own source revenue target = 14.258 + .635 (competency of revenue collectors).

The beta coefficient of .635 in competencies of revenue collectors signifies the strength and direction of the relationship between competency of revenue collectors and own

source revenue target in the context of selected county governments in Kenya. Therefore, the statistically significant relationship between competency on revenue target ($\beta = .635$, $p = 0.000$, Sig. <0.05) emphasizes the practical importance of investing in the training and development of revenue collection personnel within county governments.

4.5.2 Stakeholder Engagement and own source revenue targets

The second null hypothesis stated that there is no statistically significant relationship between stakeholders' engagement and own source revenue targets among selected county governments in Kenya (H_02). To test this hypothesis, a simple linear regression was also conducted:

Table 4.14 Model Summary for Model II

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.608 ^a	.369	.367	3.87886

a. Predictors: (Constant), Stakeholder Engagement

b. Dependent Variable: Own Source Revenue Target

Source: Research Data (2023)

A correlation coefficient of 0.608 was established, implying a strong linear relationship between stakeholders' engagement and own source revenue target. An R square of 0.369 was also established, implying that stakeholders' engagement accounts for a notable 36.9% of the variance in own source revenue target while the balance of 63.1% is accounted for by factors excluded in the regression model.

Table 4.15 ANOVA for Model II

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2202.467	1	2202.467	146.387	.000 ^b
	Residual	3761.387	250	15.046		
	Total	5963.853	251			

a. Dependent Variable: Own Source Revenue Target

b. Predictors: (Constant), Stakeholder Engagement

Source: Research Data (2023)

ANOVA statistics was found to be significant (F=146.387, Sig. <0.05), implying that the regression model adopted was statistically significant, and can be relied upon to make further inferences. The regression Sum of Squares was recorded at 2202.467 out of 5963.853, further confirming that stakeholders' engagement accounts for a notable 36.9% of the variance in own source revenue target while the balance of 63.1% is accounted for by factors excluded in the regression model as indicated by the residual sum of squares (3761.387).

Table 4.16 Coefficients for Model II

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.269	1.673		7.933	.000
	Stakeholder Engagement	.380	.031	.608	12.099	.000

a. Dependent Variable: Own Source Revenue Target

Source: Research Data (2023)

A beta coefficient of .380 was recorded in stakeholders' engagement, implying that keeping other factors constant, a unit change in stakeholders' engagement would result in .380 change in own source revenue target. The finding was also significant at 95% confidence level (Sig. <0.05), indicating that stakeholders' engagement has a statistically significant relationship with own source revenue target. The study thus rejects the second null hypothesis that states that there is no statistically significant relationship between stakeholders' engagement and own source revenue targets among selected county governments in Kenya (H₀₂).

Taking the regression model: $Y = \beta_0 + \beta_2 X_2$; the model can be rewritten as follows, based on the regression analysis:

Own source revenue target = 13.269 + .380 (stakeholders' engagement).

The beta coefficient of .380 representing the influence of stakeholder engagement on own source revenue target, along with its statistical significance at a 95% confidence level, highlights the pivotal role of engaging stakeholders in the context of county governments in Kenya. The rejection of the null hypothesis (H₀₂) points to the practical significance of stakeholders' engagement as a factor that significantly influences own source revenue target ($\beta = .380$, $p = 0.000$, Sig. <0.05).

4.5.3 Regulatory Compliance and own source revenue targets

The third null hypothesis stated that there is no statistically significant relationship between regulatory compliance and own source revenue targets among selected county governments in Kenya (H₀₃). To test this hypothesis, a simple linear regression was also conducted:

Table 4.17 Model Summary for Model III

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.703 ^a	.494	.492	3.44719

a. Predictors: (Constant), Regulatory Compliance

b. Dependent Variable: Own Source Revenue Target

Source: Research Data (2023)

A correlation coefficient of 0.703 was established, implying a strong linear relationship between regulatory compliance and own source revenue target. An R square of 0.494 was also established, implying that regulatory compliance accounts for a notable 49.4% of the variance in own source revenue target while the balance of 50.6% is accounted for by factors excluded in the regression model.

Table 4.18 ANOVA for Model III

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3064.209	1	3064.209	257.862	.000 ^b
	Residual	3137.145	264	11.883		
	Total	6201.353	265			

a. Dependent Variable: Own Source Revenue Target

b. Predictors: (Constant), Regulatory Compliance

Source: Research Data (2023)

ANOVA statistics was found to be significant ($F=257.862$, $\text{Sig.} < 0.05$), implying that the regression model adopted was statistically significant, and can be relied upon to make further inferences. The regression Sum of Squares was recorded at 3064.209 out of 6201.353, further confirming that regulatory compliance accounts for a notable 49.4% of the variance in own source revenue target while the balance of 50.6% is accounted for by factors excluded in the regression model as indicated by the residual sum of squares (3137.145).

Table 4.19 Coefficients for Model III

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	12.296	1.320		9.316	.000
	Regulatory Compliance	.572	.036	.703	16.058	.000

a. Dependent Variable: Own Source Revenue Target

Source: Research Data (2023)

A beta coefficient of .572 was recorded in regulatory compliance, implying that keeping other factors constant, a unit change in regulatory compliance would result in .572 change in own source revenue target. The finding was also significant at 95% confidence level ($\text{Sig.} < 0.05$), indicating that regulatory compliance has a statistically significant relationship with own source revenue target. The study thus rejects the third null hypothesis that states that there is no statistically significant relationship between

regulatory compliance and own source revenue targets among selected county governments in Kenya (H₀₃).

Taking the regression model: $Y = \beta_0 + \beta_3 X_3$; the model can be rewritten as follows, based on the regression analysis:

Own source revenue target = 12.296 + .570 (Regulatory compliance).

The beta coefficient of .570 illustrating the impact of regulatory compliance on own source revenue target, coupled with its statistical significance at a 95% confidence level ($\beta = .570$, $p = 0.000$, Sig. <0.05), underlines the critical role of adhering to regulatory frameworks in the revenue collection process within county governments in Kenya. The rejection of the null hypothesis (H₀₃) points to the practical importance of regulatory compliance as a key determinant of own source revenue target, suggesting that county governments should focus on strengthening their regulatory and legal frameworks to enhance revenue collection and promote fiscal sustainability.

4.5.4 Revenue Management and own source revenue targets

The fourth null hypothesis stated that there is no statistically significant relationship between revenue management and own source revenue targets among selected county governments in Kenya (H₀₄). To test this hypothesis, a simple linear regression was also conducted:

Table 4.20 Model Summary for Model IV

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.669 ^a	.447	.445	3.55406

a. Predictors: (Constant), Revenue Management

b. Dependent Variable: Own Source Revenue Target

Source: Research Data (2023)

A correlation coefficient of 0.669 was established, implying a strong linear relationship between revenue management and own source revenue target. An R square of 0.447 was also established, implying that revenue management accounts for a notable 44.7% of the variance in own source revenue target while the balance of 55.3% is accounted for by factors excluded in the regression model.

Table 4.21 ANOVA for Model IV

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2636.323	1	2636.323	208.712	.000 ^b
	Residual	3258.893	258	12.631		
	Total	5895.215	259			

a. Dependent Variable: Own Source Revenue Target

b. Predictors: (Constant), Revenue Management

Source: Research Data (2024)

ANOVA statistics was found to be significant (F=208.712, Sig. <0.05), implying that the regression model adopted was statistically significant, and can be relied upon to make further inferences. The regression Sum of Squares was recorded at 2636.323 out of 5895.215, further confirming that revenue management accounts for a notable 44.7% of

the variance in own source revenue target while the balance of 55.3% is accounted for by factors excluded in the regression model as indicated by the residual sum of squares (3258.893).

Table 4.22 Coefficients for Model IV

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	12.194	1.473		8.277	.000
	Revenue Management	.517	.036	.669	14.447	.000

a. Dependent Variable: Own Source Revenue Target

Source: Research Data (2023)

A beta coefficient of .517 was recorded in revenue management, implying that keeping other factors constant, a unit change in revenue management would result in .517 change in own source revenue target. The finding was also significant at 95% confidence level (Sig. <0.05), indicating that revenue management has a statistically significant relationship with own source revenue target. The study thus rejects the third null hypothesis that states that there is no statistically significant relationship between revenue management and own source revenue targets among selected county governments in Kenya (H₀₄).

Taking the regression model: $Y = \beta_0 + \beta_4 X_4$; the model can be rewritten as follows, based on the regression analysis:

$$\text{Own source revenue target} = 12.194 + .517 (\text{Revenue management}).$$

The beta coefficient of .517, along with its statistical significance at a 95% confidence level ($\beta = .517$, $p = 0.000$, Sig. <0.05), highlights the substantial influence of effective revenue management on own source revenue target within county governments in Kenya.

4.5.5 Agency Revenue Collection and Own Source Revenue Target

A multiple regression analysis was conducted to assess the relationship between agency revenue collection as indicated by competency of revenue collectors, stakeholder engagement, regulatory compliance and revenue management. Three outputs were further produced, including a model summary, ANOVA and Coefficients.

Table 4.23 Model Summary for Model V

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.734 ^a	.539	.531	3.25503	.734 ^a

a. Predictors: (Constant), Revenue Management, Competency of Revenue Collectors, Stakeholder Engagement, Regulatory Compliance

b. Dependent Variable: Own Source Revenue Target

Source: Research Data (2023)

A correlation coefficient of .734 was established, implying a strong linear relationship between own source revenue target and agency revenue collection as indicated by competency of revenue collectors, stakeholder engagement, regulatory compliance and revenue management. An R square of .539 was also established, implying that agency revenue collection accounts for a notable 53.9% of the variance in own source revenue

target while the balance of 46.1% is accounted for by factors excluded in the regression model.

Table 4.24 ANOVA for Model V

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2886.775	4	721.694	68.115	.000 ^b
	Residual	2468.687	233	10.595		
	Total	5355.462	237			

a. Dependent Variable: Own Source Revenue Target

b. Predictors: (Constant), Revenue Management, Competency of Revenue Collectors, Stakeholder Engagement, Regulatory Compliance

Source: Research Data (2023)

ANOVA statistics was found to be significant ($F=68.115$, $p<.05$), implying that the regression model adopted was statistically significant, and can be relied upon to make further inferences. The regression Sum of Squares was recorded at 2886.775 out of 5355.462, further confirming that agency revenue collection as indicated by competency of revenue collectors, stakeholder engagement, regulatory compliance and revenue management accounts for a notable 53.9% of the variance in own source revenue target while the balance of 46.1% is accounted for by factors excluded in the regression model as indicated by the residual sum of squares (2468.687).

Table 4.25 Coefficients for Model V

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	8.313	1.697		4.900	.000
	Competency of Revenue Collectors	.140	.075	.120	1.878	.062
	Stakeholder Engagement	.010	.047	.016	.215	.830
	Regulatory Compliance	.246	.068	.305	3.642	.000
	Revenue Management	.279	.060	.366	4.660	.000

Source: Research Data (2023)

A beta coefficient of .140 was recorded in competency of revenue collectors, implying that keeping other factors constant, a unit change in competency of revenue collectors would result in .140 change in own source revenue target. The finding was however not significant at 95% confidence level ($p = .062$, Sig. >0.05), indicating that in the multivariate model, competency of revenue collectors does not have a statistically significant relationship with own source revenue target.

A beta coefficient of .010 was recorded in stakeholder engagement, implying that keeping other factors constant, a unit change in stakeholder engagement would result in .010 change in own source revenue target. The finding was however also not significant at 95% confidence level ($p = .830$, Sig. >0.05), indicating that in the multivariate model,

stakeholder engagement does not have a statistically significant relationship with own source revenue target.

A beta coefficient of .246 was further recorded in regulatory compliance, implying that keeping other factors constant, a unit change in regulatory compliance would result in .246 change in own source revenue target. The finding was significant at 95% confidence level ($p = 0.000$, Sig. <0.05), indicating that in the multivariate model, regulatory compliance has a statistically significant relationship with own source revenue target.

A beta coefficient of .279 was finally recorded in revenue management, implying that keeping other factors constant, a unit change in revenue management would result in .279 change in own source revenue target. The finding was also significant at 95% confidence level ($p = 0.000$, Sig. <0.05), indicating that in the multivariate model, revenue management also has a statistically significant relationship with own source revenue target.

Taking the regression model: $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$; the model can be rewritten as follows, based on the regression analysis:

Own source revenue target = $8.313 + .140$ (Competency of Revenue Collectors) + $.010$ (Stakeholder Engagement) + $.246$ (Regulatory Compliance) + $.279$ (Revenue Management)

In summary, the study found out that regulatory compliance ($\beta=.246$, $p <0.05$) and revenue management ($\beta=.279$, $p <0.05$) had greater contribution to OSR target and their contribution was significant. On the other hand, competency of revenue collectors

($\beta=.140$, $p < 0.05$) and stakeholder engagement ($\beta=.010$, $p < 0.05$) had a lesser contribution to OSR target and their contribution was not significant.

The significant impact of regulatory compliance on OSR target ($\beta = .246$, $p < 0.05$) aligns with studies that emphasize the importance of strong regulatory frameworks in ensuring effective revenue collection. For instance, Al-Mutairi and Al-Shammari (2020) found that municipalities with rigorous financial controls and adherence to regulatory frameworks were more effective in meeting their revenue targets. This supports the notion that compliance with regulations is crucial in maintaining fiscal discipline and enhancing revenue performance. The significant contribution of revenue management ($\beta = .279$, $p < 0.05$) to OSR target is consistent with the findings of Miller and Roberts (2021) and Johnson and Müller (2020). Both studies highlight the critical role of effective revenue management strategies, such as strategic budgeting and risk management, in achieving financial targets. These findings reinforce the idea that robust revenue management are essential for county governments in Kenya to meet their OSR targets, echoing global best practices.

Although the study found that the competency of revenue collectors had a lesser and non-significant contribution to OSR target ($\beta = .140$, $p < 0.05$), this contrasts with some empirical literature. For example, Waddell et al. (2019) argue that competency in revenue collection is crucial for effective revenue management, noting that staff training and development are key to improving revenue outcomes. The disparity in findings might be due to differences in the contexts studied or the specific competencies measured. It suggests that while competency is generally important, other factors like regulatory

compliance and revenue management might overshadow its direct impact in Kenya County governments contexts.

The finding that stakeholder engagement had the least and non-significant contribution to OSR target ($\beta = .010$, $p < 0.05$) contrasts with the literature that emphasizes the importance of public participation and engagement in revenue management. For instance, Clark and Mitchell (2023) highlighted that citizen engagement can be a critical factor in ensuring the success of revenue management strategies. The gap here could indicate that, in the context of your study, stakeholder engagement practices may not be effectively integrated or may lack the depth needed to significantly impact revenue outcomes. Alternatively, it could reflect the challenges of translating engagement into tangible revenue results, especially in a public sector context.

4.5.6 Competency of Revenue Collectors, Automation and Own Source Revenue Targets

The fifth null hypothesis further stated that revenue collection automation does not have statistically significant moderating effect on competency of revenue collectors and own source revenue targets among selected county governments in Kenya (H_{05}). Testing for moderation involves assessing whether the relationship between an independent variable and a dependent variable is influenced by a third variable, known as the moderator. A hierarchical regression model was thus adopted in this regard. The process typically begins by standardizing the independent variable and the moderator by computing their z-scores, which transforms the variables into a common scale with a mean of zero and a standard deviation of one. This standardization simplifies the interaction analysis and helps in interpreting the effects. Next, the interaction term is created by multiplying the z-

scores of the independent variable and the moderator. This interaction term is then included in a regression model alongside the independent variable and moderator to evaluate its effect on the dependent variable. The significance of the interaction term indicates whether the moderator significantly alters the strength or direction of the relationship between the independent variable and dependent variable. This approach allows researchers to determine if and how the moderator influences the primary relationship under investigation. Three outputs were further produced, including a model summary, ANOVA and Coefficients.

Table 4.26 Model Summary for Model VI

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.712 ^a	.507	.501	3.33120

a. Predictors: (Constant), Iteration1, Revenue Collection Automation, Competency of Revenue Collectors

Source: Research Data (2023)

The correlation coefficient of .712 indicates a strong positive relationship between the predictor variables (competency of revenue collectors, revenue collection automation, and their interaction) and the dependent variable (own source revenue target). The R Square value of .507 shows that approximately 50.7% of the variance in own source revenue target can be explained by the model, that is the combination of competency of revenue collectors, revenue collection automation, and their interaction.

Table 4.27 ANOVA for Model VI

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2820.513	3	940.171	84.724	.000 ^b
	Residual	2740.929	247	11.097		
	Total	5561.442	250			

a. Dependent Variable: Own Source Revenue Target

b. Predictors: (Constant), Interaction, Revenue Collection Automation, Competency of Revenue Collectors

Source: Research Data (2023)

The ANOVA results further confirm the model's significance. The regression sum of squares (2820.513) compared to the residual sum of squares (2740.929) indicates that a substantial portion of the variability in own source revenue target is explained by the independent variables. The F-statistic (84.724) is quite large, with a p-value of .000, which is far below the conventional significance level of 0.05. This indicates that the overall regression model is statistically significant and that the predictors together significantly impact the dependent variable.

Table 4.28 Coefficients for Model VI

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	11.150	2.017		5.528	.000
	Competency of Revenue Collectors	.203	.069	.174	2.954	.003
	Revenue Collection Automation	.431	.046	.550	9.428	.000
	Interaction	-.209	.150	-.075	-1.395	.164

a. Dependent Variable: Own Source Revenue Target

Source: Research Data (2023)

Taking the regression model: $Y = \beta_0 + \beta_1 X_1 + \beta_2 M + \beta_3 X_1 * M + \epsilon$; the model can be rewritten as follows, based on the regression analysis:

Own source revenue target = 11.150 + .203 (Competency of Revenue Collectors) + .431 (Revenue Collection Automation) + -.209 (Interaction)

The coefficients table provides insight into the individual contributions of each predictor. The competency of revenue collectors has a positive and significant effect on own source revenue target ($B = .203$, $p = .003$), indicating that enhancing the skills and effectiveness of revenue collectors directly improves revenue outcomes. Revenue Collection Automation also has a positive and significant impact ($B = .431$, $p = .000$), suggesting that the implementation of automated systems substantially enhances revenue collection efficiency. However, the interaction term between competency of revenue collectors and revenue collection automation ($B = -.209$, $p = .164$) is not statistically significant, implying that while each factor is crucial independently, their combined effect does not significantly alter the outcome. The study thus fails to reject the fifth null hypothesis that states that revenue collection automation does not have statistically significant moderating effect on competency of revenue collectors and own source revenue targets among selected county governments in Kenya (H_{05}). It is then concluded that revenue collection automation does not have a statistically significant moderating effect on the relationship between competency of revenue collectors and own source revenue targets among selected county governments in Kenya.

4.5.7 Stakeholder Engagement, Automation and Own Source Revenue Targets

The sixth null hypothesis further stated that revenue collection automation does not have statistically significant moderating effect on stakeholder engagement and own source revenue targets among selected county governments in Kenya (H_06). Three outputs were further produced, including a model summary, ANOVA and Coefficients.

Table 4.29 Model Summary for Model VII

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.739 ^a	.547	.541	3.31930

a. Predictors: (Constant), Interaction, Stakeholder Engagement, Revenue Collection Automation

Source: Research Data (2023)

The model summary reveals that the R-value is .739, indicating a strong positive correlation between the independent variables—stakeholder engagement, revenue collection automation, and their interaction—and the dependent variable, own source revenue target. The R Square value of .547 implies that 54.7% of the variance in own source revenue target is explained by these predictors, suggesting that the model is a strong predictor of revenue target in the selected counties.

Table 4.30 ANOVA for Model VII

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3217.046	3	1072.349	97.329	.000 ^b
	Residual	2666.291	242	11.018		
	Total	5883.337	245			

a. Dependent Variable: Own Source Revenue Target

b. Predictors: (Constant), Interaction2, Stakeholder Engagement, Revenue Collection Automation

Source: Research Data (2023)

The ANOVA table supports the overall significance of the model. The regression sum of squares (3217.046) is notably higher than the residual sum of squares (2666.291), which indicates that the majority of the variation in own source revenue target is explained by the independent variables in the model. The F-statistic (97.329) is highly significant, with a p-value of .000, indicating that the model is statistically significant and that stakeholder engagement, revenue collection automation, and their interaction collectively have a significant impact on the dependent variable.

Table 4.31 Coefficients for Model VII

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	9.423	1.792		5.260	.000
	Stakeholder Engagement	.178	.035	.280	5.159	.000
	Revenue Collection Automation	.389	.046	.479	8.423	.000
	Interaction	-.364	.164	-.108	-2.226	.027

a. Dependent Variable: Own Source Revenue Target

Source: Research Data (2023)

The coefficients table provides detailed insights into the individual contributions of each predictor. Stakeholder Engagement has a positive and significant effect on Own Source Revenue Target ($B = .178$, $p = .000$), indicating that increasing stakeholder engagement leads to improved revenue target. Revenue Collection Automation also has a positive and highly significant effect ($B = .389$, $p = .000$), confirming that automation enhances the effectiveness of revenue collection processes. However, the interaction term between stakeholder engagement and revenue collection automation ($B = -.364$, $p = .027$) is

statistically significant but negative, suggesting that the combined effect of these variables does not lead to the anticipated synergistic improvement in revenue target. Instead, it may indicate that while both factors are important individually, their combined effect might introduce complexities that could reduce overall effectiveness. The study thus rejects the sixth null hypothesis that states that revenue collection automation does not have statistically significant moderating effect on stakeholder engagement and own source revenue targets among selected county governments in Kenya (H_06). It is then concluded that revenue collection automation has a statistically significant moderating effect on the relationship between stakeholder engagement and own source revenue targets among selected county governments in Kenya.

Taking the regression model: $Y = \beta_0 + \beta_4 X_2 + \beta_5 M + \beta_6 X_2 * M + \varepsilon$; the model can be rewritten as follows, based on the regression analysis:

Own source revenue target = 9.423 + .178 (Stakeholder Engagement) + .389 (Revenue Collection Automation) + -.364 (Interaction)

4.5.8 Regulatory Compliance, Automation and Own Source Revenue Targets

The seventh null hypothesis further stated that revenue collection automation does not have statistically significant moderating effect on regulatory compliance and own source revenue targets among selected county governments in Kenya (H_07). Three outputs were further produced, including a model summary, ANOVA and Coefficients.

Table 4.32 Model Summary for Model VIII

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.762 ^a	.581	.576	3.16740

a. Predictors: (Constant), Interaction, Regulatory Compliance, Revenue Collection Automation

Source: Research Data (2023)

The model summary reveals an R-value of .762, indicating a strong positive correlation between the predictors—regulatory compliance, revenue collection automation, and their interaction—and the dependent variable, own source revenue target. The R Square value of .581 suggests that 58.1% of the variation in Own Source Revenue Target can be explained by these predictors, reflecting a robust model. The Adjusted R Square of .576, slightly lower than the R Square, adjusts for the number of predictors in the model and further supports its strength. The Standard Error of the Estimate (3.16740) represents the average deviation of the observed values from the predicted values, indicating a good fit for the model.

Table 4.33 ANOVA for Model VIII

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3532.393	3	1177.464	117.366	.000 ^b
	Residual	2548.231	254	10.032		
	Total	6080.624	257			

a. Dependent Variable: Own Source Revenue Target

b. Predictors: (Constant), Interaction³, Regulatory Compliance, Revenue Collection Automation

Source: Research Data (2023)

The ANOVA table demonstrates that the model is statistically significant. The regression sum of squares (3532.393) is significantly higher than the residual sum of squares (2548.231), indicating that the independent variables account for a substantial portion of the variance in Own Source Revenue Target. The F-statistic (117.366) is highly significant with a p-value of .000, confirming that the overall model, which includes Regulatory Compliance, Revenue Collection Automation, and their interaction, significantly predicts Own Source Revenue Target.

Table 4.34 Coefficients for Model VIII

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	9.317	1.553		6.001	.000
	Regulatory Compliance	.337	.047	.411	7.200	.000
	Revenue Collection Automation	.311	.047	.381	6.636	.000
	Interaction	-.203	.133	-.069	-1.527	.128

a. Dependent Variable: Own Source Revenue Target

Source: Research Data (2023)

The coefficients table provides detailed information on the contribution of each predictor to the model. Regulatory Compliance has a significant positive effect on Own Source Revenue Target ($B = .337$, $p = .000$), indicating that higher levels of regulatory compliance are associated with better achievement of revenue targets. Similarly, Revenue Collection Automation also has a significant positive effect ($B = .311$, $p = .000$), underscoring the importance of automation in enhancing revenue collection effectiveness.

However, the interaction term between regulatory compliance and revenue collection automation ($B = -.203$, $p = .128$) is not statistically significant, suggesting that automation does not significantly moderate the relationship between regulatory compliance and revenue target. The study thus fails to reject the seventh null hypothesis that states that revenue collection automation does not have statistically significant moderating effect on regulatory compliance and own source revenue targets among selected county governments in Kenya (H_07). It is then concluded that revenue collection automation does not have a statistically significant moderating effect on the relationship between regulatory compliance and own source revenue targets among selected county governments in Kenya.

Taking the regression model: $Y = \beta_0 + \beta_7 X_3 + \beta_8 M + \beta_9 X_3 * M + \varepsilon$; the model can be rewritten as follows, based on the regression analysis:

Own source revenue target = $9.317 + .337$ (Regulatory Compliance) + $.311$ (Revenue Collection Automation) + $-.203$ (Interaction)

4.5.9 Revenue Management, Automation and Own Source Revenue Targets

The eighth null hypothesis further stated that revenue collection automation does not have statistically significant moderating effect on revenue management and own source revenue targets among selected county governments in Kenya (H_08). Three outputs were further produced, including a model summary, ANOVA and Coefficients.

Table 4.35 Model Summary for Model IX

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.740 ^a	.548	.542	3.24804

a. Predictors: (Constant), Interaction4, Revenue Management, Revenue Collection Automation

Source: Research Data (2023)

The model summary presents an R-value of .740, indicating a strong positive correlation between the predictors—revenue management, revenue collection automation, and their interaction—and own source revenue target. The R Square value of .548 suggests that 54.8% of the variation in own source revenue target can be explained by these predictors, indicating a well-fitted model. The Adjusted R Square of .542, which slightly adjusts for the number of predictors, confirms the model's robustness. The Standard Error of the Estimate (3.24804) indicates the average deviation of the observed values from the predicted values, showing a reasonable fit for the model.

Table 4.36 ANOVA for Model IX

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3194.393	3	1064.798	100.931	.000 ^b
	Residual	2637.434	250	10.550		
	Total	5831.827	253			

a. Dependent Variable: Own Source Revenue Target

b. Predictors: (Constant), Interaction4, Revenue Management, Revenue Collection Automation

Source: Research Data (2023)

The ANOVA table reveals that the model is statistically significant. The regression sum of squares (3194.393) is notably higher than the residual sum of squares (2637.434), indicating that the independent variables explain a significant portion of the variance in own source revenue target. The F-statistic (100.931) is highly significant with a p-value of .000, confirming that the overall model, which includes revenue management, revenue collection automation, and their interaction, significantly predicts own source revenue target.

Table 4.37 Coefficients for Model IX

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	9.591	1.667		5.753	.000
	Revenue Management	.293	.045	.381	6.586	.000
	Revenue Collection Automation	.315	.049	.393	6.373	.000
	Interaction	-.180	.141	-.062	-1.281	.201

a. Dependent Variable: Own Source Revenue Target

Source: Research Data (2023)

The coefficients table provides insights into the individual contributions of each predictor. Revenue management has a significant positive effect on own source revenue target (B = .293, p = .000), suggesting that effective revenue management practices contribute significantly to achieving revenue targets. Similarly, revenue collection automation also shows a significant positive effect (B = .315, p = .000), indicating that automation plays a crucial role in enhancing revenue target. However, the interaction term between revenue management and revenue collection automation (B = -.180, p =

.201) is not statistically significant, implying that automation does not significantly moderate the relationship between revenue management and revenue target. The study thus fails to reject the eighth null hypothesis that states that revenue collection automation does not have statistically significant moderating effect on revenue management and own source revenue targets among selected county governments in Kenya (H₀₈). It is then concluded that revenue collection automation does not have a statistically significant moderating effect on the relationship between revenue management and own source revenue targets among selected county governments in Kenya.

Taking the regression model: $Y = \beta_0 + \beta_{10}X_4 + \beta_{11}M + \beta_{12}X_4 * M + \varepsilon$; the model can be rewritten as follows, based on the regression analysis:

Own source revenue target = 9.591 + .293 (Revenue Management) + .315 (Revenue Collection Automation) + -.180 (Interaction)

4.6 Discussion of the Results

The first null hypothesis stated that there is no statistically significant relationship between competencies of revenue collectors and own source revenue targets among selected county governments in Kenya (H₀₁). A statistically significant relationship between competency on revenue target ($\beta = 0.635$, $p = 0.000$, Sig. <0.05) was established, emphasizing the practical importance of investing in the training and development of revenue collection personnel within county governments. The study thus rejects the first null hypothesis that stated that there is no statistically significant

relationship between competencies of revenue collectors and own source revenue targets among selected county governments in Kenya (H_01).

This finding has significant policy implications, as it suggests that improving the competency of revenue collectors can lead to enhanced revenue collection performance and, ultimately, greater fiscal sustainability and public service provision.

The empirical literature offers substantial support for these findings, highlighting the necessity of competent revenue collectors in enhancing revenue collection and achieving fiscal targets. Malalgoda *et al.* (2021) conducted an empirical study across ten different UK cities, involving 70 respondents, to investigate the impact of employee training on service delivery and revenue collection. The study utilized regression analysis and found that enhanced staff training led to significant improvements in tax collection. The well-trained workforce was credited with these improvements, ensuring that revenue collection was more efficient and effective. However, the study focused on general service delivery rather than the specific competencies related to revenue collection, leaving a gap that this current study in Kenya aims to fill by exploring the direct relationship between competency in revenue collection and OSR target.

Similarly, Ling and Ahamad (2020) explored the impact of competence on government financial accountability in Indonesia. Their study, which involved 71 respondents and employed Multiple Linear Regression analysis, revealed that competence significantly affects the effectiveness of financial audits. This finding was further supported by Abd El Maksoud (2023), who examined the relationship between motivation, competence, and performance, concluding that competence is a key driver of effective performance in revenue collection. These studies highlight the importance of staff competency in

achieving financial accountability and effective revenue management, but they do not specifically address the context of revenue collection in county governments, which is the focus of the current study.

In Pakistan, Malik et al. (2023) conducted a survey on performance management and key competencies in public libraries, identifying six critical competencies that significantly impact employee performance. While the study identified essential competencies such as interpersonal skills, analytical abilities, and technological proficiency, it did not delve into specific competencies related to revenue collection or financial management. This presents a conceptual gap that the current study addresses by focusing on the specific competencies required for effective revenue collection in county governments, thereby contributing to the broader understanding of how these competencies influence OSR target.

Further supporting the relevance of competency in revenue collection, Culpeper and Aniket (2023) studied staff training and tax collection in China using a descriptive survey research design. Their findings indicated that extrinsic factors like the fairness of training processes and aptitude for training significantly influenced work performance in tax collection. The study's focus on the general tax collection industry in China suggests a need for similar research in the Kenyan context to determine whether these findings hold true in the county governments setting. The current study sought to bridge this contextual gap by examining the impact of staff training and competencies specifically within Kenyan county governments.

The findings from these studies reinforce the critical role that the competencies of revenue collectors play in achieving OSR targets. However, the contextual, conceptual,

and methodological gaps identified in the literature highlight the need for the current study. By focusing on the Kenyan county government context, this study contributes to a deeper understanding of the specific competencies required for successful revenue collection and offers practical insights for enhancing revenue management in similar developing country settings.

The results further align with the well-established understanding that a competent and skilled workforce is a cornerstone of efficient public financial management (Waniani *et al.*, 2017; Salman *et al.*, 2020). In the realm of public finance, the competence of revenue collectors is critical for effectively implementing tax policies and ensuring that taxpayers comply with their obligations (Fakhari, et al., 2022). Similarly, Amadi (2014) found that employee engagement and productivity were positively impacted by training and development. Competent revenue collectors are better equipped to handle complex tax regulations, offer clear guidance to taxpayers, and manage the revenue collection process more efficiently.

The second null hypothesis stated that there is no statistically significant relationship between stakeholders' engagement and own source revenue targets among selected county governments in Kenya (H_02). A beta coefficient of .380 was recorded in stakeholders' engagement, implying that keeping other factors constant, a unit change in stakeholders' engagement would result in .380 change in own source revenue target. The finding was also significant at 95% confidence level (Sig. <0.05), indicating that stakeholders' engagement has a statistically significant relationship with own source revenue target. The study thus rejects the second null hypothesis that states that there is

no statistically significant relationship between stakeholders' engagement and own source revenue targets among selected county governments in Kenya (H_02).

This finding has substantial policy implications, indicating that county governments should actively seek ways to engage and collaborate with their stakeholders to enhance revenue collection and, by extension, the overall fiscal performance and service provision.

When evaluating whether the empirical literature supports or contrasts with the findings of the current study, which reveals a significant positive influence of stakeholder engagement on OSR target in Kenyan county governments, it becomes clear that most of the literature offers support, while some studies present nuanced differences or highlight gaps that contrast with the findings. The study by Potoski and Prakash (2022) found that effective stakeholder engagement improves revenue collection by aligning policies with stakeholder input. This directly supports the current study's finding that stakeholder engagement significantly influences OSR target in Kenya. Both studies agree on the positive role of engagement in enhancing revenue outcomes, though Potoski and Prakash pointed out the lack of a standardized framework, which the current study addresses in its context. Roxburgh *et al.*'s (2020) research in the EU also supports the current findings by demonstrating that stakeholder engagement aligns sectoral interests with economic goals, leading to improved policy outcomes. Although their study struggled to measure the direct impact of engagement on revenue targets, the alignment of stakeholder interests with revenue goals in both studies indicates a common understanding of the importance of engagement.

The positive correlation between proactive stakeholder engagement and revenue targets found by Lee and Kang (2021) in South Korean municipalities aligns closely with the findings in the Kenyan context. Both studies affirm that stakeholder engagement is crucial in achieving financial goals, especially under budgetary constraints, further reinforcing the importance of engagement in diverse political and economic environments. In Colombia, Gómez and Ramirez (2021) found that continuous stakeholder involvement leads to more accurate revenue projections and higher compliance rates, which directly supports the current study's finding of stakeholder engagement's positive influence on revenue targets in Kenya. Both studies emphasize the importance of continuous and inclusive stakeholder engagement for achieving revenue goals. The study by Ayodele and Kwame (2023), which found that stakeholder engagement improves tax compliance and broadens the tax base in West African countries, supports the current study's findings in Kenya. Both studies highlight the critical role of stakeholder engagement in improving revenue outcomes, though Ayodele and Kwame also point out the challenges of under-engagement in rural areas, an aspect that the current study addresses through a more generalized engagement strategy.

The study by Park and Park (2020) found that higher levels of public participation led to budget variances, with higher revenues but lower expenditures. This contrasts with the current study's findings, which show a straightforward positive influence of stakeholder engagement on OSR target in Kenya. While both studies recognize the importance of engagement, Park and Park's findings suggest a more complex relationship where public expectations may lead to budget imbalances, a discovery not observed in the Kenyan context. While Brown and Green (2023) found that stakeholder engagement leads to

innovative revenue strategies like public-private partnerships, they raised concerns about the long-term sustainability of these strategies. This partially contrasts with the current study, where stakeholder engagement is shown to have a positive and significant impact on revenue targets without questioning sustainability. The contrast suggests that while engagement is beneficial in the short term, its long-term effects may require further examination.

The findings are further consistent with literature that emphasizes the importance of involving taxpayers and other relevant stakeholders in revenue collection processes (Gatta et al., 2018; Ruz, 2021). The findings are consistent with Ali (2019) who demonstrated that stakeholder involvement has a direct and advantageous impact on NG-CDF projects implementation success factors. Similarly, Kimutai (2017) found that collaboration amongst stakeholders, stakeholder training, and technology all positively and significantly affected revenue mobilization tactics and, in turn, the socioeconomic advancements of the counties. The results by Muute (2019) further demonstrated that projects were being finished without too many difficulties and that the allocated funds were adequate to complete the project and the study further found out that stakeholder involvement significantly and favorably influenced how successfully building projects were completed. Further, Onyango, Bwisa, and Orwa (2017) discovered that stakeholder participation had a substantial impact on the success of road upgrades in Kiambu County. Stakeholder engagement can foster tax compliance by building trust, enhancing transparency, and ensuring that taxpayers perceive the tax system as fair and responsive to their needs (Nkuna, 2021; Kimutai, 2017).

The third null hypothesis stated that there is no statistically significant relationship between regulatory compliance and own source revenue targets among selected county governments in Kenya (H_{03}). The beta coefficient of .572 illustrating the impact of regulatory compliance on own source revenue target, coupled with its statistical significance at a 95% confidence level ($\beta = .572$, $p = 0.000$, Sig. <0.05), underlines the critical role of adhering to regulatory frameworks in the revenue collection process within county governments in Kenya. The study thus rejects the third null hypothesis that states that there is no statistically significant relationship between regulatory compliance and own source revenue targets among selected county governments in Kenya (H_{03}).

The findings of the current study, which reveal a significant positive impact of regulatory compliance on the achievement of OSR targets in Kenyan county governments, are generally supported by the empirical literature, though some studies highlight contextual and methodological gaps that offer a more refined perspective.

The findings of O'Donnell and Lewis (2021) align with the current study by demonstrating that rigorous regulatory compliance enhances revenue collection by reducing tax evasion and ensuring strict adherence to financial regulations. This supports the positive beta coefficient of .572 found in the current study, suggesting that regulatory compliance is indeed a critical factor in improving revenue outcomes. However, the conceptual gap identified by O'Donnell and Lewis (2021)—regarding the complexity and variability of regulations across different municipalities—highlights a potential area where the current study could explore the adaptability of regulatory frameworks across different Kenyan counties.

Bücker and Jansen's (2020) study in the EU also supports the findings by illustrating those higher levels of regulatory compliance correlate with improved revenue outcomes, particularly in countries with well-established infrastructure. This reinforces the idea that regulatory compliance is a key determinant of revenue performance, similar to the Kenyan context. However, the methodological gap they identified—concerning the long-term effectiveness of regulations in a rapidly changing digital economy—suggests that the current study benefited from examining how regulatory frameworks in Kenya adapt to evolving economic conditions. The findings by Lee and Kim (2022) from South Korea, which show that regulatory compliance improves revenue outcomes in urban municipalities, are consistent with the current study's results. However, the discrepancy in rural areas, where enforcement is more challenging, points to a contextual gap. This suggests that while the overall impact of regulatory compliance is positive, the Kenyan study might consider exploring regional differences within the country to understand better how compliance is enforced across urban and rural areas.

Ramirez and Gomez's (2021) study in Colombia supports the current findings by showing that stricter enforcement of regulations leads to more consistent revenue collection. However, their identification of a one-size-fits-all approach as ineffective in diverse municipal environments introduces a contextual gap. This suggests that Kenyan county governments might need to tailor their regulatory frameworks to local conditions to optimize revenue generation fully. Smith and Green's (2023) study reinforce the current findings by highlighting that municipalities with robust compliance frameworks are more successful in achieving revenue targets. However, the conceptual gap they identify, related to the challenges of enforcement in remote areas, could be relevant to

certain Kenyan counties. This underscores the importance of exploring innovative strategies to ensure consistent compliance across all regions in Kenya.

While Brown and Taylor (2022) found that environmental regulatory compliance created new revenue streams, the study identified a methodological gap in comparing these with traditional revenue sources. This contrasts with the current study, which focuses more broadly on regulatory compliance without specifically addressing the potential financial sustainability of new revenue strategies that arise from such compliance. This gap suggests that future research could explore how different types of regulatory compliance, including environmental regulations, impact overall revenue sustainability. The findings by Al-Omari and Qasim (2020) from the GCC region reveal that while regulatory compliance generally improves revenue outcomes, the lack of standardized regulations across countries introduces a significant contextual gap. This contrasts with the Kenyan context, where the study assumes a more unified regulatory framework. The contrast underscores the importance of standardization in ensuring consistent revenue generation, which could be a focus for further research in Kenya, particularly in examining how local and national regulations interact.

The study by Ayodele and Mensah (2023) highlights that while regulatory compliance is crucial, its effectiveness is often undermined by political and economic factors. This introduces a contextual gap that contrasts with the current study's findings, which do not explicitly address the influence of political interference. This gap suggests that further research in Kenya could examine how political dynamics affect the enforcement of regulatory compliance and its impact on revenue generation. The findings by Ndegwa and Owino (2023) align with the current study in showing that counties with higher levels

of compliance are more likely to meet their revenue targets. However, the conceptual gap they identify—concerning the role of political interference in regulatory enforcement—highlights an area that the current study does not fully explore. This gap suggests that the relationship between regulatory compliance and revenue outcomes in Kenyan counties could be further interrogated by considering the political environment's impact.

The results further align with established literature emphasizing the significance of tax compliance and regulatory adherence in revenue generation (Ewa *et al.*, 2018). Regulatory compliance, which involves adherence to tax laws, regulations, and policies, is essential for creating a conducive environment for taxpayers, ensuring fairness, and promoting trust in the tax system (Githua & Ngahu, 2018). The findings are consistent with Githua and Ngahu (2018) whose study conclusions indicate that administrative capability has a big impact on revenue collection. According to the report, for the purpose of increasing the collection of revenues, the county administration should strengthen its ability to manage revenue. Similarly, Mwachiro (2013) discovered that successful revenue collection was significantly influenced by regulatory compliance. The results showed that management control make up regulatory compliance.

The fourth null hypothesis stated that there is no statistically significant relationship between revenue management and own source revenue targets among selected county governments in Kenya (H_04). The beta coefficient of .517, along with its statistical significance at a 95% confidence level ($\beta = .517$, $p = 0.000$, Sig. <0.05), highlights the substantial influence of effective revenue management on own source revenue target within county governments in Kenya. The study thus rejects the fourth null hypothesis that states that there is no statistically significant relationship between revenue

management and own source revenue targets among selected county governments in Kenya (H_04).

The rejection of the null hypothesis (H_04) points to the practical relevance of revenue management, indicating that county governments should prioritize robust financial planning and management to improve their own source revenue target, ultimately contributing to fiscal sustainability and public service delivery. This result is in line with existing literature that points to the importance of sound financial management and planning in revenue collection.

The findings of the study, which show a significant influence of effective revenue management on achieving own-source revenue (OSR) targets within county governments in Kenya, align with and are contrasted by empirical literature across various global contexts. Miller and Roberts (2021) found that municipalities with diversified revenue sources and strong enforcement mechanisms were more successful in meeting their revenue targets. This supports the study's assertion that effective revenue management is crucial for achieving OSR targets, especially when it comes to strategic financial planning and robust management practices. Johnson and Müller (2020) similarly highlighted the importance of effective revenue management, including rigorous financial planning and risk management, in achieving revenue targets in German municipalities. This aligns with the findings of this study and reinforces the argument that well-planned and managed revenue systems significantly impact financial performance.

Park and Lee (2022) discovered that proactive revenue management, particularly in tax collection and public asset management, significantly enhanced revenue outcomes in

South Korea. This finding echoes the results, suggesting that counties in Kenya, like South Korean municipalities, can benefit from proactive and well-structured revenue management. Jeppesen (2021) noted that independent tax administrations, such as Kenya's Revenue Authority, face challenges related to political interference, which resonates with the findings on the practical relevance of autonomy in revenue management.

The findings are further in line with Shibia and Barako (2015) who show that urbanization, population density, and administrative capability are crucial elements in determining how well property taxes perform. The study indicates significant differences between counties and a drop in property taxes relative to the global average. It advises county governments to increase their administrative capabilities in order to mobilize tax property. Similarly, Kanyinga (2016) who found that KRA has used information technology into its operations. SME's view of EFT, SIMBA, ITR and ITMS as the key tax management drivers of compliance and, subsequently, enhanced collection of revenue.

The findings further agree with Naburi (2017) determination that ineffective administration and political intervention were to blame for the low collection of property taxes, and it made recommendations for better public services, capacity building, and political support mobilization. The findings are also supported by Attah-Botchwey (2018) who found that insufficient revenue monitoring resulted in weak expenditure restrictions, raised the possibility of embezzlement, and encouraged unauthorized borrowing of money for personal use as well as other financial irregularities which in turn reduced municipal revenue. The study came to the conclusion that improving revenue

mobilization required the use of internal controls. In order to monitor internal controls and inform the government when revenue goals are met, this study is therefore necessary and the findings confirm the importance of internal controls.

The fifth null hypothesis stated that revenue collection automation does not have statistically significant moderating effect on competency of revenue collectors and own source revenue targets among selected county governments in Kenya (H_05). The interaction term between competency of revenue collectors and revenue collection automation ($B = -.209, p = .164$) is not statistically significant, implying that while each factor is crucial independently, their combined effect does not significantly alter the outcome. The study thus fails to reject the fifth null hypothesis that states that revenue collection automation does not have statistically significant moderating effect on competency of revenue collectors and own source revenue targets among selected county governments in Kenya (H_05).

However, the non-significant interaction effect observed in this study suggests that the direct impacts of competency and automation on own source revenue target may operate independently rather than synergistically in the context of the selected county governments in Kenya. This could imply that while both are essential, their combined effect may not necessarily enhance revenue outcomes as expected, possibly due to challenges in integrating technology with existing human skills, or gaps in training and adaptation to automated systems (Miller & Roberts, 2022). The findings contrast with the literature that highlights the importance of revenue collection automation in improving efficiency and accuracy in revenue collection. For instance, previous research has often emphasized that automation complements human competency by increasing efficiency

and reducing errors in revenue collection processes (Otieno & Waweru, 2019; Smith & Johnson, 2021).

The sixth null hypothesis further stated that revenue collection automation does not have statistically significant moderating effect on stakeholder engagement and own source revenue targets among selected county governments in Kenya (H_06). The interaction term between stakeholder engagement and revenue collection automation ($B = -.364, p = .027$) is statistically significant but negative, suggesting that the combined effect of these variables does not lead to the anticipated synergistic improvement in revenue target. Instead, it may indicate that while both factors are important individually, their combined effect might introduce complexities that could reduce overall effectiveness. The study thus rejects the sixth null hypothesis that states that revenue collection automation does not have statistically significant moderating effect on stakeholder engagement and own source revenue targets among selected county governments in Kenya (H_06).

The unexpected negative moderation effect found in this study suggests that integrating automation with stakeholder engagement requires careful management. The complexities introduced by technology, such as potential resistance from stakeholders or challenges in aligning automated systems with stakeholder expectations, may dampen the effectiveness of engagement efforts. The study emphasizes the need for county governments to carefully design and implement automation strategies that complement and enhance stakeholder engagement, rather than complicate it. This aligns with findings by Ivanov *et al.* (2022), who noted that while automation can enhance efficiency, it can also create barriers if not well integrated into existing processes and stakeholder dynamics. The findings offer informed insights into the relationship between stakeholder engagement,

automation, and revenue target attainment. Previous studies, such as those by Potoski and Prakash (2022), have highlighted the importance of stakeholder engagement in improving compliance and revenue collection and from the findings of this study careful consideration need to be done when integrating revenue automation to stakeholder engagement.

The seventh null hypothesis further stated that revenue collection automation does not have statistically significant moderating effect on regulatory compliance and own source revenue targets among selected county governments in Kenya (H_07). The interaction term between regulatory compliance and revenue collection automation ($B = -.203$, $p = .128$) is not statistically significant, suggesting that automation does not significantly moderate the relationship between regulatory compliance and revenue target. The study thus fails to reject the seventh null hypothesis that states that revenue collection automation does not have statistically significant moderating effect on regulatory compliance and own source revenue targets among selected county governments in Kenya (H_07).

The lack of a significant moderating effect suggests that while automation is a powerful tool, its integration with regulatory compliance practices may not necessarily amplify the benefits of compliance. This could be due to various factors, such as the complexity of aligning automated systems with existing regulatory frameworks or the potential for automation to introduce new challenges that require careful management. Therefore, county governments should continue to prioritize both regulatory compliance and automation but may need to consider them as complementary but independent strategies rather than expecting a synergistic effect. These findings align with the broader empirical literature that emphasizes the independent importance of regulatory compliance and

automation in achieving revenue targets. Studies by Zhang and Liu (2021, Al-Omari and Qasim (2020) and Brown & Taylor (2022) have highlighted the critical role of regulatory compliance in ensuring effective revenue collection and reducing leakages, while research by Nkote and Luwugge (2020) and Miller and Roberts (2022) support the role of automation in streamlining revenue collection processes.

The eighth null hypothesis further stated that revenue collection automation does not have statistically significant moderating effect on revenue management and own source revenue targets among selected county governments in Kenya (H_{08}). The interaction term between revenue management and revenue collection automation ($B = -.180$, $p = .201$) is not statistically significant, implying that automation does not significantly moderate the relationship between revenue management and revenue target. The study thus fails to reject the eighth null hypothesis that states that revenue collection automation does not have statistically significant moderating effect on revenue management and own source revenue targets among selected county governments in Kenya (H_{08}).

The lack of a significant moderating effect of automation suggests that while technology is a powerful tool, its integration with revenue management practices may not necessarily amplify the effectiveness of those practices. This outcome could be due to challenges in aligning automated systems with existing revenue management frameworks or the possibility that automation primarily enhances operational efficiency rather than directly influencing revenue management strategies. Therefore, county governments should focus on strengthening both revenue management and automation as complementary strategies, while recognizing that their combined effect may not be synergistic. The findings are consistent with existing empirical literature that underscores the independent importance

of revenue management and automation in achieving revenue targets. Research by Clark and Mitchell (2023) and Moyo and Gumede (2023) highlight the critical role of revenue management in ensuring effective collection and allocation of resources, while studies by Okumu et al. (2022) emphasize the benefits of automation in streamlining revenue processes and improving efficiency.

CHAPTER FIVE

SUMMARY, CONCLUSIONS & RECOMMENDATIONS

5.1 Introduction

The concluding chapter encapsulates the comprehensive findings of this research, providing a synthesis of the study's outcomes. The summary, conclusions, and recommendations presented herein distill the key insights gleaned from the exploration of agency revenue collection, automation, and own source revenue target within selected county governments in Kenya. The subsequent conclusions drawn from these findings pave the way for robust recommendations, offering strategic insights for policymakers, practitioners, and researchers aiming to optimize revenue mobilization strategies in county governance.

5.2 Summary

This section gives the summary of the study based on the study variables

5.2.1 Competencies of revenue collectors and own source revenue targets

The study sought to determine the relationship between competencies of revenue collectors and own source revenue targets among selected county governments in Kenya. In assessing the competencies of revenue collectors, an overall mean of 4.288 was established at a standard deviation of 0.849, implying that a majority of participants highly approve of the competency of revenue collectors in their respective counties. A majority of participants particularly affirmed that achievement of county revenue targets would be possible if all revenue collection employees are trained on methods of revenue collection (4.4821); achievement of revenue collection targets would result through

training and development in revenue collection techniques (4.3018); training of staff on technology used in revenue collection would lead to achievement of revenue targets (4.3273); attainment of revenue collection targets result from revenue collection officer effective public relations techniques (4.4638); and that sensitization of staff on the rules and regulations governing revenue collections would lead to achievement of revenue targets (4.2107). A statistically significant relationship between competency on revenue target ($\beta = 0.635$, $p = 0.000$, Sig. <0.05) was established, emphasizing the practical importance of investing in the training and development of revenue collection personnel within county governments. The study thus rejects the first null hypothesis that stated that there is no statistically significant relationship between competencies of revenue collectors and own source revenue targets among selected county governments in Kenya (H_01).

5.2.3 Stakeholder engagement and own source revenue targets

The study also set out to assess the relationship between stakeholder engagements and own source revenue targets among selected county governments in Kenya. In assessing stakeholder engagement, an overall mean of 4.049 was established at a standard deviation of 0.940, implying that a majority of participants highly approve of stakeholder engagement in their respective counties. A majority of participants particularly affirmed that taxpayer sensitization on their need to pay county taxes would lead to achievement of revenue targets (4.3827); communication with taxpayers through simple and easy to access channels of communication like SMS, public notices and barazas would lead to achievement of revenue targets (4.3237); and that sensitization to taxpayers on county levies upon amendment of the Finance Act would lead to achievement of revenue targets

(4.1942). The beta coefficient of .380 representing the influence of stakeholder engagement on own source revenue target, along with its statistical significance at a 95% confidence level, highlights the pivotal role of engaging stakeholders in the context of county governments in Kenya. The study thus rejects the second null hypothesis that states that there is no statistically significant relationship between stakeholders' engagement and own source revenue targets among selected county governments in Kenya (H_02).

5.2.3 Regulatory compliance and own source revenue targets

The study further examined the relationship between regulatory compliance and own source revenue targets among selected county governments in Kenya. In assessing regulatory compliance, an overall mean of 4.053 was established at a standard deviation of 0.923, implying that a majority of participants highly approve of regulatory compliance in their respective counties. A majority of participants particularly affirmed that annual review of the Finance Act to capture changes in the economic outlook in the County would lead to achievement of revenue targets (4.2290); presence of approved policies, rules and regulations governing revenue collection would lead to achievement of revenue targets (4.2122); amendments to the County Finance Acts to comply with legislations governing specific revenue streams like Trade Licensing Act would lead to achievement of revenue targets (4.1362); Presence of primary revenue administration laws for all revenue streams would lead to achievement of revenue targets (4.0681); and that Publishing of revenue administration laws in the local media and notice boards would lead to achievement of revenue targets (4.0536). The beta coefficient of .703 illustrating the impact of regulatory compliance on own source revenue target, coupled

with its statistical significance at a 95% confidence level ($\beta = .572$, $p = 0.000$, Sig. <0.05), underlines the critical role of adhering to regulatory frameworks in the revenue collection process within county governments in Kenya. The study thus rejects the third null hypothesis that states that there is no statistically significant relationship between regulatory compliance and own source revenue targets among selected county governments in Kenya (H_03).

5.2.4 Revenue management and own source revenue targets

The study set out to determine the relationship between revenue management and own source revenue targets among selected county governments in Kenya. In assessing revenue management, an overall mean of 4.060 was established at a standard deviation of 0.932, implying that a majority of participants highly approve of revenue management in their respective counties. A majority of participants particularly affirmed that weekly analysis on key revenue streams performance would lead to achievement of revenue targets (4.2982); daily reconciliations of revenue collected would lead to achievement of revenue targets (4.1864); scheduled internal audit and checks on revenue collected would lead to achievement of revenue targets (4.1913); revenue accounting system capable of analysing revenue performance trends would lead to achievement of revenue targets (4.1227); and that scheduled rapid results initiatives on revenue collection would lead to achievement of revenue targets (4.0935).

The beta coefficient of .517, along with its statistical significance at a 95% confidence level ($\beta = .517$, $p = 0.000$, Sig. <0.05), highlights the substantial influence of effective revenue management on own source revenue target within county governments in Kenya.

The study thus rejects the third null hypothesis that states that there is no statistically significant relationship between revenue management and own source revenue targets among selected county governments in Kenya (H_04).

5.2.5 Moderating effect of automation on the relationship between agency revenue collection and own source revenue targets

The study set out to establish the moderating effect of revenue collection automation on competency of revenue collectors and own source revenue targets among selected county governments in Kenya. The interaction term between competency of revenue collectors and revenue collection automation ($B = -.209$, $p = .164$) is not statistically significant, implying that while each factor is crucial independently, their combined effect does not significantly alter the outcome. The study thus fails to reject the fifth null hypothesis that states that revenue collection automation does not have statistically significant moderating effect on competency of revenue collectors and own source revenue targets among selected county governments in Kenya (H_05).

The sixth null hypothesis further stated that revenue collection automation does not have statistically significant moderating effect on stakeholder engagement and own source revenue targets among selected county governments in Kenya (H_06). The interaction term between stakeholder engagement and revenue collection automation ($B = -.364$, $p = .027$) is statistically significant but negative, suggesting that the combined effect of these variables does not lead to the anticipated synergistic improvement in revenue target. Instead, it may indicate that while both factors are important individually, their combined effect might introduce complexities that could reduce overall effectiveness. The study thus rejects the sixth null hypothesis that states that revenue collection automation does

not have statistically significant moderating effect on stakeholder engagement and own source revenue targets among selected county governments in Kenya (H₀₆).

The seventh null hypothesis further stated that revenue collection automation does not have statistically significant moderating effect on regulatory compliance and own source revenue targets among selected county governments in Kenya (H₀₇). The interaction term between regulatory compliance and revenue collection automation ($B = -.203, p = .128$) is not statistically significant, suggesting that automation does not significantly moderate the relationship between regulatory compliance and revenue target. The study thus fails to reject the seventh null hypothesis that states that revenue collection automation does not have statistically significant moderating effect on regulatory compliance and own source revenue targets among selected county governments in Kenya (H₀₇).

The eighth null hypothesis further stated that revenue collection automation does not have statistically significant moderating effect on revenue management and own source revenue targets among selected county governments in Kenya (H₀₈). The interaction term between revenue management and revenue collection automation ($B = -.180, p = .201$) is not statistically significant, implying that automation does not significantly moderate the relationship between revenue management and revenue target. The study thus fails to reject the eighth null hypothesis that states that revenue collection automation does not have statistically significant moderating effect on revenue management and own source revenue targets among selected county governments in Kenya (H₀₈).

5.3 Conclusions

The study makes the following conclusions;

5.3.1 Competencies of revenue collectors and the achievement of own source revenue targets

The comprehensive analysis conducted in this study unequivocally establishes a robust and statistically significant relationship between the competencies of revenue collectors and the achievement of own source revenue targets among selected county governments in Kenya. The study concludes that the competence of revenue collectors plays a pivotal role in influencing the success of revenue collection. In essence, this study points to the imperative for a competent workforce as an indispensable asset in the pursuit of successful revenue mobilization efforts, reflecting a crucial dimension in the effective governance and financial management of local government entities. This finding has profound implications for county governments, emphasizing the critical need to invest in the training, development, and ongoing support of revenue collection personnel. As competency emerges as a key determinant, policymakers and administrators should prioritize strategies that enhance the skills and expertise of revenue collectors. Such initiatives are poised not only to bolster revenue collection efficiency but also to contribute significantly to the broader fiscal sustainability and service delivery objectives of county governments in Kenya.

The new knowledge brought out by the study is the critical importance of revenue collectors' competencies in achieving own-source revenue targets among county governments in Kenya. The study demonstrates that the effectiveness and success of revenue collection are strongly influenced by the skills, expertise, and overall competence of revenue collectors. These findings highlight that beyond the mere implementation of revenue collection systems, the quality and capability of the personnel managing these systems play a pivotal role in driving revenue outcomes. Consequently,

the study underscores the necessity for county governments to invest in the training and professional development of their revenue collection staff to enhance efficiency and contribute to fiscal sustainability. This insight provides a nuanced understanding of how human resource factors directly impact financial management and governance in devolved government settings.

5.3.2 Stakeholders' engagement and the achievement of own source revenue targets

Based on the findings of this study it was concluded that there is a statistically significant relationship between stakeholders' engagement and the achievement of own source revenue targets among selected county governments in Kenya. The study concludes that engaging stakeholders influence the success of revenue mobilization efforts. This outcome has far-reaching implications, emphasizing the critical importance of building and sustaining positive relationships with various stakeholders in the revenue collection process. As county governments increasingly recognize the significance of stakeholders' engagement, it becomes clear that strategies fostering transparency, communication, and collaboration with taxpayers and other relevant parties are integral to the success of revenue initiatives. The study's results not only underscore the theoretical importance of stakeholders' engagement but also provide actionable insights for policymakers and administrators seeking to optimize revenue collection outcomes. In essence, the study reinforces the notion that a proactive and inclusive approach to stakeholder engagement is not only beneficial for fostering good governance but is also a key driver for achieving robust own source revenue targets, thereby contributing to the overall fiscal sustainability and service delivery goals of county governments in Kenya.

The new knowledge brought out by the study is the essential role of stakeholder engagement in achieving own-source revenue targets among county governments in Kenya. The study reveals that actively involving stakeholders—such as taxpayers, local businesses, and community groups—significantly enhances the success of revenue mobilization efforts. It emphasizes that fostering transparency, effective communication, and collaboration with these stakeholders is crucial for optimizing revenue collection outcomes. These findings highlight that beyond technical and administrative aspects, engaging with stakeholders proactively and inclusively can drive more effective revenue collection and contribute to better fiscal sustainability and governance. Consequently, the study provides valuable insights for policymakers and administrators to adopt comprehensive engagement strategies as a fundamental component of successful revenue management.

5.3.3 Regulatory compliance and the achievement of own source revenue targets

The study establishes a statistically significant relationship between regulatory compliance and the achievement of own source revenue targets among selected county governments in Kenya and concludes that regulatory compliance helps in shaping the success of revenue mobilization efforts. This pivotal finding resonates with the broader literature emphasizing the critical role of adherence to tax laws, policies, and regulations in fostering a conducive environment for taxpayers and ensuring the integrity of the revenue collection process. As county governments grapple with the complexities of revenue administration, the study's results highlight the imperative of bolstering regulatory frameworks and enforcement mechanisms to enhance revenue collection outcomes. The rejection of the null hypothesis not only contributes to the theoretical

understanding of the relationship between regulatory compliance and revenue targets but also provides actionable insights for policymakers and administrators. In essence, the study points out that a steadfast commitment to regulatory compliance is not merely a legal obligation but a strategic imperative for county governments seeking to achieve robust own source revenue targets, thereby fortifying fiscal sustainability and advancing the broader goals of effective governance and service provision in the Kenyan context.

The new knowledge brought out by the study is the critical importance of regulatory compliance in achieving own-source revenue targets among county governments in Kenya. The study demonstrates a statistically significant relationship between adherence to tax laws, policies, and regulations and the success of revenue mobilization efforts. It underscores that effective regulatory compliance is not only essential for maintaining the integrity of the revenue collection process but also serves as a strategic tool for improving revenue outcomes. This finding highlights the need for county governments to strengthen regulatory frameworks and enforcement mechanisms as a key component of their revenue strategies. By emphasizing the role of regulatory compliance in shaping revenue success, the study provides actionable insights for policymakers and administrators, reinforcing that commitment to legal and regulatory standards is crucial for achieving fiscal sustainability and advancing effective governance and service delivery.

5.3.4 Revenue management and the attainment of own source revenue targets

The study establishes a statistically significant relationship between revenue management and the attainment of own source revenue targets among selected county governments in Kenya and hence concludes that effective revenue management shape the success of

revenue mobilization efforts. This finding aligns seamlessly with existing literature emphasizing the crucial nature of sound financial planning and management practices in optimizing revenue collection outcomes. As county governments navigate the intricacies of fiscal administration, the study's outcomes underscore the critical imperative of implementing robust revenue management strategies. The rejection of the null hypothesis not only advances theoretical insights into the nexus between revenue management and revenue targets but also offers practical guidance for policymakers and administrators. In essence, the study points to that a systematic and strategic approach to revenue management is not merely a procedural necessity but a prerequisite for county governments striving to achieve resilient own source revenue targets. This, in turn, fortifies fiscal sustainability and bolsters the overarching objectives of effective governance and service delivery in the context of Kenyan county government administrations.

The new knowledge brought out by the study is the pivotal role of effective revenue management in achieving own-source revenue targets among county governments in Kenya. The research establishes a statistically significant relationship between sound financial planning and management practices and the success of revenue mobilization efforts. It highlights that implementing robust revenue management strategies is essential for optimizing revenue collection outcomes. This finding aligns with existing literature on the importance of effective revenue management but provides new empirical evidence specific to the Kenyan context. The study offers valuable insights for policymakers and administrators, underscoring that a systematic and strategic approach to revenue

management is crucial not only for meeting revenue targets but also for ensuring fiscal sustainability and enhancing governance and service delivery.

5.3.5 Moderating effect revenue collection automation on the relationship between agency revenue collection and attainment of own source revenue targets

The study concludes that revenue collection automation does not have a statistically significant moderating effect on the relationship between competency of revenue collectors and the attainment of own source revenue targets among selected county governments in Kenya. Despite the crucial role of revenue collectors in achieving revenue targets, the study finds that the moderating effect of automation on their competency does not significantly enhance revenue target outcomes. This suggests that while competent revenue collectors are essential, the introduction of automated systems does not necessarily bolster their effectiveness in a way that significantly impact revenue targets. This finding emphasizes the need for a balanced approach that includes both human resource development and technological advancement without assuming that one will necessarily enhance the other.

The new knowledge brought out by the study is the finding that revenue collection automation does not significantly moderate the relationship between the competency of revenue collectors and the achievement of own source revenue targets in Kenyan county governments. This insight challenges the assumption that automation will inherently enhance the effectiveness of competent revenue collectors. The study reveals that while skilled revenue collectors are crucial, the integration of automated systems alone does not significantly improve revenue target outcomes. This underscores the need for a balanced strategy that simultaneously focuses on developing human resources and advancing

technology, rather than relying on automation to amplify the impact of existing competencies.

The study concludes that revenue collection automation has a statistically significant moderating effect on the relationship between stakeholder engagement and the attainment of own source revenue targets among selected county governments in Kenya. The negative interaction suggests that the positive impact of stakeholder engagement on revenue targets might be weakened when combined with automation. This could be due to resistance to change or disruption of traditional engagement methods or create barriers that stakeholders are not yet prepared to navigate, thereby reducing the overall effectiveness of engagement efforts.

The new knowledge brought out by the study is that revenue collection automation significantly moderates the relationship between stakeholder engagement and the achievement of own source revenue targets, with a negative interaction effect. This finding suggests that while stakeholder engagement is typically beneficial for meeting revenue targets, its effectiveness may be diminished when combined with automation. The study indicates that automation could potentially introduce complexities that stakeholders are not well-equipped to handle, thereby weakening the positive impact of engagement efforts on revenue collection outcomes. This highlights the need for carefully designed automation strategies that align with stakeholder engagement practices to avoid undermining their effectiveness.

It is also concluded that revenue collection automation does not have a statistically significant moderating effect on the relationship between regulatory compliance and the attainment of own source revenue targets among selected county governments in Kenya.

While it is a crucial factor for achieving revenue targets, the introduction of automation does not significantly moderate its impact. This suggests that the effectiveness of regulatory compliance in revenue collection is more dependent on the robustness of the regulatory framework and its enforcement rather than on automation. County governments should therefore focus on strengthening their regulatory frameworks and ensuring compliance through effective oversight and enforcement mechanisms, while using automation to support these efforts rather than relying on it to drive compliance outcomes.

The new knowledge brought out by the study is that revenue collection automation does not significantly moderate the relationship between regulatory compliance and the attainment of own source revenue targets. This finding indicates that while regulatory compliance is crucial for achieving revenue targets, its effectiveness is not notably enhanced by the presence of automation. Instead, the impact of regulatory compliance on revenue outcomes is more closely tied to the strength of the regulatory framework and the enforcement of compliance measures. Consequently, county governments should prioritize strengthening their regulatory frameworks and enforcement mechanisms while utilizing automation as a supportive tool rather than a primary driver of compliance.

It is further concluded that revenue collection automation does not have a statistically significant moderating effect on the relationship between revenue management and the attainment of own source revenue targets among selected county governments in Kenya. While it is vital for the achievement of revenue targets, automation does not significantly enhance its effectiveness. This indicates that successful revenue management depends more on strategic planning, resource allocation, and efficient financial practices than on

the mere presence of automated systems. County governments should prioritize building strong revenue management practices that are complemented by, rather than reliant on, automation to achieve optimal results in revenue target.

The new knowledge from the study reveals that revenue collection automation does not significantly moderate the relationship between revenue management and the attainment of own source revenue targets. This finding underscores that effective revenue management relies more on strategic planning, resource allocation, and sound financial practices rather than on the implementation of automated systems alone. It suggests that while automation is a valuable tool, it does not substantially enhance the effectiveness of revenue management practices. Therefore, county governments should focus on developing robust revenue management strategies and use automation as a complementary tool to achieve better outcomes in revenue target attainment.

5.4 Recommendations

The study established a statistically significant relationship between competencies of revenue collectors and own source revenue targets among selected county governments in Kenya underscore the critical importance of investing in the capabilities of revenue collection personnel. In light of these findings, it is recommended that firstly, county governments should prioritize the continuous training and development of their revenue collectors, equipping them with the necessary skills and knowledge to navigate the complexities of contemporary revenue collection. This includes training on evolving tax laws, technological advancements in revenue administration, and effective communication strategies to engage with taxpayers. Secondly, fostering a culture of

performance-based incentives and recognition can further motivate revenue collectors, aligning their competencies with the attainment of revenue targets. Recognizing and rewarding high-performing collectors can contribute to a more motivated and efficient workforce. These recommendations collectively advocate for a strategic and human-centric approach to revenue collection, acknowledging the pivotal role of competent revenue collectors in achieving and surpassing own source revenue targets, ultimately contributing to the fiscal health of county governments in Kenya.

The study establishes a statistically significant relationship between stakeholders' engagement and own source revenue targets in selected county governments in Kenya, highlighting the crucial role of inclusive engagement practices in revenue mobilization. In light of these findings, two robust recommendations emerge for policy and practice. Firstly, county governments should adopt comprehensive strategies to enhance stakeholder engagement by involving regular consultations with taxpayers, businesses, and other relevant entities. This approach should include the use of accessible communication channels, public forums, targeted focus groups, and informal channels of communication to gather in-depth insights from diverse stakeholders. Additionally, employing informal groups and snowball sampling techniques to collect data on the taxpayers' base can provide a more informed understanding of taxpayer behavior and preferences, ensuring that their concerns and suggestions are effectively integrated into revenue policies. Secondly, leveraging technology for stakeholder engagement can amplify the effectiveness of outreach efforts. Implementing user-friendly online platforms, mobile applications, and automated communication tools can facilitate real-time engagement and enable the organization of virtual focus group discussions,

providing stakeholders with immediate access to information and avenues for feedback. By embracing these recommendations, county governments can cultivate a culture of collaboration, transparency, and trust, fostering stronger relationships with stakeholders and ultimately optimizing own source revenue targets. These measures align with the study's findings, reinforcing the practical significance of stakeholders' engagement in revenue management and contributing to the broader objectives of fiscal sustainability and effective governance.

The study established a statistically significant relationship between regulatory compliance and own source revenue targets among selected county governments in Kenya underscore the pivotal role of adherence to tax regulations in revenue mobilization. In light of these findings, it is recommended that firstly, county governments should prioritize the regular review and update of tax regulations to align with evolving economic landscapes and industry dynamics. This proactive approach ensures that regulatory frameworks remain relevant, fostering a conducive environment for compliance. Secondly, investing in public awareness and education campaigns is essential to inform taxpayers about their obligations and the benefits of compliance. Utilizing multiple communication channels, such as social media, community forums, and educational materials, can enhance the understanding of tax regulations and cultivate a culture of voluntary compliance. By embracing these recommendations, county governments can strengthen regulatory frameworks, promote voluntary compliance, and ultimately optimize own source revenue targets. These measures align with the study's findings, emphasizing the practical significance of regulatory compliance in revenue

management and contributing to the broader goals of fiscal sustainability and effective governance.

The study found a statistically significant relationship between revenue management and own source revenue targets among selected county governments in Kenya highlight the strategic importance of effective financial planning and management practices. In light of these findings, county governments should invest in the implementation of advanced revenue management systems that integrate technology for real-time tracking, analysis, and reporting of revenue streams. This modernization can enhance the efficiency of financial operations, allowing for more informed decision-making and strategic planning. By adopting these recommendations, county governments can fortify their revenue management strategies, ensuring resilience in achieving own source revenue targets. These measures align with the study's findings, underscoring the practical significance of revenue management in county governments.

The study establishes a statistically significant moderating effect of revenue collection automation on the relationship between agency revenue collection and own source revenue targets among selected county governments in Kenya underscore the transformative potential of technology in optimizing revenue management. It is thus recommended that county governments should prioritize the integration and continuous improvement of automated systems for revenue collection. Investing in cutting-edge technologies, such as machine learning algorithms and data analytics, can enhance the efficiency and accuracy of revenue collection processes, facilitating better decision-making. Secondly, ensuring that the workforce is adept at utilizing technology can maximize the benefits of automation, ultimately contributing to more streamlined

revenue collection and achievement of own source revenue targets. By adopting these recommendations, county governments can harness the full potential of revenue collection automation to reinforce their capacity to meet and exceed revenue targets. These measures align with the study's findings, emphasizing the practical significance of technology in revenue management and contributing to the broader goals of fiscal sustainability and effective governance.

It is further recommended that county governments invest in specialized training programs for revenue collectors to enhance their competencies in using automated systems. The training should focus on aligning their skills with the requirements of automated processes, ensuring that the introduction of technology complements rather than hinders their effectiveness. This will help mitigate the negative impact of automation on the competency of revenue collectors and optimize their contribution to achieving OSR targets.

It is also crucial for county governments to develop and implement enhanced stakeholder engagement strategies that are compatible with automated revenue collection systems. These strategies should aim to bridge any gaps created by automation, ensuring that stakeholders remain informed, involved, and supportive of the revenue collection process. By adapting engagement methods to the new technological environment, counties can maintain or even enhance the positive impact of stakeholder engagement on revenue target.

County governments should further ensure that their automated revenue collection systems are fully aligned with existing regulatory compliance frameworks. This might involve updating regulatory processes, refining compliance procedures, and conducting

regular audits to ensure that automation does not inadvertently create compliance challenges. Additionally, ongoing training and support should be provided to staff to ensure they can effectively manage the intersection of technology and regulatory requirements.

To avoid the potential disruption of effective revenue management, county governments should focus on the careful integration of automation into their revenue management systems. This could involve conducting a thorough analysis of existing revenue management processes and identifying areas where automation can enhance efficiency without compromising effectiveness. Continuous monitoring and adjustment of these systems will be necessary to ensure that automation supports, rather than undermines, the achievement of OSR targets.

5.5 Suggestions for Further Research

Building on the insights garnered from the comprehensive analysis of agency revenue collection, automation, and own source revenue target among selected county governments in Kenya, further research avenues emerge. Firstly, an in-depth exploration into the specific challenges and opportunities associated with the adoption of automated revenue collection systems would provide valuable insights. Understanding the factors influencing the successful implementation of such technologies, including financial, infrastructural, and human resource considerations, could guide future policy interventions. Secondly, the inclusion of a longitudinal study design could capture the dynamic nature of revenue performance over time, allowing for a more robust analysis of

trends and causality. This is due to the political nature of appointments in County governments that could have an effect on own source revenue performance.

Additionally, expanding the geographical scope to include a more diverse set of county governments could enhance the generalizability of the findings, ensuring a broader applicability of the research outcomes. Moreover, the incorporation of case studies or in-depth interviews with key informants within the county governments could offer deeper insights into specific contextual factors influencing revenue dynamics. Lastly, employing advanced statistical techniques such as structural equation modeling or path analysis could enable a more sophisticated examination of the intricate relationships among variables.

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APPENDICES

Appendix I: Letter of Transmittal

George Kirer

DATE...../...../2023

Dear Respondent,

RE: AGENCY REVENUE COLLECTION, AUTOMATION AND OWN SOURCE
REVENUE TARGET AMONG SELECTED COUNTY GOVERNMENTS IN KENYA

I am a doctoral candidate at the University of Kabianga, Registration Number PHD/BSA/010/2020 in the Department of Accounting and Finance, undertaking a doctoral degree in Business Administration – Finance Option. I am carrying out a research entitled Agency Revenue Collection, Revenue Collection Automation and Own Source Revenue Target among Selected County Governments in Kenya.

Your participation in the study has been chosen, and your reaction will be much valued. I sincerely ask that you fill out the enclosed questionnaire as completely and accurately as you can. Data acquired from yourself or your institution will be utilized for academic reasons and will be dealt with the strictest secrecy and that I will fully comply with the Kenya Data Protection Act 2019 regarding any personal data collected. Your assistance and attention will be much valued. I'm grateful in advance.

Yours Sincerely

George Kirer (PHD/BSA/010/2020)

Appendix II: Consent Form

Informed Consent for Agency Revenue Collection, Revenue Collection Automation and Own Source Revenue Target among Selected County Governments in Kenya Research Study.

If you require any further information, please contact Mr. George Kirer (PHD/BSA/010/2020) (gkirercpacisa@gmail.com), a postgraduate student at University of Kabianga. Please emphasize your selection by selecting within the relevant box (Yes or No).

Consent on	Yes	No
I have carefully read and comprehended the investigation's information leaflet: Agency Revenue Collection, Revenue Collection Automation and Own Source Revenue Target among Selected County Governments in Kenya. I was given the opportunity to raise questions concerning my involvement, and they were well addressed.		
I agree to participate in responding to the research questionnaire guided by the research team member.		
I willingly agree to participate in this investigation, and I am aware that I can decline to answer any questions with which I do not feel confident.		
I understand that I can leave the investigation by getting in touch with the researcher before data are analyzed, without having to give a reason.		
I am aware that the data I supply will be employed in academic research and publishing. I am aware that the data will only be disseminated in completely anonymous form.		

<p>I am aware that the team conducting the research will not disclose any personally identifying information regarding me that may be employed to recognize me, including my job title or age.</p>		
<p>I recognize that my information (transcribed anonymously) will be kept securely in a University of Kabianga Library and be used for academic purpose only.</p>		
<p>I agree to being quoted anonymously. Please mark the box instead of signing <input type="checkbox"/></p>		

Appendix III Research Questionnaire

This questionnaire is to be completed by CECs, Cos, CEOs of Revenue Collection Agencies and Directors leaders. The purpose is to investigate Agency Revenue Collection, Revenue Collection Automation and Own Source Revenue Target among Selected County Governments in Kenya. Your personal data will only be utilized for purposes of education. Please answer questions as accurately and honestly as you can.

Section A: Personal Details

1. Indicate your gender:

(a) Male (b) Female

2. Indicate your age:

(a) Below 20 years (b) 20-29 years (c) 30-39 years

(d) 40-49 years (e) Above 50 years

3. Indicate your title:

a) CECs, b) Cos c) CEOs of Revenue Collection Agencies

d) Revenue Directors e) Revenue Officer

f) Revenue Clerk d) Others (specify) _____

4. Years worked in current designation/rank/position

a) 1-5 years b) 6-10 years

c) 11-15 years d) 15 and above years

Section B: Competency of Revenue Collectors

The following statements relate to competence of revenue collection agents. Please indicate your level of agreement; Key: “1= Strongly disagree, 2=Disagree, 3= Neutral, 4=Agree, 5= Strongly agree”.

Competency of Revenue Collectors	1	2	3	4	5
5. Achievement of county revenue targets would be possible if all revenue collection employees are trained on methods of revenue collection.					
6. Having many years of revenue collection experience will help one achieve revenue collection target					
7. Attainment of revenue collection targets result from revenue collection officer effective public relations techniques.					
8. Achievement of revenue collection targets would result through training and development in revenue collection techniques.					
9. Training of staff on technology used in revenue collection would lead to achievement of revenue targets					
10. Having a code of conduct would lead to achievement of revenue targets					
11. Sensitization of staff on the rules and regulations governing revenue collections would lead to achievement of revenue targets					

Section C: Stakeholder Engagement

The following statements relate to stakeholders engagement. Please indicate your level of agreement; Key: “1= Strongly disagree, 2=Disagree, 3= Neutral, 4=Agree, 5= Strongly agree”

Stakeholder Engagement	1	2	3	4	5
12. Taxpayer sensitization on their need to pay county taxes would lead to achievement of revenue targets					
13. Consultation with Commission on Revenue Allocation when setting taxes and levies would lead to achievement of revenue targets					
14. Consultation with the Office of the Controller of Budget for review of targets would lead to the achievement of revenue targets					
15. Consultation with The National Treasury on target setting and forecasting would lead to achievement of revenue targets					
16. Communication with taxpayers through simple and easy to access channels of communication like SMS, public notices and barazas would lead to achievement of revenue targets					
17. Sensitization to taxpayers on county levies upon amendment of the Finance Act would lead to achievement of revenue targets					
18. Preparation of statutory reports to CRA, OCOB and National Treasury within timelines would lead to achievement of revenue targets					
19. Submission of statutory reports to CRA, OCOB and National Treasury within timelines would lead to achievement of revenue targets					
20. Scheduled public participations and consultative meetings before amendment of Finance Act would lead to achievement of revenue targets					
21. Incorporating taxpayers inputs when amending the Finance Act would lead to revenue target					

22. Commission on Revenue Allocation and Office of the Controller of Budget feedback on proposals on revenue raising measures would lead to achievement of revenue targets					
23. Direct communication by taxpayers to the county government would lead to achievement of revenue targets					
24. Complaint handling procedure for tax disputes would lead to achievement of revenue targets					

Section D: Regulatory Compliance

The following statements relate to regulatory compliance. Please indicate your level of agreement; Key: “1= Strongly disagree, 2=Disagree, 3= Neutral, 4=Agree, 5= Strongly agree”

Regulatory Compliance	1	2	3	4	5
25. Presence of approved policies, rules and regulations governing revenue collection would lead to achievement of revenue targets					
26. Amendments to the County Finance Acts to comply with legislations governing specific revenue streams like Trade Licensing Act would lead to achievement of revenue targets					
27. Adherence to legislation setting up the structures of revenue sections or agencies with regard to human resource and financial autonomy of the agencies or boards would lead to achievement of revenue targets					
28. Presence of primary revenue administration laws for all revenue streams would lead to achievement of revenue targets					
29. Primary revenue administration laws drafted in consultation and collaboration with the National Government would lead to achievement of revenue targets					
30. Consultative legislative drafting and review of revenue administration laws before approval would lead to achievement of revenue targets					
31. Publishing of revenue administration laws in the local media and notice boards would lead to achievement of revenue targets					

32. Publicizing of the revenue laws before implementation in local radio stations and county websites would lead to achievement of revenue targets					
33. Annual review of the Finance Act to capture changes in the economic outlook in the County would lead to achievement of revenue targets					

Section E: Revenue Management

The following statements relate to revenue management. Please indicate your level of agreement; Key: “1= Strongly disagree, 2=Disagree, 3= Neutral, 4=Agree, 5= Strongly agree”

Revenue Management	1	2	3	4	5
34. Daily Reconciliations of revenue collected would lead to achievement of revenue targets					
35. Scheduled Internal audit and checks on revenue collected would lead to achievement of revenue targets					
36. Weekly analysis on key revenue streams performance would lead to achievement of revenue targets					
27. Maintenance of separate revenue collection accounts for revenue streams would lead to achievement of revenue targets					
38. Trend analysis on revenue collected used in budget forecasting would lead to achievement of revenue targets					
39. Special audits on under-performing revenue streams would lead to achievement of revenue targets					
40. Scheduled Rapid Results Initiatives on revenue collection would lead to achievement of revenue targets					
41. Revenue accounting system capable of analyzing revenue performance trends would lead to achievement of revenue targets					
42. Revenue accounting system capable of revenue reconciliation through third party confirmation would lead to achievement of revenue targets					

43. Compatible revenue accounting and county government financial reporting system like IFMIS would lead to achievement of revenue targets					
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Section F: Revenue Collection Automation

The following statements relate to revenue collection automation. Please indicate your level of agreement; Key: “1= Strongly disagree, 2=Disagree, 3= Neutral, 4=Agree, 5= Strongly agree”

Revenue Collection Automation	1	2	3	4	5
44. Web Based systems for revenue automation would lead to achievement of revenue targets					
45. Automated system for taxpayer registration would lead to achievement of revenue targets					
46. Automated registration that alert the county government on dormant accounts that are not compliant would lead to achievement of revenue targets					
47. Automated system for taxpayer filing of tax obligation for structured revenue streams like property rates would lead to achievement of revenue targets					
48. Automated system for payment of tax obligation through use of USSD or mobile money would lead to achievement of revenue targets					
49. Technological upgrade for revenue collection to include emerging revenue sources and streams would lead to achievement of revenue targets					
50. Scheduled software reviews and updates would lead to achievement of revenue targets					
51. Electronic receipting of all revenues collected would lead to achievement of revenue targets					

52. E-government strategy governing revenue collection would lead to achievement of revenue targets					
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Section G: Own Source Revenue Target

The following statements relate to own source revenue collection. Please indicate your level of agreement; Key: “1= Strongly disagree, 2=Disagree, 3= Neutral, 4=Agree, 5= Strongly agree”

Own source revenue Target	1	2	3	4	5
53. The county government forecasted revenue for every financial cycle covering all revenue streams would lead to achievement of revenue targets					
54. The county government has a structured method of forecasting the revenue targets					
55. The forecasted revenues are used in the preparation of the county budget					
56. Revenue collected is reviewed daily and weekly to check on progress towards achievement of revenue targets					
57. Monitoring and evaluation has been done annually to check on revenues collected would lead to achievement of revenue targets					
58. The county government maintains a revenue arrears register for all revenue streams would lead to achievement of revenue targets					
59. The county government offering waivers on penalties and interest on outstanding amounts of property rates would lead to achievement of revenue targets					
60. Revenue arrears collected is part of the revenue target every year					

Thank you for your responses

Appendix IV: Secondary Data Extraction Tool

Financial year	2019/2020			2020/2021			2021/2022		
County Government	Target	Actual	% score	Target	Actual	% score	Target	Actual	% score
Nairobi									
Meru									
Kakamega									
Kericho									
Narok									
Nakuru									

Appendix V: County Governments of Kenya

County Code	County Name
12	County Governments of Meru,
32	County Governments of Nakuru,
33	County Governments of Narok
35	County Governments of Kericho
37	County Governments of Kakamega
47	County Governments of Nairobi,

Appendix VI: Research Authorization Letter



UNIVERSITY OF KABIANGA
ISO 9001:2015 CERTIFIED
OFFICE OF THE DIRECTOR, BOARD OF GRADUATE STUDIES

REF: PHD/BSA/010/2020

DATE: 3RD NOVEMBER, 2023

George Kirer,
Accounting & Finance Department,
University of Kabianga,
P.O Box 2030- 20200,
KERICHO.

Dear Mr. Kirer,

RE: CLEARANCE TO COMMENCE FIELD WORK/DATA COLLECTION

I am pleased to inform you that the Board of Graduate Studies has considered and approved your PhD research proposal entitled "**Agency Revenue Collection, Automation and Own Source Revenue Target Achievement among Selected County Governments in Kenya**". Subsequently the Board has also approved the following supervisors for appointments.

1. Dr. Penina Langat, PhD
2. Dr. Peter Cheruiyot, PhD
3. Dr. Williter Rop, PhD

You may now proceed to commence field work/data collection on condition that you obtain a research permit from NACOSTI and /or an ethical review permit from a relevant ethics review board.

You are also required to publish two (2) articles in a peer reviewed journal, with all your supervisors, before your oral defense of thesis and to submit through your supervisors, and HoD, progress reports every three months, to the Director, Board of Graduate Studies.

Please note that it is the policy of the University that you complete your studies within three years from the date of registration. Do not hesitate to consult this office in case of any difficulties encountered in the course of your studies.

I wish you all the best in your research and hope that your study will yield original contribution for the betterment of humanity.

Yours Sincerely,

A handwritten signature in blue ink, appearing to read "Ronald K. Rop".


Dr. Ronald K. Rop

DIRECTOR, BOARD OF GRADUATE STUDIES

- cc 1. Dean, SBE
2. HOD, Accounting & Finance
3. Supervisors




Appendix VII: Research Permit



REPUBLIC OF KENYA


Ref No: **132984**



**NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY & INNOVATION**

Date of Issue: **09/December/2023**

RESEARCH LICENSE



This is to Certify that **Mr. George Kipng'eno Kirer** of **University of Kabianga**, has been licensed to conduct research as per the provision of the **Science, Technology and Innovation Act, 2013 (Rev.2014)** in **Kakamega, Kericho, Meru, Nairobi, Nakuru, Narok** on the topic: **AGENCY REVENUE COLLECTION, AUTOMATION AND OWN SOURCE REVENUE TARGET ACHIEVEMENT AMONG SELECTED COUNTY GOVERNMENTS IN KENYA** for the period ending : **09/December/2024**.


License No: **NACOSTI/P/23/31845**

Applicant Identification Number
132984

Walter
Director General

**NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY &
INNOVATION**

Verification QR Code



NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

Appendix VIII: Authorization by the County Government

REPUBLIC OF KENYA



COUNTY GOVERNMENT OF KERICHO

OFFICE OF THE GOVERNOR

P.O. BOX 112 - 20200
KERICHO
Ref: KEC/CS/ECL&SS/VOL.VI (107)

E-mail: info@kericho.go.ke
Date: 20th December, 2023

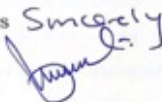
Mr. George Kipng'eno Kirer
University of Kabianga
P.O. Box 2030-20200
KERICHO

Dear Sir

RE: REQUEST FOR AUTHORIZATION TO COLLECT RESEARCH DATA

Reference is made to your letter dated 4th December, 2023 on the above subject matter.

Forwarded herewith please find enclosed approved request for your necessary action.

Yours Sincerely


Dr. Wesley K. Bor (PhD)
The County Secretary and Head of County Public Service

Telephone: +254 20 2221349
Website: www.nairobi.go.ke

NAIROBI CITY COUNTY



City Hall
P. O. Box 30075 00100
Nairobi
KENYA

FINANCE AND ECONOMIC PLANNING DEPARTMENT

REF: NCC/FEP/REV/CCO/WG/157/2023

26th June 2023

George Kirer (PHD/BSA/010/2020)
P.O.Box 8275-00200
NAIROBI

Dear George

RE: AUTHORITY TO CARRY OUT RESEARCH AND ADMINISTER QUESTIONNAIRE

In reference to your letter dated 21st June 2023 on Agency Revenue Collection, Automation and Own Source Revenue Target, we hereby write to communicate to you that you have been allowed to administer the Data Collection Instrument.

However, you should note that you will not collect the instrument without the research permit licence from NACOSTI.

Wish you all the best.

A handwritten signature in black ink, appearing to read 'Wilson Gakuya'.

WILSON GAKUYA
COUNTY CHIEF OFFICER REVENUE ADMINISTRATION



**MERU COUNTY
REVENUE BOARD**

OFFICE OF THE GENERAL MANAGER

Email: revenueboard@meru.go.ke

P.O. Box 3246- 60200 Meru

REF: MCRB/GM/REV.VOL 6/032

20th June 2023

George Kirer (PHD/BSA/010/2020)

P.O Box 8275-00200

Nairobi.

Dear George,

RE: AUTHORITY TO ADMINISTER QUESTIONNAIRE

In reference to your letter dated 16th June, 2023, we hereby write to communicate to you that you have been allowed to administer the Data Collection Instrument.

However, you should note that you will not collect the instruments without the research permit license from NACOSTI.

All the best in your endeavor.

CPA Francis Mungai
Ag. General Manager.



REPUBLIC OF KENYA



OFFICE OF THE PRESIDENT
MINISTRY OF INTERIOR AND NATIONAL ADMINISTRATION
STATE DEPARTMENT FOR INTERNAL SECURITY AND NATIONAL ADMINISTRATION

Telephone: 056 -31131

Email: eeakamega12@yahoo.com

When replying please quote:

Ref: ED.12/I/VOL.VII/35

County Commissioner
Kakamega County
P O BOX 43 - 50100
KAKAMEGA

Date: 14th February, 2024

Mr. George Kipng'eno Kirer
University of Kabianga
P.O Box 2030 - 20200
KERICHO

RESEARCH AUTHORIZATION

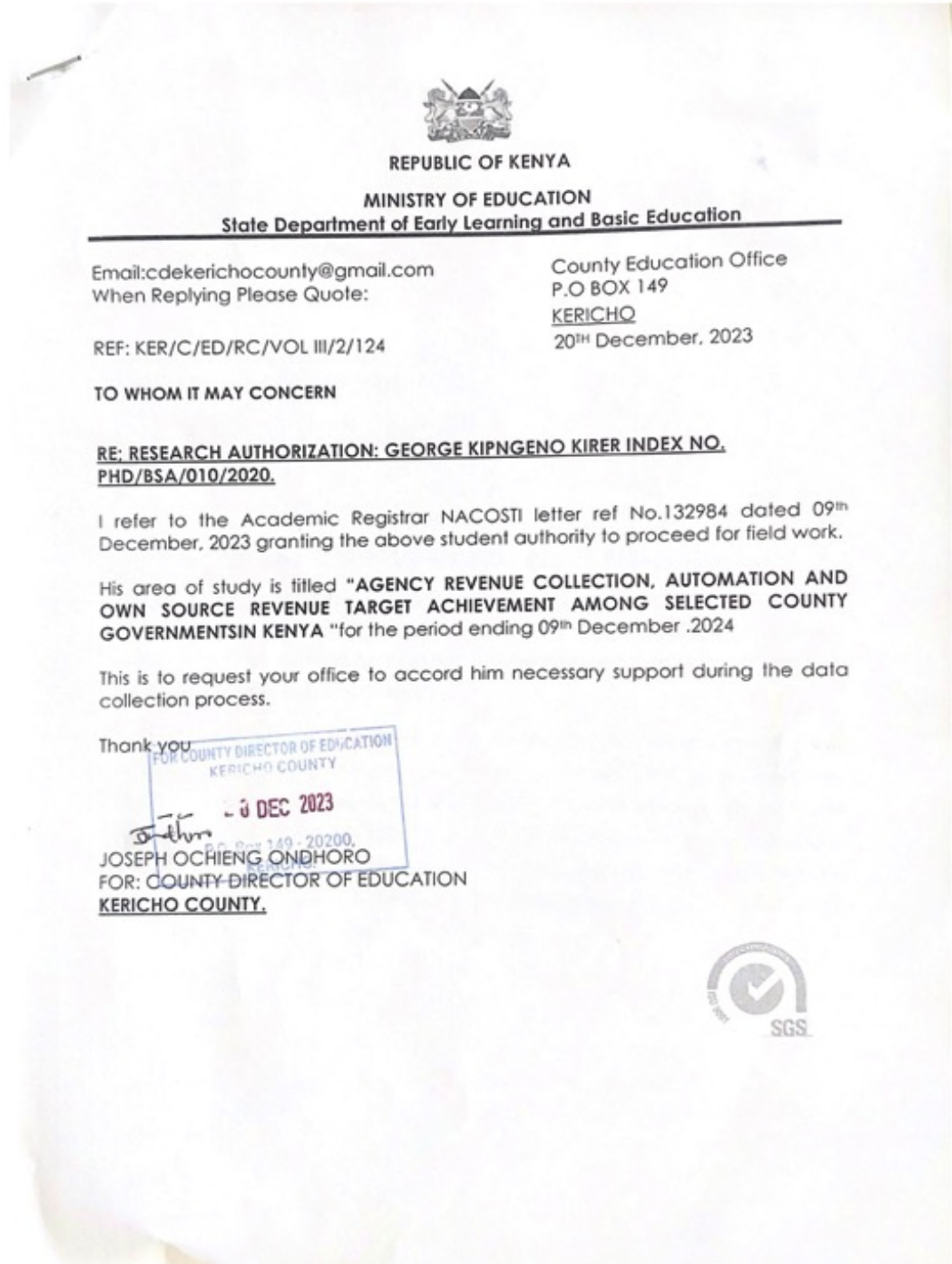
Following your authorization vide license Ref: No. NACOSTI/P/23/31845 dated 9th December, 2023 by NACOSTI to undertake research on "Agency Revenue Collection, Automation and Own Source Revenue Target Achievement among Selected County Governments - Kakamega County" for the period ending 9th December, 2024. I am pleased to inform you that you have been authorized to carry out the research on the same in this county.


COUNTY COMMISSIONER
KAKAMEGA COUNTY

P.K. KEMEI
FOR: COUNTY COMMISSIONER
KAKAMEGA COUNTY

cc: All Deputy County Commissioners
KAKAMEGA COUNTY

Appendix IX: Authorization by Ministry of Education



Appendix X: Authorization by Ministry of Interior and Co-ordination of National Government



**OFFICE OF THE PRESIDENT
MINISTRY OF INTERIOR AND NATIONAL ADMINISTRATION**

Telegrams:
Telephone: Kericho 20132
When replying please quote
kerichoec@yahoo.com

THE COUNTY COMMISSIONER
KERICHO COUNTY
P.O. BOX 19
KERICHO

REF: MISC 19 VOL.VIII (159)

20th December, 2023

TO WHOM IT MAY CONCERN

RESEARCH AUTHORIZATION -MR GEORGE KIPNG'ENO KIRER.

I am pleased to inform you that you are authorized to undertake research as per the licence No. NACOSTI /P/23/31845 dated 9th December,2023 on ***“Agency Revenue collection Automation and Own Source Revenue Target Achievement Among Selected County Governments in Kenya*** for a period ending 9th December, 2024.


GILBERT KITIYO, MBS
COUNTY COMMISSIONER
KERICHO COUNTY

Appendix XI: Revenue Collectors Competency on Achievement of Own Source Revenue in Kenyan County Governments Publication

**Appendix XII: Competencies Of Revenue Collectors And Own Source Revenue
Targets Achievement Among Selected County Governments In Kenya Publication**