

**DETERMINANTS OF REVENUE COLLECTION IN COUNTY GOVERNMENTS IN  
KENYA**

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**17/01593**

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## **DECLARATION**

I declare that this dissertation is my original work and has not been previously published or submitted elsewhere for award of a degree. I also declare that this contains no material written or published by other people except where due reference is made and author duly acknowledged.

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Sign.....

Date.....

## **SUPERVISOR**

I do hereby confirm that I have examined the master's proposal of

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And have certified that all revision that the dissertation panel and examiners recommended have been adequately addressed.

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## ABSTRACT

The purposive of this study was to examine the determinants of revenue collection in county governments in Kenya. The objectives of the study were to determine the effect of internal controls on the revenue collection, establish the effect of staff skills and competence on the revenue collection and to assess the effect of technology on revenue collection in county governments in Kenya. The study adopted descriptive research design. The target population was 3,891 finance managers and revenue officers from the 47 counties in Kenya. The study sampled 350 respondents using stratified and simple random sampling methods. The data was collected using questionnaires. The researcher administered questionnaires to the respondents and drop and pick later method was used because the respondents needed time to fill the questionnaires. Both descriptive and inferential statistics were used to analyse the data. The study used correlation and regression analysis to test the relationship between the variables. The study performed diagnostic tests to determine the appropriateness of the data before running the regression analysis. The findings were presented in tables and figures. The study established that the internal control system had a positive significant effect on the revenue collection. The study furthers established that revenue staff skills and competence have significant effect on the revenue collection in the county governments. Finally, the study established that there was a significant effect of technology on the revenue collection. The study therefore concludes that internal control, revenue staff skills and competence and technology have positive and significant effect on the county governments' revenue collection. The researcher made the following recommendations: the management of the county government should tighten the internal control systems to enhance revenue collection process with the view of increasing revenue collection in the county governments in Kenya; the organization should emphasis employee competence and skills by hiring qualities personnel with relevant revenue collection knowledge and constant training with view of sharpening their skills and competence to maximize revenue collection in the county governments; the county governments should legislate more revenue policies and strengthen enforcement of the policies with the view of enhancing the revenue collection in the county government, and the county governments should adopt more revenue collection systems to enhance the revenue collection in the county government.

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## **DEDICATION**

This proposal is dedicated to my husband William Otieno Otieno and daughters Shanyce and Shaelyne

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## ACRONYMS AND ABBREVIATIONS

<b>CBK:</b>	Central Bank of Kenya
<b>DPC:</b>	Document Processing Center
<b>FIRS:</b>	Federal Inland Revenue Services
<b>GRA:</b>	Ghana Revenue Authority
<b>IMF:</b>	International Monetary Fund
<b>KMC:</b>	Kenya Meat Commission
<b>KRA:</b>	Kenya Revenue Authority
<b>LAIFOMS:</b>	Local Authority Information Financial and Operations Management Systems
<b>RBV:</b>	Resource Based View
<b>SBP:</b>	Single Business Permits
<b>UNCTAD:</b>	United Nations Conference on Trade and Development
<b>UNES:</b>	University of Nairobi Enterprises and Services Limited
<b>VAT:</b>	Value Added Tax

## **DEFINITION OF TERMS**

**Revenue collection:** This refers to the processes and mechanisms by which the government through the authorized public agencies is able to raise funds from the citizens to finance its operation (Anderson, 2013).

**Internal Controls:** A process affected by an entity's board of directors, management and other personnel, designed to provide reasonable assurance regarding the achievement of objectives (Whittington & Peny, 2001)

**Skills and Competence:** refers to the knowledge, measurable skills and abilities and personality traits that leads to superior performance or that identify successful employees against defined roles within an organization.

**Technology:** refers to the application of scientific knowledge to the practical aim of human life



# CHAPTER ONE

## INTRODUCTION

### 1.1 Introduction

The introduction of decentralization framework in service delivery among the developing countries was meant to bring service delivery to the citizens, due to the failures of the centralized governments (Tabaro, 2018). The devolution in Kenya was meant to devolve, the responsibilities for public services, planning and delivery to regional governments. Is referred to Regional or county government depending on the state. For instance, USA and Kenya they are known as county governments, local government in Uganda and regional government in South Africa. In Kenya, a new dawn came with the New Constitution 2010 as it adopted a new system of governance by embracing devolution and the formation of 47 devolved units called county governments (Kosaye, 2018). Devolution principally implies re-distribution or sharing out power, revenue, decision and law making that was centralized in the national executive and legislature are now shared with the devolved units of county executives and assemblies. Some of the devolved functions include are infrastructure, water and sanitation, early childhood development education (ECDE), agriculture, environmental management, roads and transport among others (Kosaye, 2018).

The transfer of revenue collection and spending to a lower level of government also known as fiscal decentralization has gained prominence in governance in most developing countries in the modern times (Kosaye, 2018). In any economy, the core of fiscal policy and administration is revenue collection attributed to its influence on the government operations. The revenue collection can be termed as the driver because through it, the government can realize its budgetary obligations (Kibet, 2017; Muthama, 2013). The devolved governments derive their

revenues for operations from either the allocation by the local government two sources for their have two sources as provided in the constitution. Besides the consolidated fund from the national government, the law on revenue states that each county government shall establish revenue funds legislation from where they shall raise or receive money Ngugi&Kagiri, 2016; Government of Kenya, (2014). The locally generated funds are through levies , taxation, market dues, fines and penalties, parking fees and single business permits (SBP) (Ngugi & Kagiri, 2016).

The intergovernmental transfers according to Chitembo (2009) vary widely from country to country in Africa. For instance, in Botswana, the urban and rural councils receive 62% and 92% respectively from the national Government. However, the local authorities in South Africa are near financial independence from the national government, for instance in 2007 the local governments averagely managed to generate 89% of resources within their jurisdictions. However, in most countries in Africa such as Ghana and Uganda among others, the local governments depend on allocations from the national governments.

Taxation is a major source of revenue for governments all over the world. To this end, developed countries have put in place successful tax policies to enhance the revenue collection process. On the contrary, however, developing countries do not have efficient tax system, which negatively affects the process of revenue collection (Kayaga, 2007).Majority of these countries' revenues have fallen short of the desired outcome that is financing the budget. The failure of growth in revenue from taxes has resulted to imbalances in the public budgetary resources, which has resulted to government spending pressure. According to Kayaga (2007), while the tax structure, in type and rates, have shown improvement in the recent past, in the sub Saharan

African countries, there is an insignificant improvement in the growth of domestic revenue even after the reforms.

Effective devolution requires a local revenue base that is very strong as the locally generated revenue is primary income thus ensuring accountability and independence of the local government (Government of Kenya, 2010). An independent local government partake greater scope for self-sufficiency, and are therefore effective service delivery to the citizens. With such a success in revenue collection, the local government is able to enhance service delivery by co-funding development projects (Tabaro, 2018; Fjeldstad & Heggstad, 2012). The county governments are taxed with identifying and increasing revenue from taxes, various fees and fines imposed with the aim of generating increased revenue to minimize their budgetary deficit. By this, these governments are likely to initiate their own projects and bring them to completion thus leading to poverty reduction (Brooksons, 2012).

However, revenue mobilization for the local governments remains a challenge among sub-Saharan countries, as most are faced with constant budget shortfall. This is not because the budgets are too big to finance but as a result of poor revenue collection. Fjeldstad (2006) investigated openings and restrictions that confronts local revenue assembly of the former colonies of the British in Africa. It was discovered that, as exhibited by various cases in former colonies of the British in Africa, activation of income by nearby government experts however important, is until now deficient to create and supply obliged civilities to the general population. The problems bedeviling revenue collection are mostly due to the ignorance among the tax payers and collectors and inadequate skilled administrative staff (Bird, 2010). The lack of requisite competence by the revenue staff has been found to hinder revenue collection in the county governments (Ndung'u, 2013). Bird further notes that the greatest obstacle to the

realization of the optimum revenue collection has been the hiring of tax officials with little or no knowledge of the tax laws in governance and lacking the necessary accounting skills to analyze returns. The administration of tax thus requires qualified tax workforces, equipped with abilities necessary for upholding of the systems and work their fullest potential (Bird, 2010).

Many authors have cited corruption as a major barrier to revenue collection. Simiyu (2010) investigating the turnover tax collection challenges in Nairobi County, Kenya, noted that bribes by the revenue officers affected the revenue collection negatively. These findings were similar to those by Chiumya (2009) who noted that illegal practices which included the involvement of the revenue officers from the county government in deprived tax revenue. Pashev (2009), who noted that tax administrators engaged in illegal practices, further confirmed the findings. They conspired with the taxpayers to decrease charges and in return accepted unlawful payments. The study reported that other reasons for ineffective revenue collection were lack of clearly defined roles, purposes, and duties of public officials, which acted as a catalyst for abuse of power.

Technology such as Tax Simplification or Tax System Reform have been linked to enhanced revenue collection. Booth (2010), argues that nearly 85 percent of established tax authorities support the proposition that better technology and integration would improve their tax effectiveness. According to Jones (2009), tax technology strategy will enable revenue professionals to better focus their resources when it comes to analyzing data and creating strategies in a bid to generate revenue and cut costs, instead of spending valuable time gathering data. A revenue collection technology therefore enables the revenue function to become more effective when evaluating current revenue collection processes, identify areas for improvement, as well as leveraging the most supportive technologies at the right time.

Revenue collection in Kenya's 47 counties has been discouragingly small. Majority of the county governments failed to reach their targets of revenue collection. For instance, despite being the financial hub of the country, revenue collection in Nairobi City County has been challenging due to the perception in the public that there is decreased revenue alongside increased service demands (Lagomarsino, Garabrant, Adyas, Muga&Otoo, 2012). Many services go undelivered allegedly due to insufficient funds to cater for the said services just like other county governments therefore failing to meet their legal obligations. According to the Controller of Budgets report on the county spending for the period 2014/15, less than half of the county governments in Kenya collected more than 50% of local revenue. The report states that in the same period, the county governments raised a cumulative of Sh. 33.9 billion against a target of Sh. 50.4 billion which represents 64% (Kosaye, 2018).

## **1.2 Statement of the Problem**

The county governments have a perennial budget deficit due to overdependence on allocations from the national government which is never sufficient to finance their development programmes. Compounding the problem is the delay in the release of funds by the treasury. Yet, most of these county governments have adequate revenue bases to finance the current level of services, but the revenue collection levels are low and statistics have shown that the county revenue collections have fallen way below expectation. According to the reports by the Controller of Budget, revenue collection by 14 counties in Kenya fell below amounts generated by the former local authorities under their respective jurisdictions during the 2013/2014 financial year (Karimi, Maina, & Kinyua, 2017). In fact, in the financial year 2013/2014, against cumulative set target of Kshs. 67.8 billion, the county governments managed a paltry Kshs. 9.0 billion representing a mere 13.2 per cent of the annual target. (Controller of Budget Half Year

Report, 2014). Majority of the counties have been doing just 38% or even less with the highest managing 74% (Gituma, 2017; Kosaye, 2018; Lelei & Ombui, 2018). There is therefore a problem with regard to revenue collection in the county governments hence need for a study to investigate the determinants of revenue collection in county governments in Kenya.

So many studies have been done with regard to revenue collection determinants in county governments in Kenya. For instance, Ngicuru and Muiru (2017) studied factors affecting revenue collection in Nairobi County where it was established that revenue diversification, tax administration and tax education had an effect on revenue collection. Study by Maina (2013) investigated the challenges faced by the local authorities in Kenya, with regard to revenue collection, where the focus was Nyeri Municipal Council. It was established that, automation through the Local Authority Information Financial and Operations Management (LAIFOMS) positively influenced revenue collection in the local authority of Nyeri. Ngugi and Kagiri (2016) conducted a study on the barriers to effective revenue collection in devolved governments in Kenya, focusing on Kiambu County where the study found that public participation, skills level in the county staff, legislation framework and technology influenced revenue collection in Kiambu County. Gituma (2017) sought to investigate those factors, which influence the revenue collections by the County Government of Embu. The study established that employee skills and training, employee qualification, corruption and technology influenced the optimal revenue collection.

While these are beneficial to the researcher and the effect of many variables evaluated, the studies have been done on specific counties of Kiambu, Embu, Nakuru and Nyeri, but not on all the 47 counties in Kenya. The aim of the study was to examine the determinants of revenue collection in county governments in Kenya.

### **1.3 General Objective**

The study's general objective was to examine the determinants of revenue collection in county governments in Kenya.

#### **1.3.1 Specific Objectives**

The study's specific objectives were:

- i. To determine the effect of internal controls on the revenue collection in county governments in Kenya
- ii. To establish the effect of staff skills and competence on the revenue collection in county governments in Kenya
- iii. To assess the effect of technology on revenue collection in county governments in Kenya

### **1.5 Research Hypothesis**

*H<sub>01</sub>: Internal controls have no significant effect on the revenue collection in county governments in Kenya*

*H<sub>02</sub>: staff skills and competence has no significant effect on the revenue collection in county governments in Kenya*

*H<sub>03</sub>: Technology has no significant effect on revenue collection in county governments in Kenya*

### **1.5 Significance of the Study**

Current stalemate with regard to revenue allocation bill has brought the operations of the county governments to a near standstill. In fact, the County of Governors' Office threatened of total shutdown of county governments if the national treasury will not release the funds to the

county governments. This is a clear indication that the county governments have relied totally and squarely on the funds disbursed from the national government and that the collections from the county governments is insignificant yet reality is that most county governments hardly collect 50% of their target revenue collections. It was thus important to conduct a study to establish the determinants of revenue collection in devolved governments in Kenya. The researcher anticipated that the study will be of benefit to the following:

### **1.5.1 County and National Governments**

The study will be beneficial to the county governments and the national government as it will highlight the determinants of revenue collection by the county governments in Kenya and its recommendations will be used to develop strategies to enhance revenue collection in the county governments.

### **1.5.2 County Management**

The study will be beneficial to the county management as the findings and the recommendations of the study if adopted will go a long way in formulating policies that will enhance revenue collection.

### **1.5.3 Academicians**

To the researchers and academicians, the study will add to the existing literature in the area of determinants of revenue collection in county governments in Kenya. It may also form a basis for further researcher in the area of study.

## **1.6 Scope of the Study**

The study focused on determinants of revenue collection in county governments in Kenya. All the 25 county governments were targeted. The variables under consideration were

technology, internal controls and staff competence. The study was carried out in the months of July 2020.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The chapter regards review of related literature on determinants of revenue collection by county governments. The review includes the effect of such factors as internal control, staff competence and skills, and technology on revenue collection. The empirical review of similar studies is further presented. Also presented are the theories on which the study is based on. The chapter concludes with a conceptual framework developed from the literature.

#### **2.2 Theoretical Review**

This study revolves around the theories of Resource Based View theory, Vroom Expectancy theory and the Agency theory.

##### **2.2.1 Resource Based View Theory (RBV)**

The study adopts Resource Based Theory of Competitive Advantage as postulated by Wernerfelt (1984) and was expounded by Barney (1991) who expresses that institution's resources comprises assets, capacities, activities, institution qualities, information or data, and awareness among others. As noted by Martinez-Costa et al., (2008), the field of strategic management has made it a habit of using the resource based view theory as its preferred theoretical framework. Newbert (2007) explains that successful firms today are using their resources and capabilities to achieve competitive advantage. Relating the dynamic capabilities to the RBV, scholars have gone ahead to define RBV as important strategic and firms' routine, which the management employs to change their resource based that help to come up with innovative ways (Helfat & Peteraf, 2003).

Protogerouet *al.*,(2008) and Ambrosini *et al.*, (2009) have defined dynamic capabilities as buffer between the firm's resources and the ever changing business environment, a source of sustainable competitive advantage. Barney (1991) further supports these sentiments by stating that a resource is only capable of yielding a competitive advantage If it is valuable, rare, imperfectly imitable, and besides must not be substitutable by competitors. Thus, Fahy (2002) notes the firm's management play crucial role to firm-level competitiveness, as how they perceive the circumstances has a direct influence on the resource selection to be exploited, developed and protected (Simon & Hitt, 2007).

The adoption of technology is driven by internal factors including enhancement of efficiency together with expertise gained, the knowledge and improved processes (Somsuk, 2010) making it the source of real competitive advantage (Alcina&Inaki, 2013). Following the explanation, the firm is thus bound to adequately spur its revenue collection by adopting technology. However, adoption of technology motivated by external factor may as well not result to enhanced revenue collection, as the organization would meet the external pressures (Martinez-Costa *et al.*, 2008). The theory is thus relevant to the current study as it seeks to understand how the adoption of technology as a resource can affect the county governments' revenue collection.

### **2.2.2 The Agency Theory**

Agency is a voluntary relationship between two or more parties whereby one party is authorized to act for and on behalf of the other, called the principal. Through the given authority, the agent can affect or conduct the principal's legal affairs with others as in the case of an agreement called "power of attorney". According to Jensen and Meckling (1976), the information asymmetry between the agent and the principal affects the ability of the principal to

perfect the agent whether or not the agents are properly serving their interests. The theory further describes firms as essential structure for contract maintenance; it is also possible to exercise control that curtails unscrupulous behaviour of agents. The theory posits that, the interests of the agents and those of the principal is only possible through a written contract aimed at addressing the information gap that exists between the agent and the principal.

According to Jussi and Petri (2004), the agent-principal relationship can only be maintained by engaging the services of an expert or system (auditor and control systems) to monitor the agent. This asymmetry of information between the agent and the principal is referred to as a moral hazard as it is likely to affect the output of the agent in terms of lack of knowledge on what is to be done or failure to do exactly what he is appointed to do. Jensen and Meckling (1976) submit that the agency theory works on the assumption that principals and agents act reasonably and depend on contract of wealth to maximize their wealth.

To address the agency problem, the organizations including the public, private and businesses resorted to the use of internal controls so as to minimize the agency cost which had effect on the firm's overall performance including benefits to the principal (Payne, 2003). According to Ndungu (2013), Internal Control increases information available to the principal which discloses the agents behaviour, thus reducing the information gap and reduces investor risk and low revenue. The theory is thus relevant to the study as it seeks to determine how the internal control influence the revenue collection in the county governments.

### **2.2.3 Vrooms Expectancy Theory**

The Vrooms Expectancy Theory was proposed by Victor Vroom in 1964. The model states that the strength of a tendency to perform in a particular method is dependent on the strength of anticipation. The Expectancy theory states that employee's motivation is an outcome

of how much an individual wants a reward, the valuation that the likelihood that the effort will lead to projected performance and the belief that the performance will lead to remuneration. Valence is the significance associated by a specific about the expected consequence (Mello, 2011). It is an expectation and not the actual gratification that an employee anticipates to receive after reaching the goals.

Expectancy is the confidence that better efforts will effect in better performance. Expectancy is predisposed by factors such as ownership of suitable skills for execution of jobs, accessibility of right resources, accessibility of vital information and getting the required backing for carrying out the job (Adams, 2012). Vroom was of the opinion that employees deliberately decide whether to perform or not at the job. Vroom recognized that individual issues such as knowledge, persona skills and practice and ability determine employee's performance .

The theory stated that effort, performance and inspiration are connected to a person's enthusiasm. This is exaggerated by such things as having funds available, having the right aids including the skills to do the job and having the required support to get the job done. Waema and Bawman (2005) further points out that instrumentality is the belief that if you perform well that a valued outcome will be received. This is pretentious by such things as clear understanding of the correlation between performance and outcomes.

### **2.3 Empirical Review**

In this, section the researcher reviews related studies done on the determinants of revenue collection. This is done to capture past studies done globally, regionally, and locally that may be useful. This is done in a way that addresses the study objectives.

### **2.3.1 Internal Control and Revenue Collection**

Internal control systems is geared towards direct or indirect enhancement of the reliability of the firm's financial performance, which comes in terms of increased accountability among those responsible for provision of information in the firm (Jensen, 2003). It therefore serves a much broader purpose seeking to explore the links between disclosure of material weakness and fraud (Doyle, Ge, & McVay, 2005).

Internal control aims to appraise the performance of the management independently, investigating the conduct of the management regarding their assigned responsibilities with the aim being to enhance the organizations revenue (Beeler, Hunton, & Wier, 1999). As put by Fadzil et al. (2005), when the internal control system are effective the organization achieves successful results, as it meets revenue target level with ease. For effective revenue generation and maintenance, there is need for reliability and integrity of the Internal controls in the financial and operating information on a regular basis. The need to review the control is to safeguard the assets, assess level of compliance with management policies by the employees, assess the procedure and applicability and to evaluate the effectiveness and efficiency of the management's achievement of organizational objectives (Ittner, Larcker, & Randall, 2003).

Abdi (2015) investigated the impact of internal control system on financial performance in Mogadishu private banks. The demographic profile of the respondents was age, gender, qualification and experience. The main objectives were to assess the functionality of internal control systems in Mogadishu private banks and to examine financial performance of private banks in Mogadishu. The study was based on 33 target population especially Accountants, finance directors, chief cashiers, internal auditors and managers of private banks in Mogadishu

Descriptive analysis was used. It administers questionnaire as a research instrument. The findings of this study reveal that majority of the private banks in Mogadishu has enough cash to meet its intended goals. Also there is a clear separation of duties. This study suggests that the internal auditors perform their duties fast, efficient and reliable.

Ndungu (2013) investigated the impacts of internal controls on generation of revenue at the University of Nairobi Enterprises and Services Limited (UNES). The research adopted a descriptive design. The study population comprised all the staff at the UNES Limited in the 2013 calendar year. Data analysis of the study was by way of linear regression. The findings pointed out that internal controls lead to revenue creating at the enterprise and that UNES supports internal control by making sure that all documents are accurate, authentic and approve their signing by relevant officers prior to processing to avoid revenue embezzlement. It was similarly revealed that the enterprise has enacted guidelines for all undertakings which enable effective communication, control as well as evaluation of undertakings. The study recommended that the enterprise ought to put in place internal control as well as systems of information that lead to financial, compliance-connected and operational information accounts to allow running as well as controlling the enterprise. Furthermore, there is the need for the enterprise to adequately assess internal control to safeguard the performance effectiveness of the systems over time.

Organizations today use internal controls as a tool for alignment of organizational management activities and not for regulatory purposes as was the case previously (Kenyon & Tilton, 2006). As such organizations have stepped up efforts to enhance the use of internal control through employee training, education and sensitization as effectiveness of the system is dependent on the user competence and dependability. The system minimizes the risks that

threatened the achievement of the goals of the organization and this should occur in all the levels and functions of the organization.

Further, the internal controls take the form of preventive, detective, and corrective (Singleton, Bologna, & Singleton, 2006). They are preventive in that they are able to predict a problem way before occurrence by making adjustments, thus preventing an error, omission or malicious act from occurring. The internal control systems are detective, as they are used to detect and report the occurrences of errors of omission or any malicious acts. Finally, they are corrective as they ensure used to correct errors that may arise by identifying the causes. Through this, the system is able to correct problems that are discovered by modifying the processing system, thus minimize future occurrence.

While focusing on control environment Abbott, et.al, (2010) looked at the effect of the audit committee activity and independent on the financial statements in which 156 firms participated in the study for the period 1980-1986. The study variables were audit committee activity and independence whereby, previous studies recorded mixed results. According to the study findings, the organizations with independent directors with less activity level recorded limited likelihood in association with fraudulent financial statements.

In Belgium, there has been demonstration the effect of internal controls on the control environment with regard to internal audit practices. For instance, According to Sarens and De Beelde (2006), control environment characteristics including level of risk, tone-at-the top as well as control awareness. Further it includes elaborate explanation and communication of the risk management responsibilities and external controls in the organization. The control environment significantly regards both the internal audit function as well as fraud detection.

Berra (2010) investigates the how the penalties and other internal controls affected the employees' fraudulence propensity. The target population is on both the managerial and non-managerial employees. The study used the analytic approach in which she focused on the control activities and monitoring. According to the results, the separation of duties in the organization and control activities led to high cost of committing fraud. Thus, it would be beneficial to commit fraud only and only if the benefit of the crime outweighs the cost in an environment of segregated duties. The study further established that for the non-managerial employees, the least cost fraud deterrent is the segregation of duties, while for managerial employee; maximum penalties are the least cost fraud disincentives. Thus, the preventive control effectiveness is dependent on the detective controls (monitoring).

Simangunsong (2014) conducted a research in Indonesia that intended to explore the impact of effectiveness of internal control and internal audit on performance by local government. The research adopted a census design. The study utilized primary data obtained by way of questionnaires. Data analysis technique employed to evaluate the hypothesis was by way of regression analysis via SPSS. The study undertook the validity as well as reliability test prior to the hypothesis assessment. The findings ascertained that effectiveness of internal control and internal audit on the performance of local government positively related.

Al-Zwyalif (2015) undertook a research in Jordan to investigate the role of internal control in improving corporate governance; questionnaires were used to obtain the primary data. The findings of statistical analysis, the research revealed that the dedication every aspect of internal control leads to reinforcement of the pillars of governance of the corporate to greater extent. Furthermore, the results pointed out that internal control has a substantial function of reinforcing the corporate governance pillars in insurance enterprises in Jordan. The study

recommended that the effectiveness of corporate governance needs adherence to every aspect of internal control.

Kwaji and Dabari (2017) did a study in Nigeria that aimed to assess tax revenue collection by the Federal government in Nigeria. The research employed quantitative research design. The study also relied on the secondary data that was retrieved from the FIRS in relation to the aggregate oil tax revenue gathered as well as non-oil taxes between 2011 and 2015. The population entailed of Federal Inland Revenue Services whereas the sample size comprised planning, reporting and statistics departments. The results of the findings pointed out that capital gains tax, stamp duty, education tax and petroleum profit tax are positively substantial at 1%, 5% and 10% respectively whereas company income tax and value added tax are not substantial.

Using data analysis on descriptive and inferential statistical methods, Ofozie (2010) investigated the impact of internal control system on revenue generation control in local governments. The study established that the internal control system played a major role in the sound resource and funds management by the public sector managers in charge.

According to Mwachiro (2013), internal control is major factor influencing revenue collection. The study used both qualitative and quantitative methods in which 38 respondents participated in completing the questionnaires. The study established that control environment, information and communication, risk assessment and monitoring and control activities must be available for the functionality of the for internal control system. According to the study findings, mismanagement of collected revenue leading to loss is encouraged by weak internal control system. The conclusion drawn from the study was that effect between internal control system and revenue collection in KRA was significant. He further opined that internal auditors should

provide recommendations for improvement in those areas where strength or weakness in internal control systems are identified.

Ngugi (2015) conducted a survey on the internal control systems among the registered private enterprises and the Kenyan government establishments. The study took a case study approach and revealed that the foreign exchange market in this case is influenced by a number of factors in Kenya such as institutional changes, the varying patterns of international trade as well as the structural shifts in the process of production. Before the Central Bank of Kenya (CBK) established the Exchange Control Act foreign exchange was primarily earned by commercial banks and private sector institutions which acted mainly as agents for the local exporters. The agricultural exports during this period contributed heavily to the foreign exchange considering the fact that Kenya's economy is mainly reliant on this and tourism as an income earner.

A study carried out in Nigeria by Owizy (2008) Assessment of Effectiveness of Internal Control in Government Ministries: A Case study of Benue State Ministry of Finance. The study tackled the importance of evaluating the effectiveness of internal control system in government ministries (Units). With particular reference to Benue State ministry of finance, the study examined internal control system performance of Benue State ministry of finance where survey research design was used. The target population was the employees in the ministry. The data was collected using questionnaires. Data analysis used descriptive statistics where it was found out that the institution promptly makes yearly budget and contains sufficient expense tracking for prevention of recklessness in finance despite the internal challenges experienced like; poor communication.

Palfi and Muresan (2009) investigated how an internal control system that is well organized benefits a bank basing its sample on 25 Romania credit institution. The study was

descriptive survey design. The study selected 150 participants using stratified sampling. Descriptive statistics was used to analyse the data. Based on the answers in the survey, it was concluded that collabo that is continuous with meetings that are periodical in all bank structures, featured an internal audit department that is effective.

Abu Musa (2010) conducted a study in the Saudi County government in Kenya sector to examine how adequate is the implementation of security control of accounting information that are computerized. The study used descriptive survey research design. Data was collected using questionnaires. The study used inferential statistics mainly regression analysis to determine the relationship between the dependent and independent variables. On the results basis, sufficient security controls were in place in most Saudi banks enabling bank managers to ensure security of their accounting information system that is computerized and campaign for such if their banks have to be successful.

Mutai (2009) carried out a study on factors influencing performance of local Government Authorities in Kenya. The study used cross sectional survey design. The target population was the employees. The study collected data using semi structured questionnaire and data analysed by descriptive statistics. The researcher noted that lack of transparency and precise control systems was a key challenge to performance of local authorities in Kenya.

Also a study conducted by Mugwe (2010) on Internal Control practices on performance of manufacturing companies in Kenya clearly observed that manufacturing companies have struggled with performance problems and accountability for the financial resources is still wanting. Another a study by Mecha (2010) on the relationship between Internal Control and Performance of Government Ministries in Kenya indicated that effective internal control

practices like communication, and timely reporting contributed to improved performance of Government ministries.

### **2.3.2 Staff Competence, Skills and Revenue Collection**

According to Baurer (2005), inability to discipline corrupt tax administration employees negatively affect the business community. Birds (2003) opine that inefficiencies in revenue collections result in inadequate tax collections. Developing countries are characterized by inefficient tax administration. One of the reasons given for this is the insufficient administrative revenue staff with the necessary skills and the ignorance of the taxpayers. According to Kayaga (2010), limited financial resource is to blame for the hiring of staff with limited tax laws and accounting, which are mandatory requirements for effective revenue collection.

A study in Dar es Salam Tanzania by Franzen's (2007) found that, in terms of revenue collection the public officials are more effective than their private counter parts.

Fjeldstad and Haggstad (2012) on the other hand made a conclusion that, there was need to deploy measures aimed at improving the revenue collectors and elected officials accountable which can only be achieved with the national government's political goodwill. A study in Uganda by Kayaga (2010) on the tax policy challenges in Uganda revealed that insufficiency of new technology alone without tax officials with necessary skills. Further, qualified tax personnel with requisite skills are necessary for effective tax administration and sustainability of the system and operations.

Simiyu (2010) looking at the turnover tax collection challenges at the county of Nairobi, found corrupt by tax officers who take bribes to reduce tax liability, have to a large extent affected the revenue collection. Pashev(2006) and Chiumya(2006) equally found that turnover tax was affected by illegal practices such as reduction of deductions by the tax officers.

According to Pashev the tax administrators together with the taxpayers colluded to reduce charges after receiving bribes. Simiyu thus concluded that like in many other countries riddled with corruption and collusion among the tax collection officers, was a challenge. The problem is because of absence of clear defined roles, functions and duties of the public officers thus creating room for abusive environment.

Furthermore, Guest (2010) investigating the usefulness of training practices on the employee competence in South Africa found training had a positive effect on employee functionality and competencies resulting to better employee and organizational performance. Further, in another study in Nigeria, Hameed (2011) comparing the theoretical framework and models of employee development and performance. The researcher noted that while a lot has been invested on employee training, the suitability of such trainings is often neglected. The study found a positive effect of both capacity building and staff productivity on organizational performance. In addition, Musili (2010) investigated the perceived effect of employee competence and skills on in-flight attendant employee performance at Kenya airways. According to the findings employee skills positively affected their job performance.

As documented by several studies, the employee training positively affects organizational performance. For instance, Aragon-Sanchez *et al.* (2003) in their study found that training activities and most dimensions of effectiveness such as human resource indicators, employee involvement and quality and profitability had a positive relationship. Further, in yet another study, Ubeda Garcia (2005) investigating organizations' training policies found that organizational training programs aimed at enhancing the human capital development affected the satisfaction of customers, shareholders/owners as well as the employee. The study further showed that approximately 4.6% variance in financial performance was attributed to training

with social and organizational performance mediating (Guerrero & Barraud-Didier, 2004). Social capital through relationship building, institutional trust and norm development was found to be another benefit of training (Brown & Van Buren, 2007).

Interestingly, according to Clardy (2005), training practices can have an effect on the organization's reputation. Thus, the awareness of the benefits of training is the reason for the adoption of many policies geared towards designing and delivery of training programs (Herman Aguinis and Kurt Kraiger, 2009).

Hanafi and Ibrahim (2016) studied the impact of employee skills on service performance where a descriptive, cross-sectional; a quantitative method has been used and self-completion questionnaire developed by the researcher, using convenient sampling technique has been distributed to the customers of Sudanese telecommunication companies (Khartoum State was study area), to test the relationship between employee competencies and service performance from the standpoint of customers based on customer experience. The findings reveal that employee competencies have a direct impact on the service performance and customer experience and it is significant, and that customer experience has a direct impact on service performance, findings also reveal that customer experience has a mediating effect although it is not significant. Skills have a significant positive and direct impact on service performance. The role of customer experience as a mediator between employee competencies and service performance is not significant. Employee skills are vital for better performance in service business.

Plantilla (2017) did a study on graduates' performance in the workplace focusing on the employers' perspective. The study used a cross-sectional descriptive study where the target population was 150 employers in the manufacturing sector. The data was collected using

questionnaires and analysed using both descriptive and inferential statistics. The revelation of the findings was that employers were happy and satisfied on how the graduates were performing in the areas of comprehension and job knowledge, understanding of general and specialized skills and the personal qualities they demonstrated in the workplace. There existed a significant difference on the performance of the graduates based on positions and length of service.

Another study was conducted by Jaoko (2014) to establish the perceived relationship between employee academic qualifications and job performance in Mukuru Slums Development Projects, Nairobi County. The study was descriptive in which 95 participated in the study. The study used structured questionnaires to collect data. Regression analysis was used to determine the relationship that existed between employee academic qualification and job performance. The finding from the study revealed academic qualification as perceived to have a positive relationship with job performance. The study concluded that academic qualification has a positive relationship with employee performance.

Sukrapi, Muljono and Purnaningsih (2014) sought to determine how professional competence relates with work motivation in the elementary school teacher performance. Survey research design was used. The study collected data using questionnaires. Data was analysed using regression analysis. Results showed that there was a significant positive relationship between the professional competences of the teacher's performance and that there is a significant positive relationship between professional competence of teachers and work motivation of teachers together with teachers' performance.

### **2.3.4 Technology and Revenue Collection**

According to Sani (2013), delay in the remittance of the generated tax to the relevant authority is hugely due to corruption by the revenue officers, which have jeopardized service delivery to the citizens. Automation of revenue collection is thus aimed increase cash receipt for sustained government's operations. By automating the revenue collection process, maximum revenue collection is possible as the records are computerized.

Odoyo, Oginda, Obura, Ojiera. Alila and Siring (2013) looked at revenue collections by County Government of Homabay where it was evidence that revenue collection automation aids in reduction of financial frauds thus enhancing efficiency and accountability. Change resistance by revenue staff derailed the full implementation of the revenue collection automation. As noted by Sohne (2003), revenue collection automating has a significant influence on the total revenue collection.

According to UNCTAD (2006), the Automation technology based approach in collection of revenue, enhances the process of collection of revenue leading to more increased revenue by the governments thus helping it meet the service delivery needs and expectations of its citizens (Gill, 2000). Maina (2013) in his study concluded that while the revenue collectors appreciated the role of revenue collection automation for effectiveness, the effective implementation of LAIFOMS was hindered by accessibility and availability.

A study conducted by Franzen (2007) In Dar es Salaam Tanzania, found revenue collection automation to be more effective. Further, Fjeldstad and Haggstad (2012) found that in Tanzania, revenue collection automation enhanced revenue collection efficiency. Also, Olaoye, and Kehinde (2017) studied the benefits of revenue collection automation in Nigeria found that

revenue collection automation enhanced accountability and transparency by the revenue authorities besides enabling the government reach its goal of financial governance.

According to Lubua (2014), the use of automation for self-assessments is important in addressing the challenge of the integrity of employees besides promoting voluntary compliance there by leading to efficiency. Muthama (2013) studied how the application of technology in the management practices on management of revenue at KRA. The study established that several changes in the management have prompted management to effective change management.

Researchers have found the revenue administration using technology positively affected revenue collection. According to Gidisu (2012), the automation system has had a positive effect in Ghana. This is because it has resulted to reduced cost of tax administration and increased revenue collection. Mitullah (2005) carried out a survey in which 175 local authorities in Kenya participated regarding the effectiveness of information systems. According to the research, information system is handy in enhancing management of revenue sources.

Panday's (2006) study was geared towards establishing the influence of technological adoption on revenue mobilization in India. Using regression analysis where 20 local authorities were randomly sampled in the country, the study established that the governments needed to significantly build their financial profundity in order to compare in execution with the development.

Aamiret *al.*, (2011) sought to determine the effect of technology adoption on collection of revenue in Pakistan. The study sampled 15 local counties using simple random sampling method and later analysed the data using qualitative analysis. The study established that modernization and technology of the tax system significantly affect collection of the parking fees.

Teera (2002) studied the level of technology adoption in the tax system and structure on tax revenue mobilization in Uganda between 1970 and 2000. The results showed that the use of technological reforms enhanced revenue collection through licenses, fee and taxes.

Gitaru (2017) examined the effect of system automation on income accumulation in Kenya Revenue Authority. This investigation utilized expressive examination outline. The examination used optional information gathering. The examination used KRA customs information for the money related a long time after Simba System. The period chosen was from July 2007 to June 2016. The information was broken down utilizing Gretl and exhibited in figures and tables. The investigation discoveries built up that the quantity of exchange, expended fundamentally after the usage procedure this implies because of income frameworks computerization a high number of imported dispatches were prepared and gone through the brought together Document Processing Center (DPC). Gitaru (2017) did not make reference to theories such as transaction cost theory, financial distress theory or liquidity preference theory but made reference to taxation theories. The study established that system automation resulted to increased revenue collection.

Oduor et al (2016) concentrated on discovering the effect of receiving automated income collection system and its administration and administration conveyance in Kiambu County. The investigation results for the time of May – June 2014 demonstrated an upsurge in income acknowledgement and granular deceivability of area income and patterns. There was an expansion of 60% change in income gathering inside the principal period for the usage of County framework. The study likewise uncovered that 74% of the respondents were happy with the automated revenue collection. At long last the examination uncovered the requirement for further preparing on utilization of County system in all regions to enhance client acknowledgement. Political generosity, suitable system in all regions to enhance client acknowledgement are vital to

fruitful performance of automated revenue collection in counties. Oduor et al (2016) failed to take into account consideration of other factors that may influence revenue collection other than automation. The study did not apply t-test and regression analysis, a marked departure from the current study.

Mutisya (2014) sought to determine the impact of revenue collection automation and usage challenges looked by the administration at Machako County in Kenya. The examination included a longitudinal causal investigation enhanced by in and out subjective meetings. The population study was Machakos County comprising of eight (8) sub counties. Purposive sampling was used to choose two sub counties from eight existing sub-counties dependent on the size and level of movement. The investigation utilized both primary and secondary information sources. The essential information was gathered, utilizing an interview guide while secondary data was gotten from past records and reports of the manual systems from the county's fiancé department, from 2011 to 2014. Trend analysis was used to bring out the comparison between the period before and after automation of revenue collection in Machakos County. Chi-square was used to test whether the change in the level of automation has a relationship to the increase in revenue collection in Machakos County. The findings were presented line graphs and tables while explanation on the tables and figures was given in prose. Mutisya (2014) focus on Machakos County while the current study focuses on a government department namely, Department of Immigration border points. While Mutisya (2014) applied chi-square non-parametric analysis to establish the effect of automation on revenue collection, the current study applied parametric analysis.

Naronaa (2016) sought to investigate the automation of tax collection by the Ghana revenue Authority. Subsequent to meeting 20 authorities from the Asokwa part of Ghana Revenue Authority (GRA) in automation system it tends to be said that the automation is a great observing instrument for GRA. The exploration reports findings dependent on meeting of staff of GRA's encounters with automation showed a proficient and successful method for duty organization. The proof proposes a beneficial outcome of automation system use and expense of tax administration, and compelling methods of revenue collection. Moreover, use of technology was essentially related with tax clearance time. The exploration makes critical experimental commitment in investigating the effect of tax automation on the administration cost, the adequacy of revenue collection and time proficiency. The outcomes are steady with the thought that automation prompts proficiency in tax administration. All things considered, the essential point of automated revenue collection must be to drastically build and create an adequate rate of return identified with the system.

Ndunda, Ngahu and Wanyoike (2015) did a study on analysis of factors influencing optimal revenue collection in Nyandarua. This was a descriptive research design in which they targeted county employees. The data was collected using semi-structured questionnaires. The data was analysed using both descriptive and inferential statistics. The study found that technology had a positive effect on the optimal revenue collection. The study established that information system enhanced reporting and information storage.

Kimani, Maina and Kinyua (2017) did a study on the effect of technology and information systems on revenue collection by the County Government of Embu, Kenya. The study employed a descriptive survey research design. The target population of the study comprises all county government employees in Kenya. Purposive sampling and simple random

sampling was used to select 102 respondents for the study. Data was collected using self-administered semi-structured questionnaires. Overall; it was found that technology and information systems had the effect on revenue collection.

Mushi (2018) study was an assessment of the effectiveness of ICT towards efficient government revenue collection in Tanzania Revenue Authority. The study was used descriptive design. The data was collected using questionnaires and analysed using descriptive and inferential statistics. The results revealed that the use of ICT enhanced revenue collection. Further that it was instrumental in monitoring of the revenue collection in real time basis. Further that it led to more formalization of communication and procedures.

Masawa (2019) studied the socio-economic factors affecting revenue collection in Siaya County. The study was a cross sectional descriptive survey design and a correlational research design. The main focus of the study were the 1474 employees working under the Siaya County government. The study generally adopted stratified sampling whereby each group was sampled separately. The study utilized a data collection form and a semi-structured questionnaire. Both descriptive and inferential statistics were used to analyze the data. Mean and standard deviations were used as measures of central tendencies and dispersion respectively. The study adopted both correlation and regression to test the relationship between the variables. The study established that Legislation, Enforcement, Automation and Political goodwill are indeed socio-economic factors affecting revenue collection in Kenya.

The purpose of a study done by Maina (2013) was to establish the factors affecting revenue collection in local authorities. The study narrowed on effects of government policies and regulations, local authority information financial and operations management systems, revenue enhancement plans and employee skills on revenue collection. Relevant literature was reviewed.

Employing a descriptive research design, the study targeted civic leaders, public officers and chief officers in Municipal Council of Nyeri who totaled to 354. Using disproportionate stratified sampling, the researcher selected 130 civic leaders, public officers and chief officers to participate in the study. Data was collected using a structured pre-tested questionnaire. Data analysis was done with the help of SPSS version 20 and presentation done in terms of frequencies and percentages in the form of figures and tables. The study found that Local Authority Information Financial and Operations Management Systems (LAIFOMS) was picked by most (27%) respondents as the factor with the highest influence on revenue collection while according to 24% of the study participants, government policies had the least influence on revenue collection. Regression analysis revealed that LAIFOMS (sig. = 0.017) and employee skills (sig. =0.038) explained up to 27% of local authority revenue collection. The study concluded that the revenue collectors appreciated the role of information technology in ensuring effective revenue collection however the availability and accessibility was a hindrance to effective LAIFOMS implementation.

The purpose of a study done by Ngicuru, Muiru, Riungu and Shisia (2017) was to establish the factors affecting revenue collection in Nairobi City County Government. The specific objectives of the study were to: establish effect of revenue diversification on revenue collection, establish the effects of administration on revenue collection, assess the effects of tax structure on revenue collection and find out how different forms of revenues affects revenue collection. The study adopted a descriptive research design. The study population comprised of a total of 340 members and a sample size of 180 determined by using the Fischer's formula. Data collected was analyzed with the help of SPSS by both descriptive and inferential statistics. The study found that revenue diversification strategies increases the amount of revenue collected,

with a good tax administration practices like competent staff and adoption of latest technology, the amount of revenue collected will increase.

## **2.4 Knowledge Gap**

The reviewed literature revealed that factors like internal control, staff competence and technological influence among others influenced revenue collection. The internal controls such as internal and environmental controls have a close relationship with revenue collection (Sarens and De Beelde, 2006; Berra, 2010; Simangunsong, 2014). The staff competence in revenue collection is of importance as revenue collection is technical and therefore, requires knowledge and skills for effectiveness (Kayaga, 2010; Simiyu, 2010; Guest, 2010). Lastly, the adoption of technology on revenue collection has been linked, to enhanced revenue collection (Olaoye, and Kehinde, 2017; Mitullah,2005).

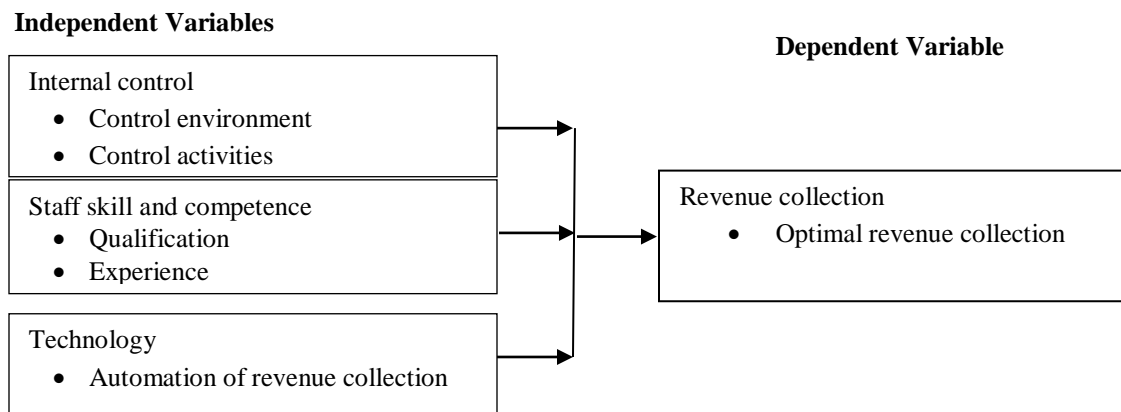
Based on the reviewed literature, most studies majored on revenue collection mainly in national governments of different countries. Little has been done on the determinants of revenue collection. Other few researches have analyzed the models to show different combination of factors influencing revenue collection. For instance, Kayaga (2010) tax policy and staff necessary skills, Okoth (2010) looked at budget constraints, tax evasion, lack of integrity and lack of capacity of the local authority, Odoyo et al., (2013) looked at effect of technology, and change resistance by staff and Muthama (2013) a combination of technology and change management. The study however, will use multiple regression model approach to assess the effect of internal controls, revenue staff skills, and technology on revenue collection in the county governments. Once more reviews obviously show that few researches on the revenue collection have been done in developing countries, including Kenya. This study is anticipated to

immensely benefit the researchers, as it will add to the knowledge about revenue collection in devolved governments in Kenya.

## 2.5 Conceptual Framework

A conceptual framework is a diagrammatical expression of the relationship between a set of independent variables on one side and a dependent variable on the other. The framework shows the sub constructs that are used to measure every variable. The arrows depict the direction of hypothesized relationship. Figure 2.1 depicts the expected relationship between automation and other determinants of revenue collection

**FIGURE 2.1**  
**Conceptual Framework**



**TABLE 2.1****2.6 Operationalization of the Variables.**

<b>Objectives</b>	<b>Variable</b>	<b>Type of variable</b>	<b>Measurement</b>	<b>Type of measurement</b>
To determine how the internal controls affect county governments' revenue collection in Kenya	Internal controls	Independent	Control environment and activities	Ordinal
To establish the effect of revenue staff skills and competence on the collection of revenue by county governments in Kenya	Revenue staff skills and competences	Independent	Qualification and experience of revenue staff	Ordinal
To assess the effect of technology on collection of revenue collection by county governments in Kenya	Technology	Independent	Automation of revenue collection processes	Ordinal
Revenue collection	Revenue collection	Dependent	Optimal revenue collection	Ordinal

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

The chapter discusses how researcher will carry out the study. The chapter is organized as follows: research design, target population, sampling techniques and sample size, research instruments, data collection techniques, and data analysis are presented.

#### **3.2 Research Design**

This was a descriptive research design, the descriptive research design is suitable for this research as it provides questions of who, what, when, where, and how associated with the particular research problem (Cooper & Schindler, 2008). Further, the design suits the study due to its effect on relationship studies and because of the comparative analysis implied by several research objectives. Besides, the descriptive research design enabled the researcher obtain information on collection of revenue in the selected county governments and thereafter describe their revenue collection with respect to internal control, staff skill and competence and technology.

#### **3.3 Target Population**

Target population refers to the particular population from where information is derived. Ngechu (2004) opines that population is a well-defined set of unit of analysis. This study, cover the population in all the 47 county governments in Kenya. The researcher targeted the finance managers and the revenue officers in the county governments. There are 3,891 finance and revenue officers in the county governments.

### 3.4 Sample and Sample Procedure

The study selected samples using simple random and stratified sampling method. First the study selected 25 counties using simple random sampling to participate in the study from the sampling frame in Appendix 2 (pg. 94). This represents 30% of the study population. The respondents were sampled from the selected counties using stratified random sampling. The selected counties formed the strata from which samples were drawn. In stratified random sampling, every element in the study has equal chance to be selected and thus minimal chances of biasness. Sample size determination is vital in order to overcome bias. Sample size determination is vital in order to overcome bias. The study sampled 350 respondents, 14 respondents from each of the sampled counties. The desired sample size was determined using the formula of Fisher et al (1991):

$$n = \frac{z^2 pq}{d^2}$$

Where-:

n-The desired sample size (assuming the population is greater than 10,000)

z -The standard normal deviation, set at 1.96, which corresponds to 95% confidence level

p-The proportion in the target population estimated to have a particular characteristic. If there is no reasonable estimate, then use 50 percent (the study used 0.50).

q = 1.0 –p

d = the degree of accuracy desired, here set at 0.05 corresponding to the 1.96.

$$\text{In substitution} = \frac{1.96^2 \times 0.5 (1-0.5)}{0.05^2}$$

n = 384

The desired population is however given by:

$$nf = \frac{n}{1 + \frac{n}{N}}$$

where nf = desired sample size (based on the population of less than 10,000).

N= the Population (in this case 3891 staff).

n = the desired sample size (assuming the population is greater than 10,000 in this case is 384)

$$\text{Substituting } nf = \frac{384}{1 + \frac{384}{3891}}$$

$$nf = 350$$

### **3.5 Data collection Instrument**

The study used Questionnaires to collect data. A questionnaire according to Mugenda and Mugenda (2008) is a tool for data collection having a set of questions to be used as guiders in gathering information from respondents. Questionnaires were preferred because the respondents can be found in a standardized way. It also saves time as well as helping to collect information from a large pull of people (Kothari, 2008) (Kothari, 2008). The tool had five sections. Section one sought information on the respondents' demographic data. Section two sought information with regard to the internal controls, while Section Three sought staff skill and competence. and Section Four technology on revenue collection.

### **3.6 Instrument Validity and Instrument Reliability**

The research instruments were pre-test for validity and reliability. Validity is the extent a research tool is able to measures what it purports to be measuring. Further, it is the extent the results obtained from data analysis that represents the phenomenon being investigated (Kluger et

al., 2005). In order to ensure content validity of the instruments, the researcher presented the questionnaire to the supervisor who is knowledgeable on the subject matters of the study. The ideas of the supervisor on the content and construction were then incorporated to enhance the final version of the questionnaire.

Reliability is concerned with the degree to which the instrument produces similar outcomes on repeated testing. Through pilot study, the researcher used test retest method where the questionnaires were distributed to the pilot respondents and the same questionnaires given to the same respondents after a period of one week to see the consistency in the response. The study sampled 10 pilot respondents from neighboring county Kiambu using simple sampling method. This represents 3.8% of the sample size, which is according to Mugenda, and Mugenda's (2008) recommendation of 1-10% of the sample size. They were asked to answer the questionnaires. The objective of pre-testing was to detect likely defects in the measurement procedures, to pinpoint obscurely expressed items, and offer a prospect for the researcher to discern behaviours on the part of respondents that may point towards discomfiting content or phraseology of questions. The researcher computed reliability coefficient using Pearson's Product Correlation Coefficient. As shown in Table 3.1, the correlation coefficient given by Cronbach's Alpha on 0.986 which is greater than Mugenda and Mugenda's (2008) reliability coefficient of 0.7, thus the research instruments were redeemed as reliable.

**Table 3.1: Reliability Statistics**

Cronbach's Alpha	N of Items
.986	35

### **3.7 Data Collection Procedure**

The researcher personally administered the questionnaires after obtaining the introductory letter from the University and permission from target counties. Prior to distributing the questionnaires to the respondents, the researcher first booked appointment with the respondents in order to explain the purpose of the study and to seek permission. Where the respondents were not in a position to complete and return the questionnaire immediately, drop and pick later method was adopted.

### **3.8 Data Analysis and Presentation**

After collection, the instruments were examined for completeness and cleaning. Code numbers were then assigned to questions where they were classified into different components for ease of analysis. The descriptive statistics including but not limited to percentages, frequency distribution, means and standard deviation were used with the aid of Statistical Package for Social Science (SPSS version 21.0). The findings were presented in the form of tables and figures.

Inferential statistics such as the correlation and regression were employed to test the relationship between the independent and dependent variables. The use of correlation analysis in this study was due to the fact that it can assess the strength of the relationship between the predictor variables and response variable, thus enabling the researcher to develop how the predictor variables of the study is associated with the study's response variable. The regression

analysis on the other hand tests the direction and the strength of the relationship between the predictor variables and the response variable.

However, before running the regression model, the study performed various diagnostic tests on the study data including normality, homoscedasticity and multicollinearity tests to ascertain the appropriateness of the study data for the regression analysis.

### **3.8.1 Normality Test**

The researcher performed a test for normality of distribution as part of exploratory data analysis using the Shapiro – Will test in which, the significance level of  $\alpha = 5\%$  is acceptable. Normality is assumed if  $P \geq 0.05$ , on the contrary if  $P < 0.05$  the deviation from normality is assumed. Where the resultant data is not found normal, a non-parametric version of test is performed, which does not assume normality (Ghasemi, Syedmoradi, Zahediasl, & Azizi, 2012).

### **3.8.2 Heteroscedasticity**

Heteroscedasticity is a situation where the variability of a variable is unequal across the range of values of a second variable that predicts it (Vinod, 2008). The study tested Heteroscedasticity using the Breuch-pagan/cook-weisberg test. In Breusch-Pagan/Cook-Weisberg test, the null hypothesis have all the error variances equal while for the the alternative hypothesis, the error variances are a multiplicative function of one or more variables. According to Bera and Jarque (2012) when the value of “Prob> Chi-squared” is  $\geq 0.05$  then heteroscedasticity is evident (Bera & Jarque, 2012). Detection of the problem of heteroscedasticity required the researcher to either specify the model or transform the variables since sometimes heteroscedasticity occur due to improper model specification resulting from wrong choice variables whose effects may not be linear (Garson, 2012).

### 3.8.3 Multicollinearity

Variance Inflation Factor (VIF) and Tolerance were used to measure multicollinearity. The VIF measures the variance of the coefficient estimated inflated by multicollinearity. The value of VIF for all the variables both the dependent and independent must be less than 3 ( $VIF \leq 3$ ) for no multicollinearity. However, if the value of VIF of  $\geq 3$  there is collinearity and a further more than 10 indicates a problem with multicollinearity (Maddala & Lahiri, 1992).

### 3.8.4 Regression

Regression analysis was utilized in the study to assist in assessing the effect of the predictor variables on the response variable. The key benefit of using regression analysis lies in its ability to suggest the extent to which variations in the predictor variables can influence the response variable. It is likewise able to show the relative strength of the different independent variables' results on the given response variable.

The regression model used in the study will be as follows;

$$RC = \beta_0 + \beta_1 IC + \beta_2 SC + \beta_3 CR + \beta_4 TEC + e$$

Where:

RC = Revenue collection

$\beta_0$  = Constant

IC= Internal Control

SC= Staff Competence

TEC= Technology

$\beta_1, \beta_2, \beta_3 \& \beta_4$  = Coefficients

e = error term.

Further, the t-test with a critical value of 1.96 and a p value of 0.05 was used to test the significance of internal control, staff skills and competence and technology. According to Kothari (2004) an independent variable has a significant effect if the t statistics is greater than + or -1.96 or if the p value is less than 0.05.

## CHAPTER FOUR

### DATA ANALYSIS AND INTERPRETATION

#### 4.1 Introduction

This chapter presents the data analysis together with the interpretations of the findings obtained from the analysis of the data. The findings were represented pictorially using tables and figures. The findings were interpreted based on the study objectives. Descriptive statistics was used to analyse the quantitative data which was followed by discussions of the findings based on the literature review. The researcher further performed further analysis to determine the effect of the independent variable on the dependent variables using regression analysis. The first section presents the demographic data and the subsequent sections presenting the study objectives.

##### 4.1.1 Response Rate

The researcher distributed 350 questionnaires to the financial managers and revenue officers from 25 counties. Out of the 350 questionnaires that were administered, 265 were adequately filled and returned thus resulting to 75.7% response rate (Table 4.3). According to Mugenda and Mugenda (2003) a response rate of 50% is adequate for analysis and reporting. They further noted that a 60% response rate is good and 70% and above as excellent. Thus the study's response rate of 75.5% according to Mugenda and Mugenda is excellent.

**Table 4.1: Response Rate**

	<b>Frequency</b>	<b>Percent</b>
Responses received	265	75.7
No response	85	24.3
<b>Total</b>	<b>350</b>	<b>100</b>

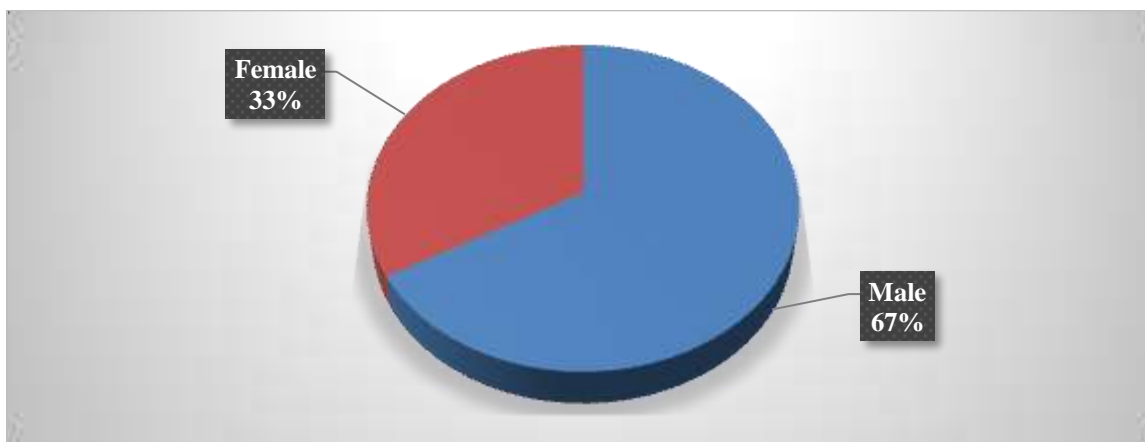
## 4.2 Respondents' Biodata Information

This section sought to establish the respondents' biodata information. The respondents were required to provide their background information based on their gender, age, level of education, professional training, work experience, designation and the duration worked in the same position. The results are described in the subsequent sections.

### 4.2.1 Distribution by Gender

The sought to establish the respondents' by asking them to state their gender. The findings are presented in Figure 4.1.

**Figure 4.1: Distribution by Gender**

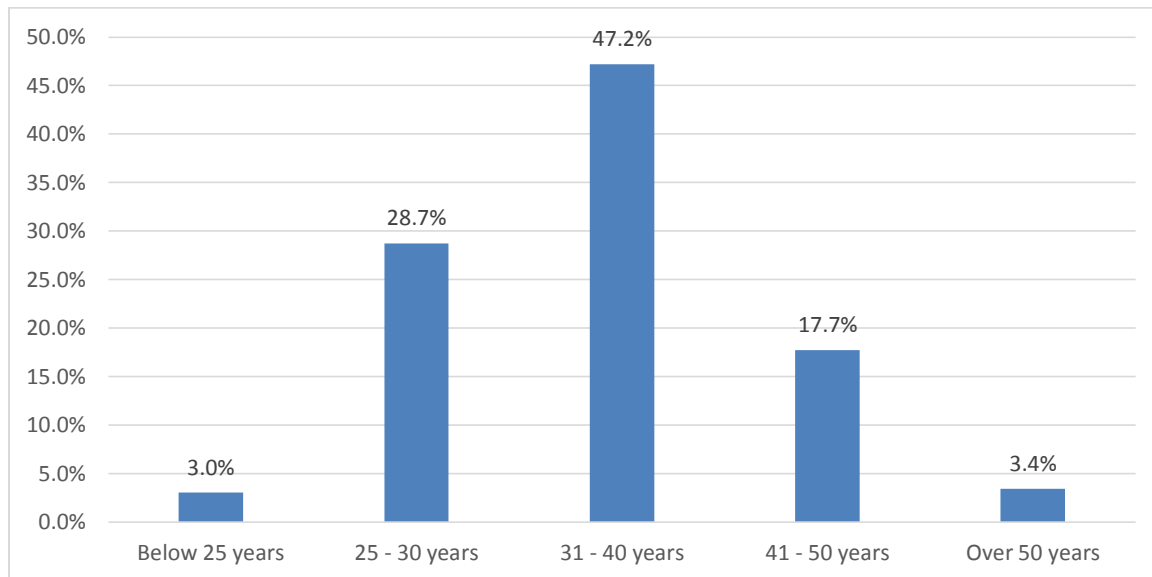


Majority of the respondents (67%) were male as compared to 33% female. The results of the study show that both genders participated in the study, however, the finance departments in the county governments seem to be a male dominated. , though meeting the not more than  $2/3^{\text{rd}}$  of the total representation.

### 4.2.2 Respondents' Age

Each respondent was required to state their ages. Figure 4.2 shows presentation of the findings.

**Figure 4.2: Respondents' Age**

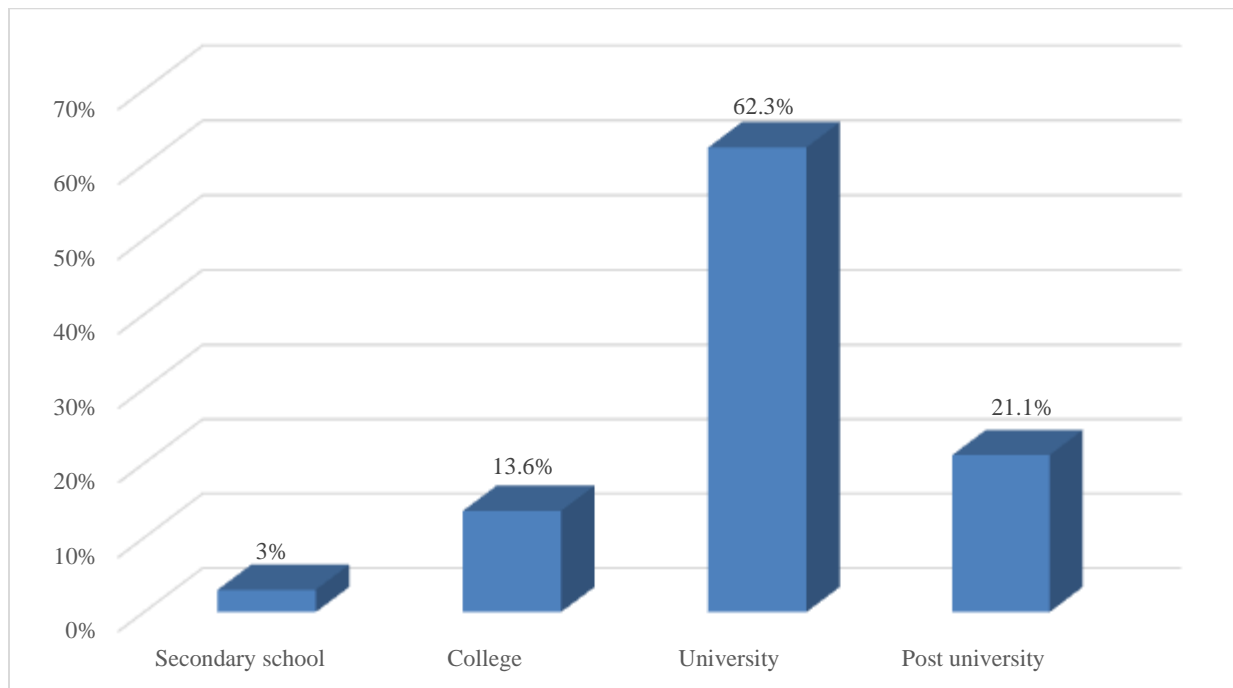


Most of the respondents (47.2%) were in the age bracket of 31 years to 40 years. The results show that 28.7% of the respondents were aged between 25 years and 30 years while 17.7% of the respondents fell in the age bracket of between 41 years and 50 years.. Still most respondents are found in the middle age that is above 30 years.

### 4.2.3 Highest Level of Education

The respondents were asked to state their highest attained education level. Figure 4.3 presents the findings.

**Figure 4.3: Highest Level of Education**

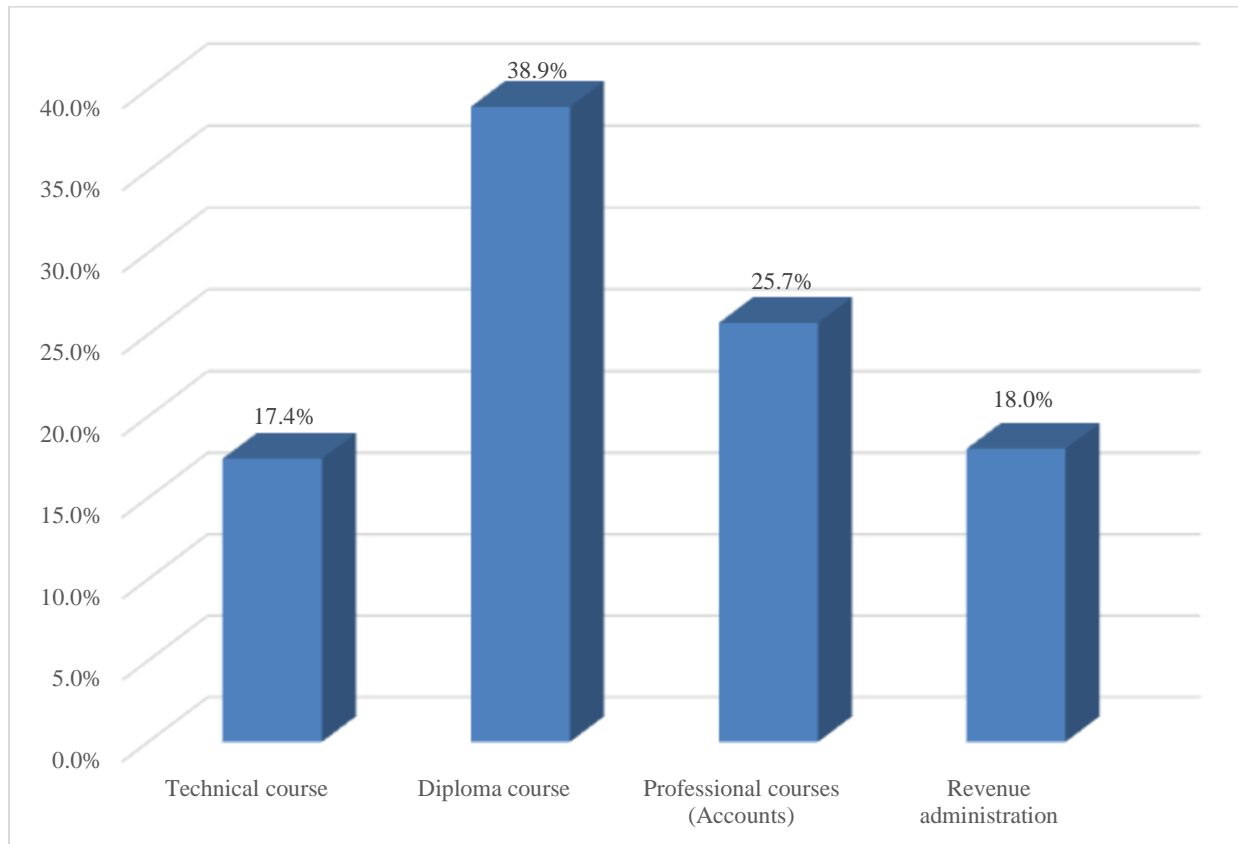


The results show that majority of the respondents (62.3%) had university education while 21.1% have a post university education. Only 3% had secondary education. These inferred that most of the respondents had a sound academic background and as such have a good understating of the subject matter and may imply that the academic qualification to some extent influenced revenue collection in the county governments.

#### **4.2.4 Professional Training**

The respondents were asked to provide information on their highest professional training they have achieved in addition to the academic qualification. The findings are captured in Figure 4.4.

**Figure 4.4: Professional Training**

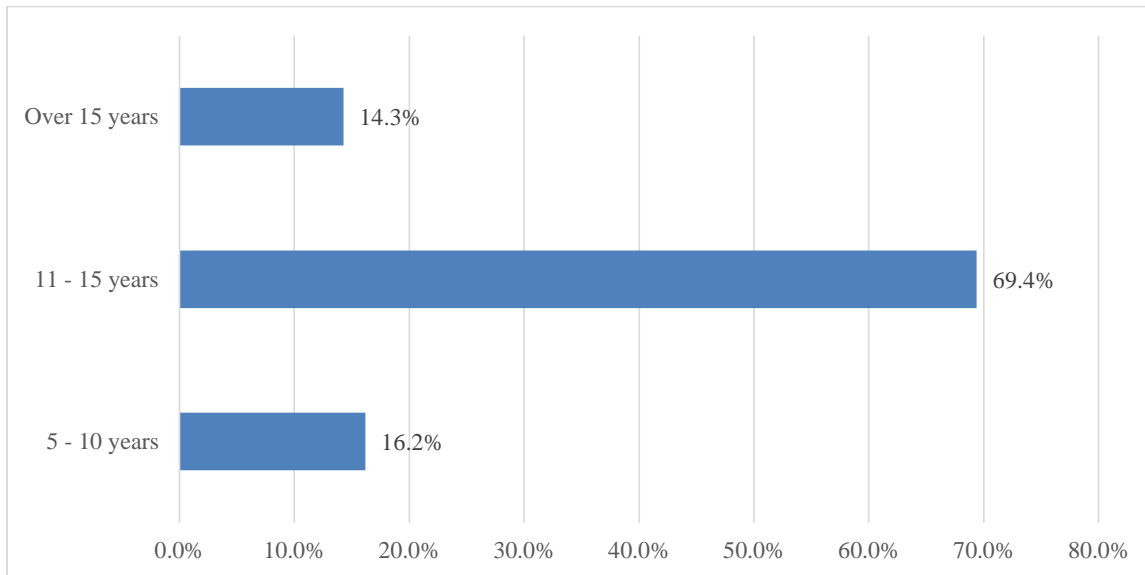


The study findings show that most of the respondents (38.9%) indicated that had diploma training in business related courses. The findings further show that 25.7% of the respondents indicated that they have had professional training mainly in accounts while 18% have had training in revenue administration. The study findings mean that only handful of the respondents had relevant training in revenue which may influence their efficiency.

#### **4.2.5 Duration worked in the County Government**

The study sought to determine how long the respondents had worked in their respective county governments. The findings are presented in Figure 4.5.

**Figure 4.5: Duration Worked in the County Government**



The study findings show that majority of the respondents (69.4%) have worked in their current county governments for between 11 years and 15 years while 14.3% of the respondents have worked for over 15 years. The results show that 16.2% of the respondents have worked for between 5 years and 10 years. The results imply that most of the respondents have worked in the county government long enough to be able to provide crucial information relating the matter under investigation.

#### **4.2.6 Designation**

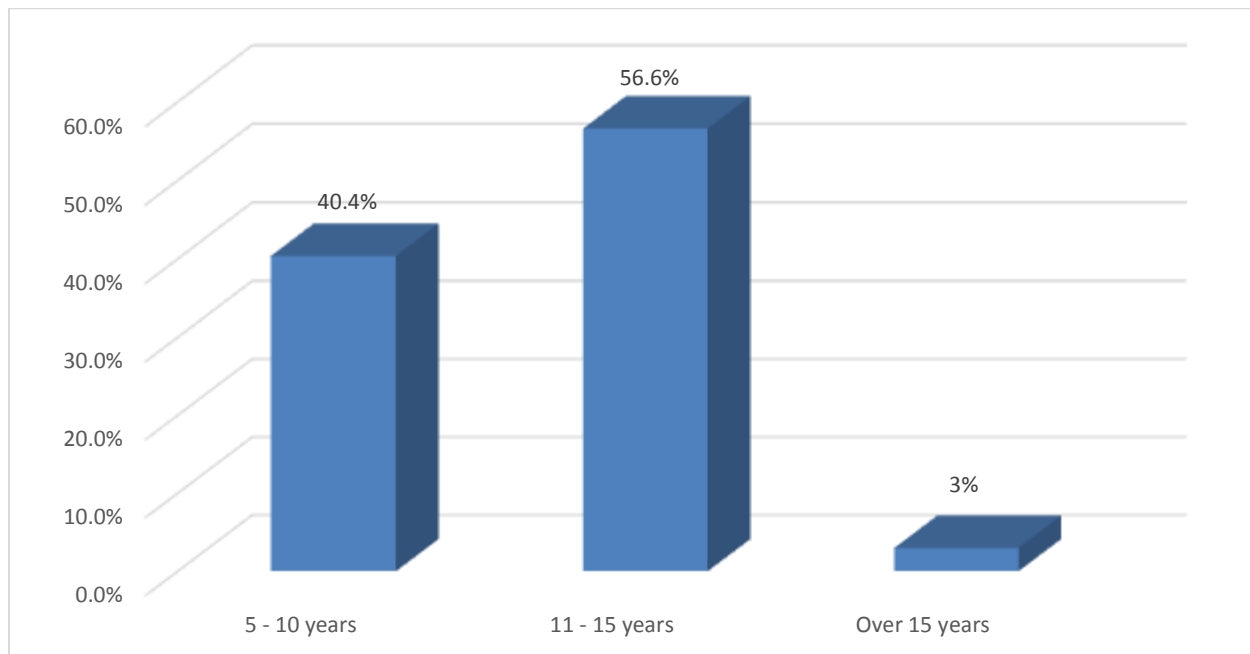
The respondents were asked to state their designation in the county government. According to the results of the study, majority of the respondents (168) were revenue officers in the county governments. The study established that 97 of the respondents were finance officers.

#### **4.2.7 Duration in the Same Position**

The study sought to establish the respondents' duration of stay in the same position.

Figure 4.6 shows presentation of findings:

**Figure 4.6: Duration in the Same Position**



Most of the respondents (56.6%) have stayed in the same position for between 11 years and 15 years. Further, about 40.4% of the respondents have remained in the same positions for between 5 years and 10 years.

#### **4.3 Effect of Internal Controls on Revenue Collection**

The first objective of the study sought to determine the effect of the internal controls on the revenue collection in the county governments. The evaluated the respondents' level of agreement with various statements on the internal control practices in the organization on a scale of strongly disagree, disagree, neutral, agree and strongly agree. The study obtained the mean and standard deviation for each of the indicators if the statements. Therefore, the overall mean and standard deviation was obtained. The responses were scored on a mean score of statistics in the range of: 1.0 – 1.8 represents strongly disagree, score 1.8 – 2.6 represents disagree, 2.6 – 3.4

represents neither agree nor disagree, 3.4 - 4.2 represents agree and score 4.2 - 5.0 represents strongly agree. The findings are presented in Table 4.2.

**Table 4.2: Internal Control Practices in the Organization**

	N	Mean	Std. Dev
Government regularly review reliability and integrity of financial and operating information	265	2.7	0.931
Government reviews controls employed to safeguard assets	265	3.41	0.93
Government asses employees compliance with management policies, procedures and applicable laws and regulations	265	3.03	0.996
Evaluates the efficiency and effectiveness with which management achieves its organizational objectives	265	2.76	0.974
Government has setup internal control system as a regulatory requirement	265	3.6	0.879
Internal systems ensure all management activities are carried out appropriately	265	3.46	0.929
Controls in place able to predict potential problems before occurrences make correction and prevents errors	265	3.56	1.021
Audit committee independence minimised fraud	265	3.48	0.84
Organizations segregation of duties enhanced revenue collection at county	265	2.49	0.858
Internal control system important in management of collection of revenue	265	3.54	0.937

Respondents were indifferent with the statement that the government regularly reviewed the reliability and integrity of the financial and operating information (mean score 2.70). Further, most noted that the government reviews the controls employed to safeguard assets (mean score 3.41). Majority of the respondents were neutral as to whether the government assessed employees compliance with management policies, procedures and applicable laws and regulations or not (mean score 3.03). According to the study findings, the respondents neither agreed nor disagreed with the statement that the governments evaluated the efficiency and effectiveness with which the management achieved organizational objectives (mean score 2.76). As to whether the county governments had setup internal control systems as a regulatory requirement, the study findings revealed that majority of the respondents generally agreed with

the statement (mean score 3.60). The study findings revealed that the most of the respondents agreed with the statement that the internal systems ensured that all the management activities are carried out appropriately (mean score 3.46). The study established that majority of the respondents agreed with the statement that the controls in place were able to predict potential problems before occurrences thus making correction and prevention of errors (mean score 3.56). Further most respondents agreed with the statement that the audit committee independence had minimized fraud in the county governments (mean score 3.48). The study results show that respondents neither agreed nor disagreed with the statement that the organizations segregation of duties had enhanced revenue collection at the county (mean score 2.49). According to the findings, respondents generally agreed with the statement that internal control system was important in the management of the revenue collection (mean score 3.54). The study findings show that there were minimal variations in the responses for most of the areas tested (standard deviation  $< 1$ ), except for two statements, government has setup internal control system as a regulatory requirement and in place able to predict potential problems before occurrences make correction and prevents errors (standard deviation  $> 1$ ). The study findings imply that the internal control play a significant role in the revenue collection in the county governments in Kenya. The study findings that the audit committee independence minimizes fraud support the views of Abbott et al (2010) who argued that the organizations with independent directors with less activity level recorded limited likelihood in association with fraudulent financial statements. These findings also agree with Sarens and De Beelde (2006) who noted that control environment significantly related to the role of internal audit function and fraud detection. The study finding that the respondents remained in different with the statement that the organizations segregation of duties enhanced revenue collection at the county contradict Berra (2010) who argued that

separation of duties in the organization and control activities led to high cost of committing fraud, noting that committing fraud will only be beneficial the crime outweighs the cost in an environment of segregated duties.

#### 4.4 Effect of Staff Competence on Revenue Collection

The second objectives of the study sought to determine the effect of staff competence on revenue collection in the county governments. The study evaluated respondents level of agreement with the various statements provided with regard to the staff competence. This was on a scale of strongly disagree, disagree, neutral, agree and strongly agree. The findings are presented in Table 4.3.

**Table 4.3: Effect of Staff Competence on Revenue Collection**

	N	Mean	Std. Dev
Revenue collection challenge in county government a result of incompetent staff	265	3.40	.847
Hiring of skilled revenue officers key to revenue collection in county government	265	3.52	.879
Qualified revenue personnel ensure effective administration of revenue collection	265	3.52	.946
Corruption and collusion of revenue officers with tax payers main reason for poor revenue collection by county government	265	3.49	.880
Employee compliance has direct influence on revenue collection performance	265	3.55	.936
Revenue officers in the county lack necessary training	265	3.02	.896
Organization organized several training and workshops on revenue officers	265	3.59	.941
County government keen on enhancing skills and competence of revenue officers with regard to revenue collection	265	3.31	.854

The study established that respondents generally agreed with the statement that the revenue collection challenge in the county government is as a result of the incompetent staff (mean score 3.40). The results further show that according to most of the respondents, hiring of skilled revenue officers is key to the revenue collection in the county government (mean score 3.52). The findings revealed that majority of the respondents agreed with the statement that

qualified revenue personnel will ensure effective administration of the revenue collection (mean score 3.52). The respondents generally agreed that corruption and collusion of revenue officers are tax payers is the main reason for poor revenue collection by the county government (mean score 3.49). According to the results of the study, employee compliance has a direct influence on their revenue collection performance (mean score 3.55). As to whether the revenue officers in the county lack the necessary training, the results show that many respondents neither agreed nor disagreed with the statement (mean score 3.02). The findings show that respondents generally agree with the statement that the organization has organised several training and workshops on revenue officers (mean score 3.59). Finally, respondents agreed with statement that the county government is keen on enhancing the skills and competencies of the revenue officers with regard to revenue collection (mean score 3.31). The findings show that there were minimal variance in the responses (standard deviation < 1). The findings of the study imply the employee competence and skills was integral in the county government's effort to improve revenue collection.

The assertion by the respondents that hiring of qualified revenue staff was key to enhanced revenue collection in the county government are in support of the argument by Kayaga (2010) that the limited financial resources was to blame for the hiring of staff with limited tax laws and accounting which according to him are a mandatory requirement for effective revenue collection. He further noted that qualified tax personnel with requisite skills are necessary for effective tax administration and sustainability of the system and operations. The findings further agree with Baurer (2005) who noted that the developing countries are characterized by inefficient tax administration due to revenue staff without the necessary skills and the ignorance of the tax payers.

The study findings that corruption and collusion of revenue officers with tax payers was the main reason for poor revenue collection by county government are in agreement with the findings of Simiyu (2010) who studying the turnover tax challenges in Nairobi County found that the revenue collection in the county was largely due to the corrupt tax officers who were taking bribes so that they could reduce tax liability. The study findings on the effect of corruption by the revenue officers agrees with Pashey (2006) and Chiumya (2006) who found that the turnover tax was affected by illegal practices such as reduction of deduction by the tax officers. Pashey went ahead to note that the tax administrators together with the tax payers collude to reduce charges after receiving bribes.

#### **4.5 Effect of Technology on Revenue Collection**

The fourth objective of the study was to assess the effect of technology on the revenue collection in the county governments. The researcher evaluated the respondents' level of agreement with the various statements provided regarding technology using the scales of strongly disagreed, disagreed, neutral, agree and disagree. The findings are presented in Table 4.5.

**Table 4.5: Effect of Technology on Revenue Collection**

	N	Mean	Std. Dev
Revenue computation problem is to blame for the delay in revenue collection in the county government	265	3.33	.910
Automation of revenue collection has enhanced the whole process in the county government	265	3.46	.879
Automation has minimised fraud in revenue collection in the county government	265	3.51	.909
Automation enhanced efficiency and accountability in revenue collection in the county government	265	3.54	.973
Automation of revenue collection minimised wastage in revenue collection in county government	265	3.42	.926
Automation resulted in increased revenue collection	265	3.26	.700
Automation enhanced proper management of revenue resources in county government	265	3.26	.659

The study findings show that respondents generally agreed with the statement that revenue computation problem is to blame for the delay in revenue collection in the county government (mean score 3.33). The findings further show that respondents largely agreed with the statement that the automation of revenue collection has enhanced the whole process in the county government (mean score 3.46). According to majority of the respondents, the automation has minimised fraud in revenue collection in the county government (mean score 3.51). Respondents agreed that the automation had enhanced efficiency and accountability in revenue collection in the county government (mean score 3.54). Further according to respondents, automation of revenue collection has minimised wastages in revenue collection in the county government (mean score 3.42), while the automation also resulted to increased revenue collection (mean score 3.26). As to whether the automation had enhanced proper management of revenue resources in the county government, the respondents largely agreed with the statement (mean score 3.61). According to the study findings there were limited variances in the responses

(standard deviation < 1). The results imply that technology had a great influence of the revenue collection in the county governments.

The study findings that the automation of revenue collection had enhanced the whole process of revenue collection in the various county governments support the views of Sohne (2003) who noted that revenue collection automation had significantly influenced the total revenue collection. It further supports UNCTAD (2006) who noted that the Automation technology based approach in collection of revenue, enhances the process of collection of revenue leading to more increased revenue by the governments thus helping it meet the service delivery needs and expectations of its citizens.

The results that the automation enhanced efficiency and accountability in revenue collection in the county government supports studies by Franzen (2007), Fjeldstad and Haggstad (2012), Olaoye, and Kehinde (2017) and Lubua (2014) who too noted that the automation of revenue collection enhanced effectiveness, efficiency and accountability and transparency by the revenue authorities thus enabling the governments to reach their goals.

#### **4.6 Revenue Collection**

In this section the study sought to determine the revenue collection status in the county governments. The respondents level of agreement with the various statements provided on revenue collection was evaluated on a scale of strongly disagree, disagree, neutral, agree and strongly agree. The results of the study are presented in Table 4.6.

**Table 4.6: Revenue Collection.**

	N	Mean	Std. Dev
County government meets its target of revenue collection	265	1.77	.910
Revenue collection by the county government is progressive	265	3.49	.867
County government meets its obligations with the revenue	265	2.16	.777
Revenue collection by the county government is not adequate	265	3.42	.958
County government is always on budget deficit due to uncollected revenue	265	3.60	.806

The study established that respondents disagreed with the statement that the county government meet their target of revenue collection (mean score 1.77). The results further show that respondents generally agreed with the statement that the revenue collection in the county governments were progressive (mean score 3.49). According to the findings, respondents neither agreed nor disagreed with the statement that the county governments met their obligations with the revenue (mean score 2.16). The results show that most respondents agreed with the statement that the revenue collection by the county government were inadequate (mean score 3.42). Lastly, respondents agreed with the statement that the county governments were always on budget deficit due to uncollected revenue (mean score 3.60). There were no variances in the responses (standard deviation < 1). The study findings imply that there was a problem of revenue collection in the county governments.

#### **4.7 Inferential Statistics**

The study conducted further analysis to determine the relationship between the variables. These included correlation and regression analysis.

##### **4.8.1 Correlation Analysis**

The study performed the Pearson correlation analysis to assess the association between any two variables of the study. The results are as illustrated in Table 4.7.

**Table 4.7: Correlation Matrix**

		Revenue collection	Internal control	Staff competence	Technology
Revenue collection	Pearson Corr	1			
	Sig. (2-tailed)				
Internal control	Pearson Corr	.696**	1		
	Sig. (2-tailed)	.000			
Staff competence	Pearson Corr	.765**	.890**	1	
	Sig. (2-tailed)	.000	.000		
Technology	Pearson Corr	.833**	.817**	.888**	1
	Sig. (2-tailed)	.000	.000	.000	

The results of Pearson correlation indicate that there is a significant positive correlation between revenue collection and internal controls ( $r=0.696$ ,  $p\text{-value} < 0.05$ ); a significant positive correlation between revenue collection and staff competence ( $r=0.765$ ,  $p\text{-value}<0.05$ ); and a significant positive relationship between revenue collection and technology ( $r=0.833$ ,  $p\text{-value}<0.05$ ). In general, there exists a positive correlation between any two variables under study and all the tests were statistically significant.

#### **4.7.2 Test of the Model and Data**

##### **a) Diagnostic Test**

The study performed various diagnostic tests before performing parametric analysis. This was critical in ensuring that the study data met the specific assumptions underlying regression analysis. The assumption is also extended to the error term which is generated from regression of such data. The diagnostic tests performed were; normality, multicollinearity and heteroscedasticity tests. The results of the tests are as described below.

##### **b) Test for Normality**

Linear regression assumes the regression residuals are normally with skewness and kurtosis that fall within tolerance. The normality of the data was tested using the Shapiro-Wilk statistics, which tests the null hypothesis that the data is normal. The findings of these tests were

corroborated with normal Q-Q plot, normal P-P plot and histogram of standardized residuals.

The findings are presented in Table 4.8.

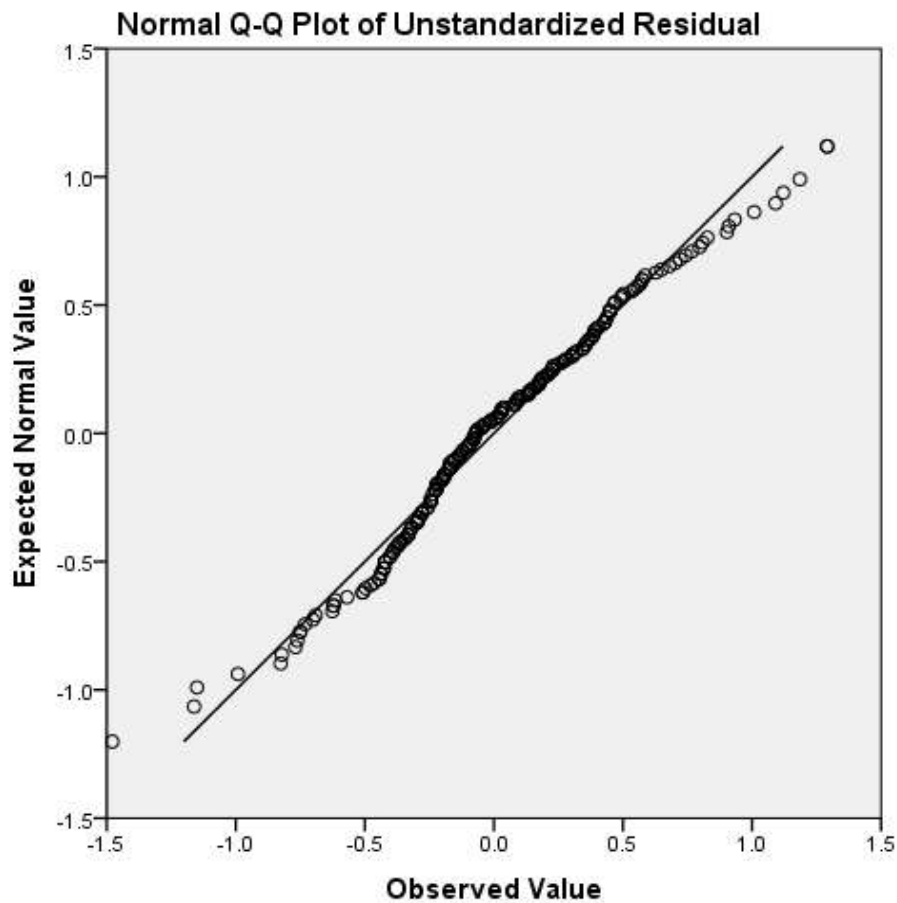
**Table 4.8 Test for Normality**

	Shapiro-Wilk		
	Statistic	df	Sig.
Internal Control	.919	265	.225
Staff Competence	.900	265	.212
Technology	.899	265	.187
Revenue Collection	.972	265	.382

a. Lilliefors Significance Correction

The study used a significance level of 5 percent as the probability of making type one error. The results thus show that the p-values for all the variables (internal control, staff competence, technology and revenue collection) were more than 0.05. Therefore, the null hypothesis were retained indicating normality in the standardized residuals. Furthermore, the results show the static of Shapiro-Wilk test near unity (1.000), it showed that the unstandardized residuals were normally distributed (Osborn, 2013).

**Figure 4.7: Normal Q-Q Plot of Unstandardized Residuals**



As stated by Loy, Follet and Hoffman (2014), a quantile-quantile (Q-Q) plot must be rendered to support findings of Shapiro-Wilk test because the latter test might not indicate the features of distribution that are not normal. A Q-Q plot is a scatterplot created by plotting one set of a standard normal quantile against one another observed quartile. If both quartiles come from the same normal distribution, the points should form roughly straight line. Figure 4.7 shows that the values were distributed along the expected normal curve indicating normality in the unstandardized residuals.

**Figure 4.8: Histogram of Standardized Residuals**

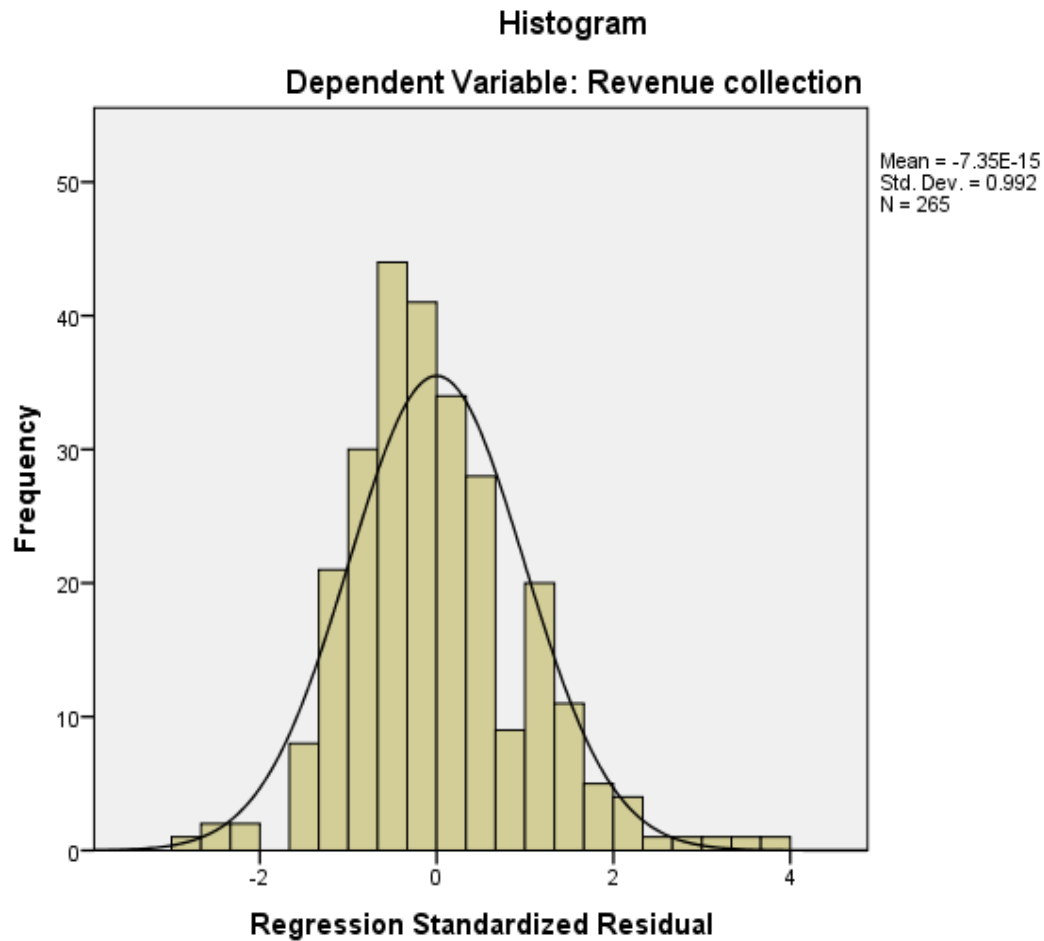


Figure 4.8 is the histogram of standardized residuals which shows that the residuals spread normally and with a systematic curve above the zero-residual mark. Visual inspection of the normal curve in figure further reveals that there was no visible outright skewness nor skewness in the data.

**Figure 4.9: Normal P-P Plot of Regression Standardized Residuals**

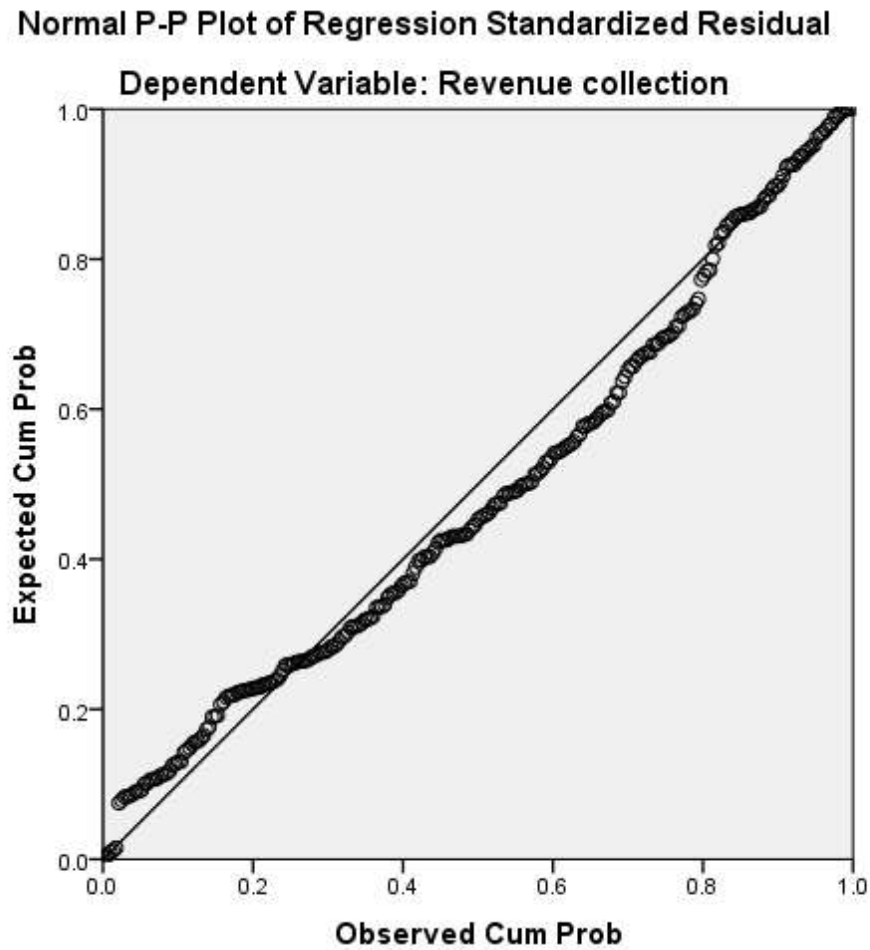


Figure 4.8 shows the normal p-p plot, which is a plot of expected cumulative probability against observed cumulative probability. It shows that the observed cumulative probability values were closely following the expected cumulative probability. This is evidence of a normal distribution of the standardized residuals.

### c) Multicollinearity

Multicollinearity is a test that evaluates whether the independent variables are highly correlated. The primary concern is that as the degree of multicollinearity increases, the regression model estimates of the coefficients become unstable and the standard errors for the coefficients can get wildly inflated. Multicollinearity in the study was tested using Variance Inflation Factor (VIF) and Tolerance. According to Field (2009), VIF values less than 10 (VIF <10) indicated no multicollinearity while a VIF of  $\geq 10$  indicated presence of multicollinearity. Further, Tolerance Statistics values below 0.1 indicated a multicollinearity problem. According to the results in Table 4.9 show that the values of tolerance for all the variables in the study are greater than 0.1 signifying that multicollinearity is not problematic. Further, the values of VIF for all the variables are less than 10 signifying the no problem of multicollinearity (see Table 4.9).

**Table 4.9: Multicollinearity**

	Collinearity Statistics	
	Tolerance	VIF
Internal control	.203	4.928
Staff competence	.129	7.725
Technology	.203	4.926

### d) Heteroscedasticity Test

Heteroscedasticity is a situation where the variability of a variable is unequal across the range of values of a second variable that predicts it (Vinod 2008). In this study heteroscedasticity was tested using the Breuch-pagan/cook-weisberg test. The results for the heteroscedasticity tests are as shown in Table 4.10.

**Table 4.10: Test for Heteroscedasticity**

HO	Variables	Chi2	Prob. > Chi2
Constant Variance	Int Con, Skil &Comp, Tech	57.08	0.373

The results show that the constant variance (Chi2 = 56.02) is insignificant (P = 0.323).

The findings thus mean that we fail to reject the null hypothesis and conclude that the error variance is equal thus heteroscedasticity is not a problem in the study data.

### 4.7.3 Regression Analysis

Having satisfied all the diagnostic tests, the researcher performed a regression analysis in order to determine the relationship between the study variables. This was achieved by regressing the independent variables namely; internal controls, staff competency, and technology against the dependent variable which was revenue collection. The results are summarized below.

#### 4.7.3.1 Model Summary

The model summary table below presents the extent to which the independent variables are predictors of the dependent variable.

**Table 4.11: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.848 <sup>a</sup>	.719	.715	.367

a. Predictors: (Constant), Technology, Staff Competence, Internal Control,

b. Dependent Variable: Revenue Collection

The results in Table 4.11 show that there was a positive association of the four predictor variables with the revenue collection in the county governments (R = 848). The results show that the value of the “R squared” is 0.719. This means that 71.9% variation in the county governments’ revenue collection was due to variations in internal control, staff competence, and technology. The results also mean that 28.1% variation in the county government’ revenue collection was explained by other factors not in the model or not focused in the current study.

**Table 4.12: Analysis of Variance (ANOVA)**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	89.613	4	22.403	166.707	.000 <sup>b</sup>
	Residual	34.941	260	.134		
	Total	124.553	264			

a. Dependent Variable: Revenue Collection

b. Predictors: (Constant), Technology, Staff Competence, Internal Control

The ANOVA was used to help in computing the significance of the regression model for the collected data. The results in Table 4.12 denote that there is a significant goodness of fit of the regression model for the collected data. This is indicated by high F-statistics value  $F_{cal} = 166.707 > F_{cri} = 4.123$ ) at confidence level of 95% and the values are also statistically significant as the p values = 0.000 which is less than 0.05.

**Table 4.13: Coefficients of Revenue Collection**

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.331	.112		2.968	.003
Internal Control	.079	.029	.103	2.709	.007
Staff Competence	.071	.028	.091	2.585	.010
Technology	.569	.054	.623	10.460	.000

a. Dependent Variable: Revenue Collection

Based on the regression results shown on Table 4.13 above, the regression model becomes;

$$RC = 0.331 + 0.079IC + 0.071SC + 0.569TEC$$

From the regression equation above, all factors held constant, revenue collection at the counties would change by 0.331. The results further indicate that a unit change in internal control

will result in a 0.079 change in revenue collection at the county governments. The results also show that a unit change in staff competence would result into a 0.071 change in revenue collection in the county governments. Finally, the results show that a unit change in technology would result in a 0.569 change in revenue collection in the county governments. The results show that with the p-values  $< 0.05$ , the variables were statistically significant.

The study findings that the variables have a positive effect of revenue collection in the county governments in Kenya. These findings are in support of various studies that have been done previously. For instance, Gidisu (2012) noted that there was a positive effect of automation of the revenue collection as it resulted in administration cost reduction and increase in revenue collection. These findings were further supported by Mitullah who noted that automation of revenue collection was important in enhancement of the management of revenue resources this increased revenue.

#### **4.7.4 Hypothesis Testing**

Using the results in Table 4.13 to test the study hypothesis, the researcher made interpretations seeking to establish the nature of significance of the independent variables in determining the dependent variable. The study tested the hypothesis as indicated below:

##### **Hypothesis 1**

*H<sub>0</sub>: Internal controls have no significant effect on the revenue collection in county governments in Kenya*

*H<sub>a</sub>: Internal controls have significant effect on the revenue collection in county governments in Kenya*

The results of the study in Table 4.13 show that  $t = 2.709$  and  $p$ -value  $0.07$ . This implies that since the  $p$ -value  $< 0.05$ , we reject the null hypothesis ( $H_0$ ) and accept the alternative hypothesis ( $H_a$ ). This indicates that there exists enough evidence to confirm a significant relationship between internal controls and revenue collection in the county governments in Kenya. Further, it means that at  $\alpha = 0.05$  (5% level of significance), there is sufficient evidence that internal control is a useful estimator of revenue collection in county governments in Kenya.

## **Hypothesis 2**

*$H_0$ : staff skills and competence has no significant effect on the revenue collection in county governments in Kenya*

*$H_a$ : staff skills and competence has significant effect on the revenue collection in county governments in Kenya*

According to the study findings,  $t = 2.585$ ,  $p$ -value =  $0.010$ , with the  $p$ -values  $< 0.05$ , we reject the null hypothesis ( $H_0$ ) and accept the ( $H_a$ ). The results mean that there exists a significant relationship between staff skills and competence and revenue collection in the county governments. At  $\alpha = 0.05$ , that is 5% level of significance level, there is significant evidence that staff skills and competence is useful predictor of revenue collection in the county governments in Kenya.

## **Hypothesis 3**

*$H_0$ : There is no significant effect of technology on revenue collection in county governments in Kenya*

*$H_a$ : There is significant effect of technology on revenue collection in county governments in Kenya*

Finally, the study findings that  $t = 10.460$ ,  $p\text{-value} = 0.000$ , with the  $p\text{-values} < 0.05$ , we reject the null hypothesis ( $H_0$ ) and accept the ( $H_a$ ). The results mean that there exists a significant relationship between technology and revenue collection in the county governments. At  $\alpha = 0.05$ , that is 5% level of significance level, there is significant evidence that technology is useful predictor of revenue collection in the county governments in Kenya.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

In this chapter the researcher presents the study findings summary, conclusions and recommendations as per the objectives. Further presented are the study limitations and suggested areas for further research.

#### **5.2 Summary of the Findings**

The research her in this section provides a summary of the key findings of the study based on the study objectives.

##### **5.2.1 Effect of Internal Controls on Revenue Collection**

The internal control was found to have a positive significant effect on the revenue collection in the county governments. The study findings imply that whenever an internal control in the county governments is increased, the revenue collection will increase in the same direction. The county governments employed more internal controls in the management of the organizations. The internal controls are aimed at ensuring efficiency in the management of the organizations resources thus minimizing wastages and mismanagement.

##### **5.2.2 Effect of Staff Skills and Competence on Revenue Collection**

It was established that there was a positive and significant relationship between staff skills and competence and revenue collection in the county governments. The findings imply that an increase in the employee skills and competence will result in an increase in the revenue collection. Relevant skills and competence is directly related to employee productivity and as such competent staff will be effective in their assignments, in this case, revenue collection in the

county governments. This therefore means that by hiring qualified revenue personnel, the county governments will enhance their revenue collection.

### **5.2.3 Effect of Technology on Revenue Collection**

Technology was found to positively and significantly affect the revenue collection in the county governments. These results imply that adoption of technology results to increase in revenue collection. The use of technology enhances efficiency in terms of speed and availability of records for ease of management of the information. Technology also eliminates a lot of processes as the taxpayers can pay for the services directly thus minimizing chances of corruption.

## **5.3 Conclusion**

The study established that the internal control system have a positive significant effect on the revenue collection. The study furthers established that revenue staff skills and competence have significant effect on the revenue collection in the county governments. Finally, the study established that there was a significant effect of technology on the revenue collection. The study therefore concludes that internal control, revenue staff skills and competence, and technology have positive and significant effect on the county governments' revenue collection.

## **5.4 Recommendation**

### **5.4.1 Effect of Internal Controls on Revenue Collection**

The study results revealed a positive and significant effect of internal control on the revenue collection. It is thus recommended that the management of county governments sought tighten the internal control systems for enhancement of the management of revenue collection process with the view of increasing revenue collection in the county governments in Kenya.

#### **5.4.2 Effect of Staff Skills and Competence on Revenue Collection**

The study established that the revenue staff competence and skills had a positive and significant effect on the county government's revenue collection. The researcher therefore recommends that the county governments should employ more resources on revenue staff skills and competence by organizing more training and workshops for its employees. The county governments should emphasis hiring of qualified staff for effectiveness in revenue collection.

#### **5.4.3 The Effect of Technology on Revenue Collection**

The study established that there was a positive and significant relation between technology and revenue collection in the county governments in Kenya. It is thus recommended that the county governments in Kenya should consider automating all revenue collection in the county governments with the view of enhancing revenue collection in the county governments.

#### **5.5 Limitations of the Study**

This study was conducted during the COVID 19 and as such a lot of caution even in meeting the people and thus the researcher was constrained in meeting the respondents. However, the researcher emailed the questionnaires to the respondents. Further, because the researcher used email, it was not easy to account for all the questionnaires and as such, many questionnaires were not returned. The researcher however, sent out more questionnaires to increase the number of the responses.

#### **5.6 Suggestions for Further Research**

This study was done on the effect of internal control, staff competence and skills, and technology on revenue collection in county governments in Kenya. There are other factors which may affect revenue collection in the county governments. The study therefore, recommends that

similar studies should be carried out other than the current study with the view of establishing their effect on revenue collection in county governments in Kenya. The study was also limited to only 25 counties in Kenya. Similar studies should be duplicated in the rest of the county governments in Kenya.

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**APPENDICES**

**APPENDIX 1: QUESTIONNAIRE**

**Instructions**

- i. Please take time to answer the questions provided as honestly and accurately as possible.
- ii. You are required to carefully read each statement and mark with either a tick (✓) or and (X) as you deem appropriate.
- iii. Fill in the blank spaces with correct information.

**SECTION A: RESPONDENTS BIO DATA**

- 1. What is your gender? Male  Female
- 2. What is your age? Below 25 years  25-30 years  31-40 years  41-50 years  Over 50 years
- 3. What is your level of education? Secondary  College  University  Post University
- 4. What professional training do you have? \_\_\_\_\_
- 5. For how long have you worked in the county government?  
Less than 5 years  5-10 years  11-15 years   
Over 15 years
- 6. What is your designation? \_\_\_\_\_
- 7. For how long have you been in the same position?  
Less than 5 years  5-10 years  11-15 years   
Over 15 years

**SECTION B: EFFECT OF INTERNAL CONTROLS ON REVENUE COLLECTION**

- 8. State the extent to which you agree with the following statements with regard to the effect of internal controls on revenue collection on the scale of 1-5 where 1-strongly disagree, 2-disagree, 3-neutral, 4-agree and 5-strongly agree.

	1	2	3	4	5
The government regularly reviews the reliability and integrity of the					

financial and operating information					
The government reviews the controls employed to safeguard assets					
The government assess employees compliance with management policies, procedures and applicable laws and regulations					
Evaluates the efficiency and effectiveness with which management achieves its organizational objectives					
The government has setup internal control system as a regulatory requirement					
Internal system ensures that all management activities are carried out appropriately					
Controls in place are able to predict potential problems before occurrences make correction and prevent errors					
The audit committee independence has minimised fraud					
The organizations segregation of duties has enhanced revenue collection at the county					
Internal control system is important in the management of the collection of revenue					

**SECTION C: EFFECT OF STAFF COMPETENCE ON REVENUE COLLECTION**

9. State the extent to which you agree with the following statements with regard to the effect of staff competence on revenue collection on the scale of 1-5 where 1-strongly disagree, 2-disagree, 3-neutral, 4-agree and 5-strongly agree.

	1	2	3	4	5
Revenue collection challenge in the county government is as a result of the incompetent staff					
Hiring of skilled revenue officers is key to the revenue collection in the county government					
Qualified revenue personnel will ensure effective administration of the revenue collection					
Corruption and collusion of revenue officers are tax payers is the main reason for poor revenue collection by the county government					
Employee compliance has a direct influence on their revenue collection performance					
Revenue officers in the county lack the necessary training					
The organization has organised several training and workshops on revenue officers					
The county government is keen on enhancing the skills and competencies of the revenue officers with regard to revenue collection					

**SECTION E: REVENUE COLLECTION**

State the extent to which you agree with the following statements with regard to revenue collection on the scale of 1-5 where 1 is strongly disagree, 2- disagree, 3-neutral, 4-agree and 5-strongly agree.

	1	2	3	4	5
The county government meets its target of revenue collection					
The revenue collection by the county government is progressive					
The county government meets its obligations with the revenue					
The revenue collection by the county government is not adequate					
The county government is always on budget deficit due to uncollected revenue					

## **APPENDIX 2: LIST OF COUNTY GOVERNMENTS IN KENYA**

1. Baringo
2. Bomet
3. Bungoma
4. Busia
5. Elgeyo-Marakwet
6. Embu
7. Garissa
8. Homa Bay
9. Isiolo
10. Kajiado
11. Kakamega
12. Kericho
13. Kiambu
14. Kilifi
15. Kirinyaga
16. Kisii
17. Kisumu
18. Kitui
19. Kwale
20. Laikipia
21. Lamu
22. Machakos
23. Makueni
24. Mandera
25. Marsabit
26. Meru
27. Migori
28. Mombasa
29. Murang'a
30. Nairobi

31. Nakuru
32. Nandi
33. Narok
34. Nyamira
35. Nyandarua
36. Nyeri
37. Samburu
38. Siaya
39. Taita Taveta
40. Tana River
41. Tharaka Nithi
42. Trans Nzoia
43. Turkana
44. Uasin Gishu
45. Vihiga
46. Wajir
47. West Pokot