

Influence of Internal Controls and Technology Absorption on Revenue Collection in Nairobi City County, Kenya

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Abstract:

Nairobi County has been facing inadequate finance to service its obligations, in spite of having several revenue streams which include; parking, rates, business permits, building permits, bill boards and other incomes. Failure to maximize on raising the desirable revenue collection which would shield the county government from having a budget deficit and stagnation of projects as well as minimizing employees unrest, which has been witnessed over the years has negatively affected the county. The aim of this study was to examine the factors determining revenue collection in Kenya. The specific objectives was to assess the influence of internal controls on revenue collection in Nairobi City County and evaluate the influence of technology absorption on revenue collection in Nairobi City County. This study used a descriptive research design. In this study, the target population was revenue officers working at county of Nairobi. The study employed Stratified random sampling technique and simple random sampling technique. Primary data was collected using a questionnaire as the main data collection instrument. Structured questionnaires allowed for uniformity of responses to questions. Quantitative data was analyzed using descriptive statistics. The results indicated that internal control and technology adoption have significant effect on revenue collection. The study concluded that internal controls and technology absorption are significant predictors of revenue collection in Nairobi City County. The study recommends that the County government should ensure use latest technological hand held systems in revenue collection. This study also recommends that the County Government of Nairobi should ensure that they develop and deploy an electronic payment platforms and citizen E-wallets service accessible to all categories of citizens; from high income earners to low income earners. The study recommended the county governments should automate internal control systems, develop sufficient physical controls to control protect from revenue fraud and ensure redundant numbers for enhanced protection. Further, the county management should ensure that all the internal control activities are identified, strategically positioned and implemented across all the departments in order to achieve improved revenue collection.

Key Word: Revenue Collection, Internal Control, Technology Absorption, Nairobi City County

Date of Submission: 10-11-2021

Date of Acceptance: 26-11-2021

I. Introduction

Governments across the globe are working towards maximizing on their revenue collection methods to ensure that they raise enough revenues to run and manage their affairs. In the United States for example, there are 3,069 counties which greatly vary in size and population from Loving County, Texas with just 71 residents to Los Angeles, California which is home to 9.2 million people (Theofanis, Drogalas, & Giovanis, 2015). 48 out of 50 states in that country have operational county governments. In these counties, increase in revenue collection has been achieved through employing county revenue instruments for tax collection as well as exploiting and harnessing all available sources of revenue in their localities and devising a cost effective means of collecting revenues. As such, developed countries like the USA and Canada have effective revenue collection systems hence minimizing revenue collection challenges.

Kerongo and Ngotto (2014), avers that in spite of recent reforms, the government tax systems in many African countries are characterized by an excessive number of different taxes with rate structures that are difficult for taxpayers to understand; this goes to show that, although the reforms have led to tremendous improvement in collection efficiency, there are still numerous hurdles that many governments face in terms of collection of the much needed tax revenue. Resistance from taxpayers and prospective taxpayers as well as high levels of ignorance has also brought about difficulty in the collection of revenue for the government (Aikins, 2016). Interest in enhancing revenue mobilization in developing countries is increasing day by day. Most developing countries are emerging from the crisis with their fiscal prospects broadly intact, but with many still facing a fundamental need to raise more revenue from their own revenue bases. Therefore, enhancing of revenue

collection efficiency will ensure that counties collect all the projected revenue and thereby increasing the revenue collection performance.

In most developing countries, due largely to the extreme lack of local level revenue alternatives, the intergovernmental fiscal analysis begins by focusing on revenue allocation (Amudo & Inanga, 2017). Thus, in addition to establishing a system of enhanced central-local revenue transfers, governments are forced to mobilize and improve existing local level revenue sources. Virtually all countries focus attention on the property tax and business permits, the most common revenue sources for local governments throughout the world. In Ghana, in a study carried out by Fati (2014), it was discovered that revenue trend has not been stable in revenue collection since the government did not have a full or comprehensive register of all taxable activities or levies in their jurisdiction. There existed no system to track invoices and payments. Data on services, facilities, levies were handled manually and consequently subject to fraud, abuse and significant revenue loss. In Zimbabwe, the revenue collection sector has over the decades gone through milestone reforms, notable ones being the establishment of a sole national revenue authority in 2001, the shifting from cumbersome Income Tax Return Forms to Final Deduction Systems, the adoption of VAT in 2004 and Toll Gate systems in 2009 (Zhou, 2013). In Uganda, new technology has been used to improve revenue collection but this alone is not sufficient if the government does not recognize the need for skilled revenue collection officials. Effective revenue collection requires qualified tax personnel with requisite skills to maintain these systems and operate them to their fullest potential (Kayaga, 2014).

In Kenya county government are mandated to generate revenue internally and get a subsidy from the national government. This include entertainment tax, property tax, business rent and rates, borrowings and grants, dividends and interests from investments and other taxes imposed by the act of parliament (Olumbe, 2014). Local revenue collection helps to achieve service delivery in county governments by co-funding development projects, hence an increasing need by the county government to collect much revenue to face the increasing financial expenditures budgeted for. However, as Owuor, et al. (2015) note, revenue collection in developing economies like Kenya has not always been as effective as it should be. There are various challenges in revenue collection performance, where counties are not able to collect sufficient funds to cover their budget expectations and thereby causing huge local revenue collection gaps. Ismail (2016) indicates that the main challenges in revenue collection rotate around revenue collection system. The performance of revenue collection in County governments is deteriorated by corrupt practices issues which result into tax evasion through corruption by corrupt revenue collection officers (Balunywa, et al., 2014).

The foregoing is a huge problem due to the fact that, County Government operations might stall, projects might derail, and even the workforces might resort to go-slow and strikes as it has hitherto been witnessed in a number of Counties (Odoyo, et al., 2013). When the County Governments fail to optimally collect requisite revenues, the public will negatively be affected by being denied vital services. As aforesaid, the County Government employees are bound to fail to be adequately remunerated. Moreover, the National Government will be overburdened by the financial demand from the County Governments which will ultimately negate the national economy.

Statement of the Problem

When the Kenyan constitution was promulgated in the year 2010, its main objective was to decentralize services and take them closer to the people. This was to be achieved through raising optimal revenue by county governments in order to supplement the allocation from the national government (Odoyo, et al., 2013). However this is an objective which is yet to be achieved as counties are still grappling with inability to raise the optimal revenue required to meet their demands (Kosaye, 2018). According to the financial report of the Controller of Budget, Counties raised Kshs.35 billion in the financial year 2015/16, which was 69.3% of the aggregate target of Kshs.50.5 billion (Controller of Budget, 2016). 13 Counties realized less than 50% of their target; 23 realized between 50% and 80%. In the financial year 2017/2018 Nairobi County's annual budget was Kshs.35.79 billion whereby own revenue accounted for Kshs.19.76 billion which was 55% of the total budget (Controller of Budget, 2018). Though this was an increase in revenue collection as compared to the previous financial year's collection of Kshs.10.9 billion, it was still short of the full potential of its revenue collection (Korongo, 2017).

Nairobi County has been facing inadequate finance to service its obligations, in spite of having several revenue streams which include; parking, rates, business permits, building permits, bill boards and other incomes. Failure to maximize on raising the desirable revenue collection which would shield the county government from having a budget deficit and stagnation of projects as well as minimizing employees unrest, which has been witnessed over the years has negatively affected the county (Kerongo & Ngotto, 2014). The failure of the county government to raise optimal desirable revenue have also had an adverse effect on financial planning where the public has been negatively affected by inadequate service delivery and over-burdening the national government by the increase of demands.

Studies done on revenue collection include; Kosaye, (2018) who did a study on the factors affecting revenue collection of Marsabit county governments in Kenya. The study found that there was need to automate revenue collection as this would save on revenue collection costs and time spent in revenue collection. Mburugu and Gekara (2016), also conducted a study on determinants influencing revenue collection on the performance of Kenya Revenue Authority. Despite there being studies on revenue collection, no study has been conducted to establish the determinants of revenue collection in Nairobi County. The study by Kosaye (2018) is not generalizable to Nairobi County because the circumstances prevailing revenue collection in the two counties such as population and development is different. This study sought to fill this gap by examining the factors determining revenue collection in Nairobi County.

Objectives of the Study

- i) To assess the effect of internal controls on revenue collection in Nairobi City County.
- ii) To evaluate the effect of technology absorption on revenue collection in Nairobi City County.

II. Literature Review

Theoretical Framework

The study used Control theory as proposed by Kirsch, (1996). Control theory helps in sustaining the performance management system by defining forms of control between the organization and the systems within. According to control theory, actions of all systems should be in sync with the overall goals and objectives of an organization. Setting objectives, budgets, plans and other expectations establish criteria for control. Control theory focuses on control mechanism which should be imposed at all levels of an organization. There are different forms of control which an organization can use in order to get the desired results such as; organizational structure, behavioral controls like norms and policies of an organization or performance measurement mechanisms. Control itself exists to keep performance or a state of affairs within what is expected, allowed or accepted. Control built within a process is internal in nature. It takes place with a combination of interrelated components-such as social environment effecting behavior of employees, information necessary in control, and policies and procedures. Internal control structure is a plan determining how internal control consists of these elements. This theory is relevant to this study in explaining the importance of internal controls in sealing leakages and maximizing revenue collection.

Technology Acceptance Model was proposed and developed by Davis (1709). TAM is a theoretical model that evaluates the effects of things like system characteristics on user acceptance (Davis, 1706). TAM assumes that a computer user generally acts quite rationally and uses information in a systematic manner to decide whether to adopt, or not to use this technology in the workplace. Davis (1706) identified three major determinants of technology acceptance that relate to cognition and effectiveness and were suggested by previous research studies. He began with the TRA and adapted this as a basis for causal links between perceived usefulness, perceived ease of use, attitude towards using technology and behavioral intention to explain technology adoption. TAM model as proposed, is primarily intended to foretell users' acceptance of Information Technology and usage in an organizational perspective. By focusing on the attitude explanations of intention to use a specific technology or service, TAM model deals with perceptions as opposed to real usage, suggests while a new technology is presented to the potential adopter, two attitude-affecting factors, perceived usefulness and perceived ease of use, influence their decision about how and when they will use it (Davis, 1709). As an extension of TAM, Fishbein and Ajzen, (1975) proposed the Theory of Reasoned Action (TRA). The main point of this theory is that human behavior originates from their intentions and behavioral intention (BI) is a kind of cognitive activity which consists of two facets, namely attitude and subjective norm. To sum up, according to TRA both attitude and subjective norm component of individual behavior is determined by salient belief. The theory is relevant in this study in explaining the importance of technology absorption in the revenue collection.

Conceptual Review

Conceptual framework is a diagrammatic presentation of the relationship between dependent and independent variables. In this study the dependent variable is revenue collection while independent variables are internal controls, and technology absorption.

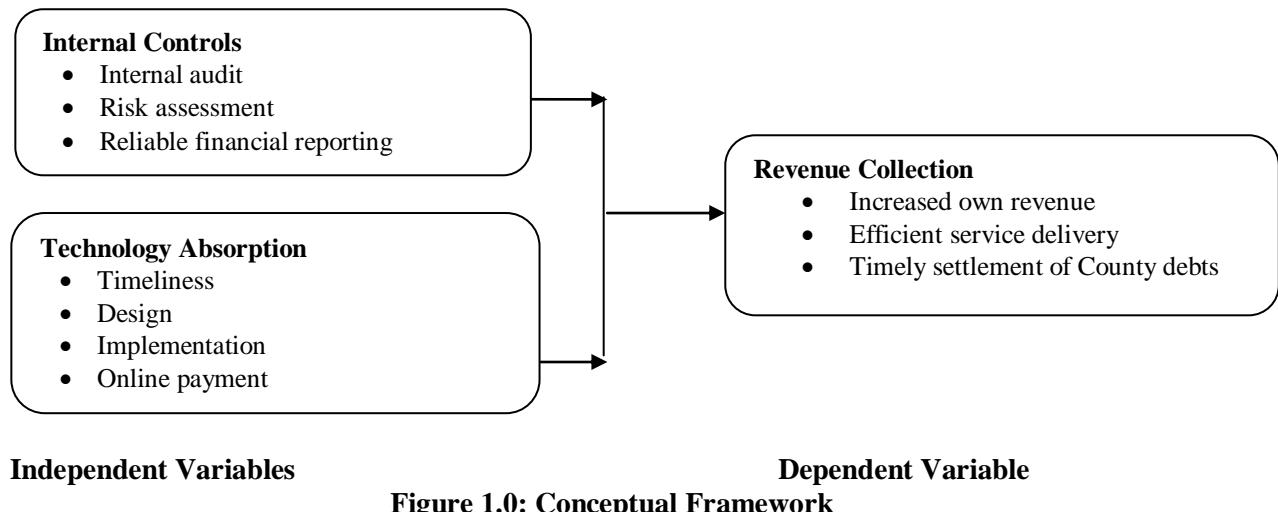


Figure 1.0: Conceptual Framework

Empirical Review

Puttick (2015), has asserted internal controls as a set of organizational policies and approved internal processes (internal controls) crafted by management of an organization to ostensibly achieve management's primary objective of ensuring that the business operates flawless. He further explained that a business is said to be running smoothly if they are able to stick to the management policies, to protect the organization assets, set up a system that would stop and eradicate manipulation of the accounting information. Mwangi (2015), carried out a research on the relationship between internal control system and financial performance of Alexander Forbes financial services of (EA) limited. The findings revealed that control activities contribute more to the effectiveness of internal controls and financial performance of Alexander Forbes Financial services of (EA) limited followed by the risk assessment, information and communication, monitoring ,control environment being the least. Njanike, Mutengezanwa and Gombarume (2015) assessed factors that influence the internal controls in ensuring good corporate governance in financial institutions in developing economies with special reference to Zimbabwe. It emerged that failure to effectively implement internal controls contributed significantly to poor corporate governance. The study discovered that internal control system overrides and the issue of "fact cat" directors also contributed to poor corporate governance.

Jones (2017) investigated on internal controls, accountability and corporate governance in medieval and modern Britain. He demonstrated that most of the internal controls found today were present in medieval England. Stewardship and personal accountability were found to be the core elements of medieval internal control. The recent recognition of the need for the enhanced personal accountability of individuals is reminiscent of medieval thinking. Kozak (2015), investigated major effect of Modern information and communication technology development on income generated and effectiveness in cost reduction by organizations over a period of twelve years between 1992 and 2003. From the findings, there was a noticeable correlation between the executed technological tools, profits obtained and expense reduction. This ICT transformation enhances great improvement in organizations operations all over the world. For example, development of global networks has significantly reduced the costs of international fund transfers. Berger (2013), revealed that organizations making use of ICT tools such as, electronic payments and information exchanges can deliver high quality customer services delivery to customers with less effort. Through principals for a firm's ICT foundation and services are compiled in the enterprise structure.

Chatama (2013), did a study to examine the means by which ICT has modernized Tax administration methods and enhanced revenue collection, focusing on Tanzania Revenue Authority (TRA). The study found that the revenue collected increased over the study period and this was attributed to the introduction of ICT systems which shortened the processing time for returns and the time for responding to queries raised by tax payers. Sigey (2016), researched on the impact of automation as a structural change strategy on customs clearing procedures at Kenya Revenue Authority. Sigey (2016), findings indicated that automation of clearance procedures in the local tax department greatly enhanced operational usefulness and productivity, increased employees' professionalism and productivity, reduction of operational costs and improved governance. Ling and Nawawi (2015), conducted a study in Malaysia on coordinating skills in advanced Information and Communications systems and tax software in tax education. The study discovered that three special abilities were required for the best interaction between an individual and a computer based tax system namely, spread sheet software, word-processing software and e-mail.

Panday (2016) carried out an empirical study whose main goal was to establish the influence of adoption of technology on revenue mobilization in India. The results of the study revealed that for government to compare in execution with the development and desires of its constituents, it should significantly build its financial profundity without causing expensive repeating overheads. Butt et al., (2015) carried out a meter analysis in Pakistan among a random sample of 15 local counties using qualitative analysis. The main goal of the studies was to determine the effect of technology adoption on collection of revenue in the counties. The results of the studies revealed that modernization and technology adoption in the tax system had a significant impact on collection of street parking fees.

III. Material And Methods

This study used a descriptive research design. According to Cooper and Schindler (2010), a descriptive study is concerned with finding out the what, where and how of a phenomenon. the target population was senior revenue officers working at county of Nairobi as supervisors. There are five main revenue streams in Nairobi County that contribute the biggest part of the county's revenue (Korongo, 2017). These are; the parking stream, Rates stream, Business permits, Building permits, and billboards and adverts. These form the unit of analysis while the unit of observation was the senior revenue officers. The sampling frame for this study was the list of all supervisors in the targeted departments. The study's sample size was determined using Taro Yamane's proportional sampling technique formula. The study employed Stratified random sampling technique. Stratified random sampling is ideal for this study because the agencies from which the study was done are uniquely different as they fall under different categories as presented in table 1

Table 1: Study Population

Category	Target Population	Sample Size
Parking stream	54	38
Rates stream	48	33
Business permits	28	20
Building permits	22	15
Billboards and adverts	18	13
Total	170	119

Primary data was collected using a questionnaire as the main data collection instrument. Questions were constructed so as to address specific objectives and provide a variety of possible responses. A 5 point Likert scale ranging from 1 to 5 was used as answers to statement like questions where 1 represented strongly disagree, 2- Disagree, 3- Neutral, 4- Agree and 5- Strongly agree. Prior to actual collection of data, a pilot testing was conducted to obtain some assessment of the questions' validity and the likely reliability of the data that was collected. The pilot testing was conducted on 10 supervisors who were not included in the main study. The Statistical Package for Social Sciences (SPSS) Version 24 software was used to analyze the data collected. The data analysis was descriptive as well as inferential. Descriptive analysis was used to determine the basic trends in the data by calculating percentages, means, and standard deviations of the scores on items in the study variables. Inferential analysis, on the other hand, took the shape of both correlation coefficient and multiple regression analysis. The findings were presented statistically in the form of descriptive and inferential tables.

IV. Result and Discussion

Preliminary Findings

In this study, a total of 119 questionnaires were administered to the sample respondents, 91 were successfully completed by the respondents which is a response rate of 76.5% of the total questionnaires. A pilot study was conducted to determine the reliability of the test items used to gather primary data. Cronbach alpha was used to determine reliability for each variable, which had a range of 0.934 to 0.938; hence, for this research, a Cronbach alpha statistic of 0.7 or above was deemed reliable. The test items were retained and used in this study hence considered reliable as shown in the Table 2.

Table 2: Reliability Tests

Variable	No.of items	Cronbach's Alpha	Verdict
Internal Controls	6	0.973	Reliable
Technology Absorption	6	0.952	Reliable
Revenue Collection	6	0.847	Reliable

Descriptive Analysis

Descriptive analysis included an assessment of the revenue collection. The statements were anchored on a five point Likert-type scale ranging from 5=Strongly Agree to 1= Strongly Disagree and respondents were asked to indicate the extent to which they agreed to the statements. The percentages are in parenthesis () .

Internal controls

To measure internal controls, a set of six statements were formulated. The respondents were asked to indicate the extent of agreement with each of the internal controls. The pertinent results are presented in Table 3.

Table 3: Descriptive statistics: Internal controls

Statement	5	4	3	2	1	Mean	Std Dev
There are measures in place to help in minimizing wastage in the county	28 (30.8)	35 (38.5)	15 (16.5)	4 (4.4)	9 (9.9)	3.76	1.22
The county government has put measures to prevent misappropriation of funds	24 (26.4)	14 (15.4)	28 (30.8)	10 (11)	15 (16.5)	3.24	1.39
The county accounting information is protected from manipulation	24 (26.4)	23 (25.3)	30 (33)	7 (7.7)	7 (7.7)	3.55	1.19
The county has adopted separation of tasks which helps in minimizing commission of fraud	4 (4.4)	25 (27.5)	35 (38.5)	16 (17.6)	11 (12.1)	2.95	1.06
The county government has instituted risk management strategies which help in preventing loss of funds	12 (13.2)	26 (28.6)	28 (30.8)	18 (19.8)	7 (7.7)	3.20	1.14
The county government has instilled personal accountability which minimizes revenue loss	26 (28.6)	27 (29.7)	19 (20.9)	9 (9.9)	10 (11)	3.55	1.30
Valid listwise 91							
Grand mean = 3.37							

From table 3, 38.5% and 30.8% of respondents agreed and strongly agreed respectively that there are measures in place to help in minimizing wastage in the county. On the other hand, 16.5% of the respondents were neutral. A mean of 3.76 suggested that there are measures in place to help in minimizing wastage in the county. Further 25.3% of the sampled respondents strongly agreed that the county government has put measures to prevent misappropriation of funds and 15.4% agreed on the same. However, as indicated by 30.8% of the respondents who were neutral that the county government has put measures to prevent misappropriation of funds with a mean of 3.24. More so, 25.3% of respondents agreed that the county accounting information is protected from manipulation while 26.4% of the respondents strongly agreed on the same. On the other hand, 33.0% of the respondents were neutral with a mean of 3.55. The results also revealed that few of the respondents (4.4%) strongly agreed that the county has adopted separation of tasks which helps in minimizing commission of fraud and 27.5% agreed on the same. A mean of 2.95 implied that the county has adopted separation of tasks which helps in minimizing commission of fraud.to a moderate extent which was also supported by 38.5% of the respondents who were neutral.

The results also indicated that 28.6% of respondents agreed the county government has instituted risk management strategies which help in preventing loss of funds while 13.2% strongly agreed on the same. However, 30.8% were neutral with a mean of 3.20. Lastly, 29.7% of respondents agreed that the county government has instilled personal accountability which minimizes revenue loss and 28.6% strongly agreed on the same. A mean of 3.55 postulated that the county government has instilled personal accountability which minimizes revenue loss. The grand mean of internal control was 3.37 implying that majority of the respondents were neutral on statements regarding internal control and revenue collection. The study findings are interpreted to imply that internal controls play an important role in ensuring revenue collection is carried out effectively. Internal control design influences staff attitude towards fraud such that a strong internal control mechanism is deterrence to staff fraud while a weak one exposes the system to fraud and creates opportunity for staff to commit fraud.

These findings are supported by Ndungu (2013) who researched on effects of internal controls on revenue collection by Kenya Revenue Authority and concluded that internal controls played an important role in ensuring effective revenue collection. A study in Nigeria by Ewa and Udoayang (2018) sought to establish the impact of internal control design on banks' ability to investigate staff fraud and staff life style and fraud detection in Nigeria. The study established that Internal control design influences staff attitude towards fraud such that a strong internal control mechanism is deterrence to staff fraud while a weak one exposes the system to fraud and creates opportunity for staff to commit fraud. In addition, the study found out that most Nigerian banks do not pay serious attention to the life style of their staff members and that most staff members are of the view that effective and efficient internal control design could detect employee fraud schemes in the banking sector. The study concluded that effective and efficient internal control system is necessary to stem the malaise in the banking sector.

To measure technology absorption, a set of six statements were formulated. The respondents were asked to indicate the extent of agreement with each of the technology absorption. The pertinent results are presented in Table 4.

Table 4: Descriptive statistics: Technology absorption

Statement	5	4	3	2	1	Mean	Std Dev
The automation of the county operations has increased the integrity of the management	13 (14.3)	26 (28.6)	26 (28.6)	16 (17.6)	10 (11)	3.18	1.21
The use of technology has helped close the previously existing loopholes in revenue collection	21 (23.1)	35 (38.5)	19 (20.9)	15 (16.5)	1 (1.1)	3.66	1.05
The use of technology has enhanced the preparation and provision of clear records	21 (23.1)	37 (40.7)	25 (27.5)	7 (7.7)	1 (1.1)	3.77	0.93
The automation of revenue collection has minimized operational costs	29 (31.9)	27 (29.7)	20 (22)	13 (14.3)	2 (2.2)	3.75	1.12
The use of technology in revenue collection has curbed delays as it has reduced processing time	32 (35.2)	28 (30.8)	16 (17.6)	13 (14.3)	2 (2.2)	3.82	1.13
The adoption of technology has increased employees' professionalism and productivity	22 (24.2)	46 (50.5)	13 (14.3)	8 (8.8)	2 (2.2)	3.86	0.96
Valid listwise 91 Grand mean = 3.67							

From table 4, few of the respondents strongly agreed (14.3%) and agreed (28.6%) that the automation of the county operations has increased the integrity of the management. However, 28.6% of the respondents were neutral with a mean 3.18. The results also revealed that 38.5% of the respondents agreed that the use of technology has helped close the previously existing loopholes in revenue collection and 23.1% strongly agreed on the same although 20.9% were neutral on the same assertion. A mean of 3.66 indicated that the use of technology has helped close the previously existing loopholes in revenue collection. Further, most of the respondents (40.7%) of respondents agreed that the use of technology has enhanced the preparation and provision of clear records and additional 23.1% strongly agreed on the same. A mean of 3.77 postulated that the use of technology has enhanced the preparation and provision of clear records. The results also revealed that 29.7% and 31.9% of the respondents agreed and strongly agreed that the automation of revenue collection has minimized operational costs although 22.0% of the respondents were neutral. A mean of 3.75 implied that the automation of revenue collection has minimized operational costs.

The results further revealed that 30.8% of the respondents agreed that the use of technology in revenue collection has curbed delays as it has reduced processing time and further 35.2% strongly agreed on the same. A mean of 3.83 indicated that the use of technology in revenue collection has curbed delays as it has reduced processing time. Lastly, 50.5% of the respondents agreed that the adoption of technology has increased employees' professionalism and productivity and further 24.2% strongly agreed on the same. A mean of 3.86 indicated that the adoption of technology has increased employees' professionalism and productivity. These findings were interpreted to mean that Information Communication Technology provides counties with the opportunity to acquaint themselves with new strategies for effective lobbying, advocacy, design, implementation, and delivery of services to citizens by using those management information systems that meet local, national, regional, and international trends. The computerization of all the processes steps plays an important role in minimizing the errors, standardization of the operational procedures and reducing costs.

These findings are in agreement with Karimi, Maina, & Kinyua, (2017) who noted that technology adoption is key in improving the efficiency and effectiveness in revenue mobilization. No doubt, the traditional kinds of paper forms always will be an essential part of the revenue collection system. Through technology adoption, a tax collection agency will be able to meet their revenue collection targets, as there will be less tax avoidance and evasions. Technology in the tax framework falls under the Public Administration part and its target is to enhance the productivity and viability both at national and local level. Electronic revenue collection in developing countries has gained increasing prominence in the policy debate recently. Amin, (2013) also supports this findings by noting that all Sectors of the County should put in place an effective and efficient revenue collection system in monitoring framework that ensures adequate supervision of the budgeted programs and project activities to enhance accountability and absorption of resources. Automation of revenue collection systems and structures is instrumental in improving and simplifying administration of taxation through utilizing modern technologies for example ICT.

To measure revenue collection, a set of six statements were formulated. The respondents were asked to indicate the extent of agreement with each of the revenue collection. The pertinent results are presented in Table 5.

Table 5: Descriptive statistics: Revenue Collection

Statement	5	4	3	2	1	Mean	Std Dev
Revenue collection has greatly improved in the county	14 (15.4)	23 (25.3)	34 (37.4)	11 (12.1)	9 (9.9)	3.24	1.16
The county government has autonomy in revenue collection in the county.	29 (31.9)	26 (28.6)	12 (13.2)	13 (14.3)	11 (12.1)	3.54	1.38
The financial independence of the devolved governments is completely restricted by being dependent on the central government	25 (27.5)	38 (41.8)	13 (14.3)	6 (6.6)	9 (9.9)	3.70	1.22
The county has been able to evenly distribute the collected revenue	24 (26.4)	37 (40.7)	16 (17.6)	5 (5.5)	9 (9.9)	3.68	1.21
The county government has been able to collect enough revenue for its operations	14 (15.4)	33 (36.3)	31 (34.1)	4 (4.4)	9 (9.9)	3.43	1.12
The county government has been able to reach all taxable individuals and businesses	16 (17.6)	19 (20.9)	33 (36.3)	7 (7.7)	16 (17.6)	3.13	1.30
Valid listwise 91							
Grand mean = 3.45							

From table 5.0, the results indicated that 25.3% of the respondents agreed revenue collection has greatly improved in the county and 15.4% of the respondents strongly agreed. A mean of 3.24 implied revenue collections has marginally increased an assertion further supported by 37.4% of the respondents. Further, 31.9% and 28.6% of the sampled respondents agreed and strongly agreed respectively that the county government has autonomy in revenue collection in the county. A mean of 3.54 indicated that the county government has autonomy in revenue collection in the county to a moderate extent. The results also revealed that most of the respondents agreed (41.8%) that the financial independence of the devolved governments is completely restricted by being dependent on the central government 27.5% strongly agreed on the same. A mean of 3.70 implied that the financial independence of the devolved governments is completely restricted by being dependent on the central government. The results further revealed that 40.7% of the respondents agreed that the county has been able to evenly distribute the collected revenue and further 26.4% strongly agreed. A mean of 3.68 indicated that the county has been able to evenly distribute the collected revenue. The results also revealed that 36.8% and 15.4% of the respondents agreed and strongly agreed that the county government has been able to collect enough revenue for its operations. A mean of 3.43 indicated that the county government has been able to collect enough revenue for its operations to a moderate extent. Lastly, few of the respondents agreed that the county government has been able to reach all taxable individuals and businesses as shown by 20.9% and further 17.6% strongly agreed on the same. A mean of 3.13 indicated that the county government has been able to reach all taxable individuals and businesses to a moderate extent.

Inferential Analysis

Linear Regression Analysis

This tested the direct influence of independent variables (Employee competence, internal controls, tax structure and Technology absorption) on revenue collection in Nairobi City County. This was computed by SPSS version 23 by first transforming categorical data into continuous data so as to validly run linear regression analysis.

Linear Influence of Internal controls on Revenue collection in Nairobi City County

Simple linear regression analysis was conducted to establish the direct influence of internal controls on revenue collection in Nairobi City County. The results are as shown in Table 6.

Table 6: Regression Results of Internal controls and Revenue collection in Nairobi City County

Model Summary									
Model	R	R Square	Adjusted Square	R Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. Change
1	.565 ^a	.319	.311	.89822	.319	41.662	1	89	.000
a. Predictors: (Constant), Internal controls									
ANOVA ^a									
Model		Sum of Squares		Df	Mean Square		F		Sig.
1	Regression	33.613		1	33.613		41.662		.000 ^b
	Residual	71.805		89	.807				
	Total	105.418		90					
a. Dependent Variable: FP									
b. Predictors: (Constant), Internal controls									

Coefficients ^a				T	Sig.
Model		Unstandardized Coefficients	Standardized Coefficients		
		B	Std. Error	Beta	
1	(Constant)	1.368	.338		4.043 .000
	Internal controls	.605	.094	.565	6.455 .000

a. Dependent Variable: Revenue collection in Nairobi City County

The results showed that there was a statistically significant positive relationship between internal controls and revenue collection in Nairobi City County, Kenya. Internal controls explained up to 31.9% ($R^2 = 0.319$) variations in the revenue collection in Nairobi City County, Kenya. The F value was more than zero, $F=41.662$, $P=.000$, hence, internal controls is a significant predictor of revenue collection in Nairobi City County, Kenya. Results also show that internal controls had a positive, linear and significant (p-value is less than 0.05) relationship with the revenue collection in Nairobi City County, Kenya {regression coefficient, $B=0.605$ and t-test value, $t=6.455$ }. The results are represented in the following model:

$$Y = \beta_0 + \beta_2 X_2 + \epsilon$$

Where Y = revenue collection in Nairobi City County,

$$\beta_0= 1.368 \text{ (constant)}$$

$$\beta_1= 0.605$$

$$X_1= \text{Internal controls}$$

Substituting equation above with values, the model becomes: $Y= 1.368+ 0.605X_2$

From the above model, the constant had coefficient of 1.368, $P=0.424$, this implies that in the absence of internal controls, revenue collection in Nairobi City County would be positively at 0.605. This revenue collection in Nairobi City County would be significant ($P<0.01$). Further, internal controls had regression coefficient of 0.605, $P=0.000$. This implies when everything is held constant, a unit increase in internal controls would result to a significant increase in revenue collection in Nairobi City County by 0.605units. Mwachiro (2013) did a study on the role internal controls played in ensuring effective revenue collection process. It was also found that weak internal controls encourage fraud, collusion, and embezzlement of the revenue collected and loss of revenue. Thus, it was concluded from the study that significant effect exists between internal controls and revenue collection in KRA. Robert, (2014) conducted a study on internal controls in place at the Kenya Revenue Authority to assess if such internal controls have yielded any positive results in increased revenue collected. The study found that lax internal controls promote collusion in favour of fraud, loss of revenue and embezzlement of the revenue collected. The study therefore concluded that internal controls do function although with hiccups and that there is a significant effect between internal controls and revenue collection in KRA.

Linear influence of Tax structure on Revenue collection in Nairobi City County

Simple linear regression analysis was conducted to establish the direct effect of Tax structure on revenue collection in Nairobi City County. The results are as shown in Table 7.

Table 7: Regression Results of Tax structure and revenue collection in Nairobi City County

Model Summary		the Change Statistics								
Model	R	R Square	Adjusted Square	R Std. Error of Estimate	R Square Change	F Change	df1	df2	Sig. Change	F
1	.409 ^a	.167	.158	.99337	.167	17.830	1	89	.000	

a. Predictors: (Constant), Tax structure

ANOVA ^a		Sum of Squares			Df	Mean Square	F	Sig.
1	Regression	17.594			1	17.594	17.830	.000 ^b
	Residual	87.823			89	.987		
	Total	105.418			90			

a. Dependent Variable: Revenue collection in Nairobi City County

b. Predictors: (Constant), Tax structure

Coefficients ^a		Unstandardized Coefficients		Standardized Coefficients		T	Sig.
Model		B	Std. Error	Beta			
1	(Constant)	1.981	.367			5.402	.000
	Tax structure	.425	.101	.409		4.223	.000

a. Dependent Variable: Revenue collection in Nairobi City County

The results revealed that there was a statistically significant positive relationship between tax structure and revenue collection in Nairobi City County, Kenya. Tax structure accounted for 16.7% ($R^2 = 0.167$) variations in the revenue collection in Nairobi City County. The F value was more than zero, $F=17.830$, $P=.000$,

therefore, Tax structure is a significant predictor of revenue collection in Nairobi City County. Results show that Tax structure had a positive, linear and significant (p-value is less than 0.05) association with the revenue collection in Nairobi City County {regression coefficient, $B=0.425$, and t-test value, $t=4.223$ }. The results are represented in the following model:

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Where Y = revenue collection in Nairobi City County,

β_0 = 1.981(constant)

β_1 = 0.425

X_1 = Tax structure

Substituting equation above with values, the model becomes: $Y= 1.981+ 0.425X_1+\varepsilon$

From the above model, the constant had coefficient of 1.981, $p=0.000$, this implies that in the absence of Tax structure, revenue collection in Nairobi City County would be positively at 1.981. This revenue collection in Nairobi City County would be significant ($P<0.01$). Further, Tax structure had regression coefficient of 0.425, $P=0.000$. This implies when everything is held constant, a unit increase in the tax structure would result to a significant increase in revenue collection in Nairobi City County by 0.425 units. The study implies that tax structure had a positive impact on revenue collection. This is in line with Maxwell (2012) who found out that there was need for a robust tax structure in order to enhance revenue collection processes. This is by considering optimum rate structure, appropriate rules and regulations and human capacity increasing control to reduce leakage by performing surprise audits to compliment self-assessment procedure, improving the control processes, put efforts to enforce a strict and heavy penalty for non-compliance, instill financial discipline to staff that contribute to leakage in local revenues and make efforts to link tax. This was echoed by Fishlow & Friedman, 2014 who indicated that services provided by county governments; improvement of administration and better revenue planning was critically dependent upon the ability of counties to minimize the cost of collecting revenues by improving the existing tax administration procedures through administrative simplification.

V. Conclusion and Recommendation

The study concluded that there is significant positive influence of internal controls on revenue collection in Nairobi City County. Internal control design influences staff attitude towards fraud such that a strong internal control mechanism is deterrence to staff fraud while a weak one exposes the system to fraud and creates opportunity for staff to commit fraud. Internal controls in places have aid in minimizing wastage as well as revenue loss, risk assessment, reliable financial reporting and prevention misappropriation of funds. This has improved revenue collection in the city county government of Nairobi. The study also concluded that there is significant positive influence of technology absorption on revenue collection in Nairobi City County. The county has an automated system for revenue collection for instance mobile technology including mobile money is the most common mode of revenue collection. The computerization of all the processes steps plays an important role in minimizing the errors, standardization of the operational procedures and reducing costs in the revenue collection process. The use of technology has helped close the previously existing loopholes in revenue collection, enhanced the preparation and provision of timely clear records and minimized operational costs. This has enhanced revenue collection in the county.

The study recommends that the system be implemented in other county governments across the country to boost revenue collection. The County government should ensure use latest technological hand held systems in revenue collection. This study also recommends that the County Government of Nairobi should ensure that they develop and deploy an electronic payment platforms and citizen E-wallets service accessible to all categories of citizens; from high income earners to low income earners. The study recommended the county governments should automate internal control systems, develop sufficient physical controls to control protect from revenue fraud and ensure redundant numbers for enhanced protection. Further, the county management should ensure that all the internal control activities are identified, strategically positioned and implemented across all the departments in order to achieve improved revenue collection.

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Chebotibin J. Zipporah , et. al. “Influence of Internal Controls and Technology Absorption on Revenue Collection in Nairobi City County, Kenya.” *IOSR Journal of Economics and Finance (IOSR-JEF)*, 12(06), 2021, pp. 13-24.