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**EFFECT OF MONITORING AND EVALUATION IN OPTIMIZATION OF REVENUE COLLECTION IN COUNTY GOVERNMENTS OF WESTERN KENYA**

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**ABSTRACT**

*Governments are aiming at increasing revenue collection through strategic innovations and measures that helps in maximizing revenue. There have been significant shortages in revenue collection at all levels of government as a result there are innovations and strategies that the governments comes up with so that to optimize the revenue. The purpose of the study was to assess the strategic innovation on revenue collection that optimized the amount of revenue collection in county governments of Western Kenya. The study was guided by the following objective: to determine the influence of monitoring and evaluation on optimization of revenue collection in county governments of Western Kenya. A survey research design will be used in the study. The target population consisted of all revenue staff in the 4 identified counties. A census inquiry was used to study all the revenue staff. The study population to be used therefore consisted of 32 staff from Busia County, 29 from Kakamega County, 24 from Bungoma County and 25 from Vihiga County leading to total of 110 sampled respondents. By employing survey research design, data was collected using a questionnaire after ascertaining its content validity through experts and internal consistency reliability through cronbach alpha result. Data was then analyzed using descriptive and inferential statistics. The study employed regression analysis with aim of determining the significant relationships between the independent and the dependent variable sets. The government of Kenya is able to identify the challenges facing the county government revenue collection in optimizing revenue collection. Also, the country is able to know the importance of ranking the counties, provinces in terms of the amount of revenue collected. The study revealed that monitoring and evaluation affects optimization of revenue collection in Western Kenya ( $P=0.004$ ). The study concluded that monitoring and evaluation affects optimization of revenue collection in Western Kenya. The study recommended that the county governments of western Kenya need to improve the efficiency and effectiveness of monitoring and evaluation in order to increase the level revenue collection in the counties.*

**Keywords:** Strategic Innovation; Monitoring and Evaluation; and Optimization of Revenue Collection

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## INTRODUCTION

Brill and Hassett (2007) stated that maximum revenue collection in a country is the main aim of every state since revenue collected from the country is the main way in which state can sustain itself. According to Shleifer and Vishny (1993) the success of development projects depend largely on the amount of revenue collected in a given country. States come up with approaches of optimizing revenue collection such as use of computers in revenue recording, revenue forecasting, fraud detection in revenue collection and leakage of revenue collected through corruption (Buyonge, 2007). Outsourcing of revenue collection is another strategy used to optimize revenue collection, discounting encourages tax payment and investment which in return will increase revenue collection in the country. Finally monitoring and evaluation increase revenue collection since it mainly ensures that the strategies of revenue collection come up with the desired results. Optimum revenue collection in a country is indicated by the Country's ranking on the amount of revenue they collect in a given year. Growth of revenue collected in a country is also an indicator of optimum revenue collection (Hutchcroft, 2000).

According to Mc Kerchar and Evans (2009), optimization of revenue collection is an area of concern to most states globally. In devolved structures such as the Philippines and the U.K, each local government unit (LGU) are granted power to create their own sources of levy tax and revenue, charges and fees which is in consistent with the policy of local autonomy. According to Aizenman, Kletzer and Pinto (2007) the tax fees and charges accrues mainly to the local government unit following the power of political subdivisions to tax. The revenue cycle staffs are insights on how the practice can prevent errors and better manage processes to prevent denials. A summary of taxes collected by state for 5 broad tax categories and up to 25 tax subcategories is the annual Survey of State Government Tax Collections (STC) in United States (Hutchcroft, 2000).

Engela and Ajam (2010) monitoring and evaluation plays a role in identifying when and the circumstances possible and appropriate to undertake impact evaluation. Monitoring and evaluation as strategic innovation in optimization of revenue collection makes sure there are no malpractice in collection of revenue and also the systems are in the right position to collect revenue in government such as used in UK (Preker, Langenbrunner, & Jakab, 2002).

African countries are also involved in application of strategic innovation that helps to optimize revenue collection. Local government in Tanzania has reformed system of revenue collection as a way of increasing the amount of revenue collection. Privatization of revenue collection in rural areas such as Kiloso and Kasarawe and urban councils such as Ilala and Kinodini is a way in which the country outsources collection of revenue to private sectors. Outsourcing of revenue collection in Tanzania it's result of complaints by the citizen on the revenue collectors and that the money collected from the revenues does not benefit them. In addition, government officials intervene in the revenue collection process and also in recruitment of revenue collectors (Buyonge, 2007).

Nwajiaku (1994) revealed that Togo revenue authority (OTR) which was formed in 2014 with selected services which are to be shared by taxes commissioners and customs. OTR established a system of collecting revenue directly with nearly total removal of tax cashier and all accounting and entrust banks with tax collection. This result to reduced delay on goods issued, queues disappearing when making tax payment and increase in state revenue. The OTR introduced system to disclose agents' asset and set up email and hotline for complaints from taxpayers (Buyonge, 2007).

Kamolo (2014) stated that county governments in Kenya are required to collect maximum revenue though tax to meet their financial expenditure budget and to balance between allocation of budget and revenue collected through tax

instrument. County government has introduced use of computers in revenue authorities which allows county government to predict risks such as fraud or corruption and also to predict whether the revenue is on the increase or decrease. This ensures that there is optimum collection of revenue.

Contrary to what was expected, many county governments in Western Kenya have failed to discharge their functions due to lack of enough finances. It has been a common phenomenon in the local media reporting on county workers going on strike due to unpaid salaries, allowances and lack of funds to run county projects and operations. This denotes that most of these counties have poor revenue collection programs which results to financial deficit (Nyaga, 2016; Okir, 2015; Owino, 2017). It is against this backdrop, the study assessed effect of monitoring and evaluation in optimization of revenue collection in Western Counties of Kenya.

#### Statement of the Problem

Kamolo (2014) asserted that it is imperative for county governments to exhaustively collect revenue from the county as this is the main source of funds to be used in funding development project. Projects such as development of market, feeder roads, garbage collection, maintenance and establishment of sewerage systems, keeping the street clean, rural access roads in towns are financed by local revenues. County governments should collect enough revenue through taxes so that they can face

increasing budget and to balance county budget and revenue collection through tax instrument. It is required that the county government optimizes revenue collection to be able to meet their financial demand without dependence on the national government.

This however is not the case. Though the county Governments have made some progress in revenue collection such as full adoption of the Integrated Financial Management Information System (IFMIS), establishment of County Budget and Economic Forums (CBEF), and improvement in the absorption of development funds revenue collection is not optimized. According to Nyaga (2016); Okiro (2015) and Owino (2017), western Kenya revenue collection have been on the decline and the target is not met despite the high needs to serve the locals this have affected the performance in the region. The counties in the region have not allowed advanced strategies in revenue collection method this has led to minimum revenue collection as shown in table 1 below. Also, the results indicates from 2013/14 to 2018/19 there has been high increase of revenue collection but in 2019/20 the revenue collection started to decrease by 0.9% The region should adapt strategic innovation in order to optimize revenue collection (Owino, 2017). It is therefore against this will assess strategic innovations in optimization of revenue collection in county governments of western Kenya.

**Table 1: Revenue Collection of County Governments of Western Kenya**

| COUNTIES | YEARS            |                  |                  |                  |                  |                  |                  |
|----------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|          | 2013/14<br>000's | 2014/15<br>000's | 2015/16<br>000's | 2016/17<br>000's | 2017/18<br>000's | 2018/19<br>000's | 2019/20<br>000's |
| Busia    | 3.473            | 4.799            | 5.668.           | 6.256            | 6.894            | 6.734            | 6.380            |
| Kakamega | 6.931            | 8.090            | 9.646            | 10.703           | 11.062           | 12.151           | 11.364           |
| Bungoma  | 6.271            | 6.783            | 8.029            | 8.876            | 9.430            | 10.120           | 9.559            |
| Vihiga   | 2.860            | 3.420            | 4.054            | 4.470            | 4.843            | 5.221            | 5.198            |

**Source:** (KNBS and Commission of Revenue Allocation 2021; County Government of Western Kenya Report, 2021).

### **Objective of the Study**

To determine the influence of monitoring and evaluation on optimization of revenue collection in county governments of Western Kenya.

### **Research Hypothesis**

H<sub>01</sub>. There is no statistically significant influence of monitoring and evaluation on optimization of revenue collection in county governments of Western Kenya.

## **LITERATURE REVIEW**

### **Review of Theories**

The following theories were adopted in the study.

#### **Technology Acceptance Theory**

The study employed the technology acceptance model (TAM) by Davis (1989). According to Davis (1989), technology acceptance theory involves how users accept the use of technology in running the operations of an organization or a firm in terms of perceived usefulness, perceived ease of use, attitude towards using, behavioral intention to use and actual system use. The theory explains that when new system is introduced in the organization, there are factors which need to be focused such as when to be used, how I will be used and what impact it will bring in the organization (Venkatesh & Bala, 2008).

The theory is based on two assumptions which are perceived ease-of-use and perceived usefulness. Bagozzi, Davis and Warshaw (1992) stated that introducing a new technology, the company asks questions how will impact the business operations? or will it bring improve the fir operations or increasing profit volume?. Also, the staff in the organization when they are introduced with new system, are they able to use the system or technology without any hindrance or drawbacks. In addition, the staff need to familiarize with the system (Venkatesh & Bala, 2008).

Segards and Grover (1993) revealed that public firms when introducing a new software they focus on perceived ease-of-use and perceived usefulness. The new software was determined by how

employees are able to use the technology and also how it affects the firm operations. Also, the organization makes sure the software is working properly where it enhance effectiveness and efficiency of firm operations.

Technology acceptance theory is based on information communication technology department of the firm where by it enhances flow of communication from one department to another especially in government organizations, hospitals, manufacturing companies and so forth. In this 21<sup>st</sup> century, technology has enhance effectiveness and efficiency of firm operations in the global world where a company in Unite States of America can communicate with another company in Africa by doing transactions and this is through these firms adopting technology acceptance theory (Venkatesh et al., 2003).

Based on the study, the theory helped the county governments in Western Kenya by making them to adopt strategic innovations such as automation, outsourcing, discounting and monitoring and evaluation in order to improve the efficiency and effectiveness of revenue collection in the counties thus increasing fir performance.

#### **Diffusion of Innovation Theory**

Also, the research used diffusion innovation theory by Rodgers (2003). The theory asserts that innovation involves the increase and decrease of a new idea, product or practice that will be implemented and adopted by members or firms (Lazarsfeld et al., 2003). Rogers (2003) explained that leaders in organization may adopt or reject an innovation of a particular system needed to be introduced in an organization in order to bring change in a firm (Rogers, 1962).

Diffusion of Innovation Theory works by evaluating and monitoring how technology or system or innovation passes through some stages until it is useful or impacts an organization Littlejohn (1996). According to Rogers (3003), the theory has five assumptions which include: there is need or reason or factor prompting the organization to introduce

new innovation; it needs to be align or compatible to the firm operations or system; it needs to be clear and simple to be used by both the firm and customers; the innovation needs to be evaluated and monitored before implemented; and lastly it needs to be implemented and controlled (Infante et al., 1997).

Rogers and Shoemaker (1971) explains how employees' beliefs and norms in organization perceive the introducing of new innovation or technology where by the innovation has an impact over the existing technology or system, it needs to be align and compatible to the firm operations and employee norms and values, and the adopters must be familiar with the innovation. Also, the firm needs to know if the employees accept or reject the new innovation that is the transition from using the old system and using the new system (Swasy, 2016). The firm passes the employees a training of introducing the new innovation by making them to be aware of the reasons of introducing the new innovation, how it will help the firm operations, and how it will be used and maintained. This helps the firm to reduce change resistance and helps the staff to have positive attitude towards the introduction of new innovation (Rogers & Shoemaker, 1971).

The theory is deemed relevant for this study because when one county adapt the new innovation such as outsourcing of revenue collection, discounting and automation the idea spread and as a result all the other counties in Kenya adapted. This however optimized revenue collection in the county and the country in general.

## **EMPIRICAL REVIEW**

### **Monitoring and Evaluation and Optimization of Revenue Collection**

Engela and Ajam (2010) asserts monitoring and evaluation plays a role in identifying when and the circumstances possible and appropriate to undertake impact evaluation. Additionally it contributes important data for conducting impact evaluation and baseline data for various information on the intervention. Monitoring

involves tracking progress with previously identified objectives or plans using data which is easily measured and captured on. On the other hand, monitoring makes frequently use of quantitative data, monitoring qualitative data which is done regularly by some agencies is possible. The frequent reasons for monitoring include internal use staff and project managers. Instate of focusing on the work of the organization (Preker, Langenbrunner, & Jakab, 2002).

Preker et al. (2002) states systematic, evidence-based inquiry which describes and assess aspect of a policy and project is evaluation. It uses variety of quantitative and qualitative methods in providing comprehensive information in what is taking place if it is appropriate, why and provide guidance for directions. According to Mackay (2006) evaluation is the assessment of problem situation prior to development of the project design also these assessments identify ways that the needs can be addressed. Evaluation of the organization looks at effectiveness of an organizational unit as noted by (Seasons, 2013).

Gidisu (2012) states the budget must include all money that a county will spend and must follow a fiscal year of Impact of the Economic Recession. The responsibility of budgeting is annual preparation and submission of budget for approval by the Board of County Commissioners. This division is responsible throughout the year for controlling and monitoring budgetary compliance and expenditures. In preparation of the budget it is responsible for preparing and also submitting the County's five-year Capital Improvement Plan (CIP). Additionally this division assists county management in fiscal impact and special impact determination and is responsible for county's short and long term financial planning and guideline for operation (Engela & Ajam, 2010).

According to Kusek and Rist (2004) monitoring and evaluation also involve close supervision of revenue collection in the country. When revenue collection is closely supervised it will optimize the revenue collected in a country. This is because some agents

does not comply with the tax collection by failing to submit collected revenue or submitting less than the stipulated. Another problem is that agents targets only accessible ones to reduce collection cost. When revenue collection is closely supervised it will ensure maximum collection and thus optimization of revenue collection (Kusek & Rist, 2004).

Monitoring and evaluation is interested with the outcome of some set strategies to improve performance of revenue collection (Kusek & Rist, 2004). Monitoring and evaluation of revenue collection ensures that there is feedback to the expectation of the country. In every organization that is results oriented in their activities is always the best because every individual responsible for production will work maximally to ensure that results is presentable. According Seasons (2013) in this case the organization responsible for revenue collection will work maximally and their workers will comply with each other in ensuring that there is a maximum feedback as expected.

Prichard (2010) conducted a study on taxation and state building. The study aimed to compare none automated systems and automated systems in identifying fraud or rogue revenue collectors in United Kingdom. Primary data was collected using structured interview guides with the managers of revenue authorities. Content analysis was used to perform data analysis where the interview responses were structured based on various themes as espoused by objectives of the study. Secondary data were also used to corroborate the results of the interviews by looking at the documents for the reforms and modernization program. The study established that none automated systems of revenue were attributable to problems of tracking and identifying fraud or rogue revenue collectors since they are only compounded by the usage of manual or centralized systems due to the resources and overheads needed to monitor and control such problems. Manual collection of payments at several service points lead to delayed customer service with

built-in Risk Of manual cash management Minimal payment channels.

Nyaga (2016) examined effect of revenue collection processes innovations on the financial performance of selected county governments in Kenya. The study adopted a descriptive research design. The target population consisted of all the employees in the county revenue collection department. Simple random sampling technique was used in this study to select the respondents. The total sample in this study was 124 respondents. Primary data was gathered by use of a semi-structured questionnaire and captured through a 5-point type Likert scale. Data was analyzed using Statistical Package for Social Science (SPSS) version 20. A linear regression analysis was conducted on the data set. The Pearson Product Moment was used to analyze the data in which correlation coefficient ( $r$ ) and the coefficient of determination ( $r^2$ ) of the variables was established. In relation to the study findings, the study concluded that, training on revenue collection, mobile money payment, online tax remittances and revenue database system influences financial performance of selected county government in Kenya.

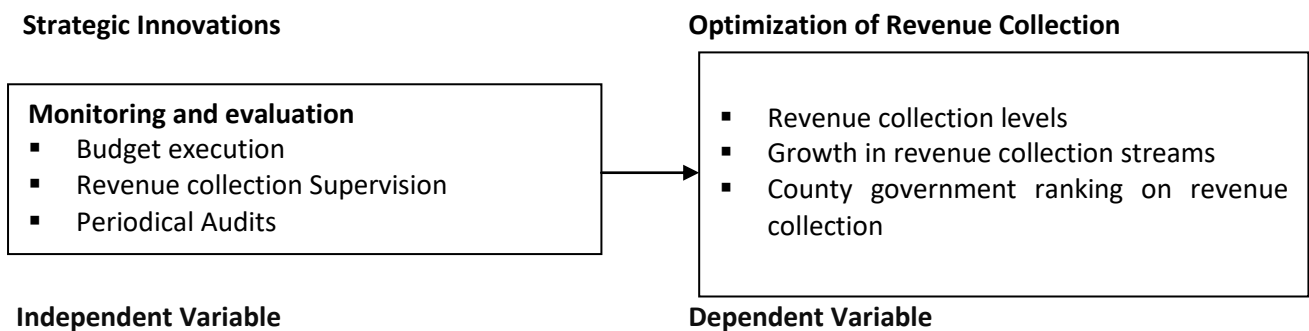
Kondo (2015) examined the effect of revenue enhancement strategies on financial performance of Kenya Revenue Authority. The data was analyzed using descriptive statistics including frequencies, mean scores and correlation analysis. Regression models were used to determine the existence, if any, of the relationship between financial performance and the strategies adopted to enhance financial performance by KRA. In addition, regression model were used to measure the quantitative data to establish the extent to which independent variables affect the dependent variable as shown by the size of the beta coefficients. It was established that tax payer education and revenue collection points have strong, positive and significant effect financial performance of KRA while computerized operations and staff training have strong, negative and significant effect on financial performance of KRA.

Otieno et al. (2013) studied effect of information systems on revenue collection by local authorities in Homa Bay County, Kenya. A structured cross-section survey was used to collect data from 2,007 individuals, of which 165 were Local Authorities staff and 1,842 were traders in Homa Bay Municipality. The study found that there is a relationship between information systems and both efficiency and effectiveness in revenue collection. Also it was revealed that there is a strong positive

relationship between internal control systems and revenue collection.

### Conceptual Framework

In this study, the independent variable construct shall include; monitoring and evaluation while the dependent variable constructs shall be optimization of revenue collection. Figure 1. illustrates the conceptual framework.



**Figure 1: Conceptual Framework**

**Source:** Adopted from (Kamolo, 2014; Gidisu, 2012; Karori, Muturi & Mogwambo, 2016).

### METHODOLOGY

Survey research design was adapted in the study. A survey research design is preferred because of the large number of revenue officials within the study area. This design accommodates valuable and unique argument different from using other approaches as it studies things in detail and discover what would be impossible to find if other designs were used. The descriptive design adopted because descriptive studies are not only useful for fact finding but often result in the formulation of important principles of knowledge and solution to significant problems. This ensured that the researcher is able to visit the various revenue offices in Western Counties that were sampled to participate in the study and sought the opinions of the respondents about how strategic innovations affect optimization of revenue collection. The survey research design therefore allowed the researcher to manage the study population size thus ensuring that the information collected is sufficient (Kombo & Tromp, 2006).

The study was conducted in county governments in Western Kenya. Through devolvement of government in counties through the constitution of 2010, it has help the county government in Kenya to improve their revenue collection through adoption of computerized systems in collecting of revenue in the public. However, the introduction of computerized systems in the county government, the revenue collection department has not reach to its level in revenue collection thus influencing the county government operations. This is the same case in county governments in Western Kenya.

According to Mugenda and Mugenda (2003) population is object or case or individuals with similar characteristics. The target population in this case was from revenue department in counties in western Kenya. Revenue officials from Busia county were 32. Respondents from Kakamega County were 29 respondents from Bungoma County were 24 and respondent from Vihiga County were 25 respondents.



Census inquiry entails studying the entire target population by complete enumeration of subjects (Kothari, 2008). This study employed census inquiry because the study population was small enough to allow for complete enumeration. Sampling error was therefore eliminated and study results reflected actual population parameters. A study population of 110 revenue officials was used in the study.

In this study, questionnaire was designed and used to collect data from revenue collectors. Questionnaires a tool that the respondent reacts on by responding to both open and close questions in writing. Questions in the questionnaire are designed words and are distributed to respondents to answer the questions. Questionnaire can collect more information in a short time. During the study respondents were given time to complete filling the questionnaire and then returned for analysis. The questions in the questionnaire were closed or open ended which allows respondents to freely give their opinion without interference. The questionnaire was structured in quantitative method of research, which was advocated by Emile Durkheim (1858-1917) it includes the low level of involvement of the researcher and high number of respondents "( the individual who answers the questions)."

Questionnaire is series of questions asked to individual to obtain statistically useful information about a given topic. When properly constructed and responsibly administered, questionnaires become a vital instrument by which statements can be made about specific groups. The study questionnaire shall be structured as per the study variables. The questionnaire shall have six sections.

Data that was collected was checked for consistency with data obtained from questionnaire copies in order to eliminate misleading data which could arise from misrepresentation of answered questions in the questionnaire. Both descriptive and inferential data analysis were employed.

Data was analyzed and presented through descriptive and inferential statistics with the help of SPSS (Version 25). The descriptive statistics method

involved the use of frequencies; percentages; means; standard deviations; maximum and minimum range; skewness and kurtosis. The results were presented by tables.

Inferential statistics are statistics used to draw inferences about a given phenomenon in a population. Inferential analysis was adopted for the study because study results were applicable to the other county governments not in Western Kenya and therefore applicable to more revenue collectors not enumerated in the study. More so, results of this study were applicable to future administration if revenue collection and therefore the need to extrapolate results. In this study, regression model was employed. Data was analyzed using a four-point liker scale while the relationship between variables was determined using a regression model analysis.

The regression equation was as illustrated

$$Y=b_0+b_1X_1+e$$

Where:

Y represents dependent variable - Optimization of revenue collection

$b_0$  represents the constant when the value of independent variables is zero

$b$  represents independent variable Coefficients

X represents the independent variables – Strategic innovations

$X_1$  represents Monitoring and Evaluation

e represents error term

The multivariate regression analysis was based on the assumptions that; First multivariate analysis assumes that the data from group  $i$  has common mean vector  $\mu_i$ . This assumption says that there are no subpopulations with different mean vectors. Here, this assumption might be violated if data collected from a given site was imported from multiple sites. Secondly multivariate analysis assumes that the subjects are independently sampled. This assumption was satisfied if the assayed pottery is obtained by randomly sampling the pottery collected from each site. This assumption would be violated if, samples were collected in clusters. Thirdly multivariate analysis

assumes normality: Multivariate analysis assumes that there were multivariate normally distributed.

### DATA ANALYSIS AND DISCUSSIONS OF THE FINDINGS

The study involved descriptive and inferential statistics.

### Monitoring and Evaluation on Optimization of Revenue Collection

The study sought to determine the influence of monitoring and evaluation on optimization of revenue collection in Western Kenya.

**Table 2: Monitoring and Evaluation on Optimization of Revenue Collection**

| Statements   | 1        | 2        | 3        | 4          | 5          | Mn   | Std  | Min | Max | Skw   | Kut   |
|--|----------|----------|----------|------------|------------|------|------|-----|-----|-------|-------|
| There is a close relationship between the county's budget execution and revenue collection | 2<br>1.8 | 1<br>0.9 | 2<br>1.8 | 27<br>24.5 | 78<br>70.9 | 4.62 | 0.74 | 1   | 5   | -0.90 | 0.035 |
| There is close supervision of revenue collection process                                   | 0<br>0   | 0<br>0   | 1<br>0.9 | 44<br>40   | 65<br>59.1 | 4.58 | 0.51 | 3   | 5   | -0.06 | -1.47 |
| The revenue authority conducts periodical audits of revenue collected                      | 1<br>0.9 | 1<br>0.9 | 1<br>0.9 | 41<br>37.3 | 66<br>60   | 4.55 | 0.66 | 1   | 5   | 0.37  | -1.07 |

**Source:** Research Data (2021).

The findings indicated that there is a close relationship between the county's budget execution and revenue collection thus increasing level of revenue collection within the counties as evidenced by a mean of 4.62, standard deviation of 0.74, skewness of -0.90 and kurtosis of -0.04. The data was normally distributed and had high dispersion since it had high range. The data was normally distributed and suitable for regression with skewness and kurtosis values ranging between -3.0 and +3.

From the findings there is close supervision of revenue collection process therefore enhancing optimization of revenue collection within the western counties as shown by a mean of 4.58, standard deviation of 0.51, skewness of -0.06 and kurtosis of -1.47. The data was normally distributed and had high dispersion since it had high range. The data was normally distributed and suitable for

regression with skewness and kurtosis values ranging between -3.0 and +3.

Also, the study showed that the revenue authority conducts periodical audits of revenue collected making the revenue collection department accountable in their revenue records thus enhancing optimization of revenue collection in the counties as evidenced by a mean of 4.55, standard deviation of 0.66, skewness of 0.37 and kurtosis of -1.07. The data was normally distributed and had high dispersion since it had high range. The data was normally distributed and suitable for regression with skewness and kurtosis values ranging between -3.0 and +3.

From the results optimization of revenue collection in western counties as far as monitoring and evaluation was concerned was very high. This is an implication that western counties in Kenya are working towards enhancing optimization of revenue

collection by adopting monitoring and evaluation as strategic innovations.

The results of this finding are in consonance with Kusek and Rist (2004) who revealed that when revenue collection is closely supervised it will optimize the revenue collected in a country. Also, Seasons (2013) supports that study where the study found out that revenue collection will work

maximally and their workers will comply with each other in ensuring that there is a maximum feedback as expected.

### Indicators of Optimization of Revenue Collection

The research sought to assess the indicators of optimization of revenue collection in Western Kenya.

**Table 3: Indicators of Optimization of Revenue Collection**

| Statements   | 1 | 2 | 3 | 4  | 5  | Mn   | Std  | Min | Max | Skw   | Kut   |
|--|---|---|---|----|----|------|------|-----|-----|-------|-------|
| Revenue collection levels have increased as a results of strategic innovations | 0 | 3 | 3 | 39 | 65 | 4.51 | 0.69 | 2   | 5   | -1.44 | -0.47 |
| There has been Growth in revenue collection streams across the county          | 0 | 1 | 8 | 55 | 46 | 4.33 | 0.65 | 2   | 5   | 0.89  | 0.17  |
| The County government rankings on revenue collection has improved over time    | 0 | 1 | 4 | 34 | 71 | 4.59 | 0.61 | 2   | 5   | -0.14 | -1.10 |

**Source:** Research Data (2021)

The findings indicated that revenue collection levels in the counties have increased as a result of strategic innovations thus increasing level of revenue collection within the counties as evidenced by a mean of 4.51, standard deviation of 0.69, skweness of -1.44 and kurtosis of 0.47. The data was normally distributed and had high dispersion since it had high range. The data was normally distributed and suitable for regression with skweness and kurtosis values ranging between -3.0 and +3.

From the findings there has been growth in revenue collection streams across the counties due to adoption of strategic innovations in the revenue collection department of the counties as shown by a mean of 4.33, standard deviation of 0.65, skweness of 0.89 and kurtosis of 0.17. The data was normally distributed and had high dispersion since

it had high range. The data was normally distributed and suitable for regression with skweness and kurtosis values ranging between -3.0 and +3.

Also, the study showed that the County government rankings on revenue collection has improved over time since the adoption of strategic innovations in the revenue collection department of the western counties as evidenced by a mean of 4.59, standard deviation of 0.61, skweness of -0.14 and kurtosis of -1.10. The data was normally distributed and had high dispersion since it had high range. The data was normally distributed and suitable for regression with skweness and kurtosis values ranging between -3.0 and +3.

From the results optimization of revenue collection in western counties as far as strategic innovations was concerned was very high. This is an implication

that western counties in Kenya are working towards enhancing optimization of revenue collection by adopting automation, outsourcing, discounting and monitoring and evaluation as strategic innovations.

The study findings is in line with Terkper (2009) who revealed that strategic innovation is crucial in the optimization of revenue collection in a nation. Also,

Masese (2011) supports the study where the research revealed that computerized revenue collection reduce collection cost.

#### Inferential Analysis

The inferential analysis involves multiple regression analysis.

**Table 4: Overall Regression Model Summary of Monitoring and Evaluation**

| Model Summary |                   |          |                   |                            |  |
|---------------|-------------------|----------|-------------------|----------------------------|--|
| Model         | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |  |
| 1             | .272 <sup>a</sup> | .074     | .065              | .87163                     |  |

a. Predictors: (Constant), Monitoring and evaluation

Source: Research Data (2021).

The R-Squared is the proportion of variance in the dependent variable which can be explained by the independent variable. The R-squared in this research was 0.074 which shows that the independent variable [Monitoring and evaluation] can explain 7.4% of the change in dependent

variable (Optimization of revenue collection in county government of Western Kenya). This shows that the other factors not studied in this research explain 92.6% of the dependent variable (Optimization of revenue collection in county government of Western Kenya).

**Table 5: Results of Goodness of Fit of Linear Regression Model**

| ANOVA <sup>a</sup> |            |                |     |             |       |                   |
|--------------------|------------|----------------|-----|-------------|-------|-------------------|
| Model              |            | Sum of Squares | df  | Mean Square | F     | Sig.              |
| 1                  | Regression | 6.549          | 1   | 6.549       | 8.621 | .004 <sup>b</sup> |
|                    | Residual   | 82.051         | 108 | .760        |       |                   |
|                    | Total      | 88.601         | 109 |             |       |                   |

a. Dependent Variable: Optimization of revenue collection in county government of Western Kenya

b. Predictors: (Constant), Monitoring and evaluation

Source: Research Data (2021).

Based on the study results obtained F-calculated value was 8.621 greater the F-critical value 2.7 ( $F_c = 8.621 > F_o = 2.7$ ) significance of 0.004<sup>b</sup>. Since the significance level of  $.004^b < 0.05$ , the study concludes that the set of independent variable influence the optimization of revenue collection in

county government of Western Kenya (Y-dependent variable) and this shows that the overall model was significant. Thus monitoring and evaluation play a significant role in optimization of revenue collection in county government of Western Kenya.

**Table 6: Results of Overall Regression Model Coefficients**

| Coefficients <sup>a</sup> |                           |                             |            |                           |       |      |
|---------------------------|---------------------------|-----------------------------|------------|---------------------------|-------|------|
| Model                     |                           | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. |
|                           |                           | B                           | Std. Error | Beta                      |       |      |
| 1                         | (Constant)                | 2.213                       | .253       |                           | 8.734 | .000 |
|                           | Monitoring and evaluation | .295                        | .101       | .272                      | 2.936 | .004 |

a. Dependent Variable: Optimization of revenue collection in county government of Western Kenya

Source: Research Data (2021).

The regression equation was modeled as follows:

$$Y = \alpha_0 + \beta_1 X_1 + \epsilon$$

The regression equation computed was:

$$Y = 2.213 + 0.295X_4 + 0.253$$

Y (Optimization of revenue collection in county government of Western Kenya) = 2.213 + 0.295(Monitoring and evaluation) + 0.253 (Standard Error).

The data findings analyzed also shows that taking all indicators of monitoring and evaluation at zero, a unit increase in monitoring and evaluation would lead to a 0.295 decrease in optimization of revenue collection in county government of Western Kenya.

**H<sub>01</sub>: There is no statistically significant influence of monitoring and evaluation on optimization of revenue collection in county government of Western Kenya.**

The study indicated a probability value of ( $p=0.004 < 0.05$ ) was obtained implying that the hypothesis (there is no statistically significant influence of monitoring and evaluation on optimization of revenue collection in county government of Western Kenya) is rejected and therefore indicating existence of statistically significant relationship between monitoring and evaluation and optimization of revenue collection in county government of Western Kenya.

Kondo (2015) concurs with the study where it was found that effective monitoring and evaluation on revenue collection in Kenya Revenue Authority

enhance high level of revenue collection. Also, the study is in line with Awitta (2010) effectiveness of revenue collection strategies at Kenya Revenue Authority in Nairobi enhance high level of revenue collection.

## CONCLUSIONS AND RECOMMENDATIONS

From the results, monitoring and evaluation affects optimization of revenue collection in county government of Western Kenya. This is described by diffusion of innovation theory, there is close supervision of revenue collection process therefore enhancing optimization of revenue collection within the western counties.

From the findings and conclusions, the following recommendations were made:

The study established that strategic innovations play an important role in increasing optimization of revenue collection in county government. Based on this, the study recommends that county governments in western Kenya need to take strategic innovations seriously if they are to collect high revenue from the public. Also, the revenue collection department needs to use effective and efficient monitoring and evaluation system on supervising the revenue collection process in the county in order to reduce cases of fraud and corruption.

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