IOSR Journal of Economics and Finance (IOSR-JEF)
e-ISSN: 2321-5933, p-ISSN: 2321-5925, Volume 16, Issue 3 Ser.5 (May - June 2025), PP 39-48
www.iosrjournals.org

Effects of Staff Competencies and Automation on Revenue Growth in County Government of Marsabit, Kenya

Denge Bonaya Roba[1] - dengeroba@gmail.com
Mohamed Shano Dawe[2], Guyo Sarr Huka[3]
[1,2,3] - *Meru University of Science and Technology*

Abstract
The Kenya 2010 Constitution was expected to enhance service delivery to Kenyans by devolving political and administrative responsibilities to County Governments. Resources required to support service delivery is from both local revenues and national government. Observably, in Marsabit County local revenue collections have continued dwindling even though empirical research has not been done to analyze this decline. Thus, this study was designed to assess the effect of staff competencies and automation of revenue collection on revenue growth in Marsabit County. A descriptive survey design was adopted for this research with 106 respondents from Department of Finance, Economic Planning and Budgeting. Data was collected using survey questionnaires complemented by secondary data from National Treasury annual reports. Data analysis employed correlation analysis and multiple linear regression. The findings of the study showed that, staff competencies and information technology influenced revenue growth in County Government of Marsabit. The study recommends upscaling of staff competencies by introducing training programs on revenue collections and administration and sensitization of staff on revenue collection administration best practices as well as investment in digitization of revenue collection processes.

Key Words: *Competencies, Automation, Revenue Growth, performance*

Date of Submission: 06-06-2025 Date of Acceptance: 16-06-2025

I. BACKGROUND OF THE STUDY

Revenue collection is an essential component of any government's fiscal policy, as it enables the government to provide public goods and services to its citizens. The effectiveness of revenue collection administration is crucial in achieving sustainable development, especially in developing countries. The lack of effective revenue collection administration can lead to poor public service delivery, corruption, and unsustainable debt levels (Fombad, C. M., & Steytler, N. (Eds), 2019). According to the International Monetary Fund (IMF), increasing revenue is necessary to finance public goods and services and reduce reliance on foreign aid and borrowing (Stubbs, T., Reinsberg, B., Kentikelenis, A., & King, L. 2020).

In developing countries, domestic revenue mobilization remains a challenge including weak tax administration, limited tax bases, and a high level of informality (Mpofu, F. Y. (2022). A study by Nama, K., Chikukwa, T., Lourens, M. E and Daweti, B. (2022) in South Africa concluded that training and development enhanced skills and knowledge of employees in South African Municipality. It further increased quality of workers` knowledge and skill in preparation for more specialized tasks and assignments

The impact of information systems and technology on revenue collection of the County Government of Embu, Kenya was studied by Kithinji, J. G., Muturi, W and Kibati, P. (2025). Information systems and technology integration had a favourable impact on revenue collection, according to the study. The study emphasized crucial roles of implementing contemporary technology, update ICT infrastructures, and creating supportive regulations in order to improve the effectiveness of revenue collection. In addition, Karimi, A, Smith, J and Brown L (2017) affirmed that automation maximize revenue collection and reduce tax avoidance and tax evasion in Kenyan Counties.

Kenya's governance structure underwent a significant transformation in 2010, moving from a unitary to a two-tier devolved framework (Gathii, J. T., & Otieno, H. M. , 2018). The national government and county departments were brought on board as a result of this constitutional changes. Most county governments have not been able to mobilize resources effectively resulting to under development and poor service delivery that do not meet citizen's expectations, with key services such as health care, water, sanitation, education, and other public services remaining dismal (Ng'ang'a et al., 2021). County governments largely, depend on Central Government for transfers of exchequer from the National Treasury. Occasional delay of fund transfers results into stagnation of development activities in the counties. Public Finance Management Act (PFM, Section 207), established

Revenue Funds for County Governments, where all paid monies shall be received on behalf of the county government, except money reasonably excluded by an Act of Parliament.

After devolution, county governments inherited the range of revenue sources available to the former LAs, and several of the human resource capital and systems formerly employed in revenue collection functions. The county government OSR contributes only up to 12-13% of the total financing of County Governments, with increasing dependency on funds transfers from the exchequer. This has raised concerns that own-source revenues are not commensurate with the scale, growth and nature of the expanding economic activity at the County level and with the expanding value of the tax/fee base (Adam, 2018).

Further, during 2019-20 financial year, only five out of the 47 counties met and exceeded their annual revenue targets, (Controller of Budget [CoB], 2020). According to Sengupta et al., (2021), most existing studies on revenue collections tend to focus on the challenges and opportunities of revenue collection in general terms, without providing a detailed analysis of the revenue collection systems itself. Similarly, Pescador and Caelian (2022) noted that while revenue collection is a crucial component of local government finance, most studies have not delved deeply into the revenue collection systems in place, thus leaving a gap in the literature. Additionally, Dhungana and Acharya (2021) argues that there was a need to examine the revenue collection systems in devolved governments to better understand their effectiveness and make recommendations for improvement.

1.1 Statement of problem

According to the Controller of Budget (CoB,2022) Financial reports of county government of Marsabit, for the five years (F/Y 2017/2018 to 2021/2022) shows the following status in revenue collection administration. The annual financial reports of the county government of Marsabit on revenue collections against the target for financial year 2017/2018 had a goal of kshs.120 million but collected Ksh. 129.6 million. Only Ksh 83.6 million was received compared to the Ksh 140 million goal for the 2018–2019 fiscal year. Although Ksh. 126.7 million was collected, the budgeted amount for the Fiscal year 2019–2020 was Ksh. 170 million. Additionally, the revenue target for the fiscal year 2020/2021 was Ksh 150 million, but only Ksh 110.3 million was achieved as revenue collected. The final financial year, 2021–2022, had a goal of Ksh. 170 million but only brought in Ksh. 78.3 million as actual collected revenues for the year under review.

Despite the importance of revenue collection administration in promoting efficiency in service delivery and economic development of county governments in Kenya, there was a lack of research revenue administration and identify the factors that affect their efficacy. The existing studies tend to focus on the challenges of revenue collection and application (Adu, E. P., Buabeng, T., Asamoah, K., & Damoah, C. M, 2020) without providing a detailed analysis of the revenue collection growth over period of time. Therefore, there was a need to examine the revenue collection administration and revenue growth patterns by the County Government of Marsabit.

1.2 Specific objectives of the study

1. To evaluate the role of staff competencies on the revenue growth in the county Government of Marsabit.
2. To assess the effect of automation on revenue growth in the county Government of Marsabit.

1.3 Research hypotheses

$H_0$1: Staff competencies have no significant role on the revenue growth in the county Government of Marsabit.
$H_0$2: Automation of revenue collections have no significant effect on revenue growth in the county Government of Marsabit.

II. Theoretical literature

2.1 Human capital theory

Human capital theory was developed by Theodore Schultz (1961) and later revised by Gary Becker (1964). They both underscored the need to view human resources as a capital to be invested in by organizations. Human capital refers to the value that people of an organization add via the use of their skills, knowledge, and expertise. It is the sum of all the human resources inside an organization's capacity to address business issues. Using creativity and innovation as benchmarks, human capital also includes how well an organization utilizes its human resources. The tenets of this theory is that people are assets to organizations since it fosters higher productivity. Thus, individuals, groups and organizations design strategies for empowering human capital in order to reap from the returns. According to the human capital theory each worker has certain levels of competencies developed through capacity growth, education and training. Individuals would weigh the costs of obtaining the education necessary to pursue jobs, including time spent in the classroom, and compare the predicted future profits from various career options.

This theory informs the need for the County government of Marsabit to have competent human resources who support revenue collections target. This could be done by hiring employees who have the necessary academic credentials, trustworthy, personal integrity or even by retraining current employees with clear direction or

supervision. Having the requisite skill, knowledge, and positive attitude that have the impact of boosting the level of production of the human resource. Hence, the human behavior like integrity, respect, trustworthy play the key role in human capital theory that encourages to be upheld in conducting their roles especially in collecting revenues.

2.2. Technological determinism theory

Technology Determinism theory was first published by Thorstein Veblen (1921) in his work – *"The Engineers and the Price System"* the theory postulates that technological advances influence social organizations in terms of its structures and functioning. The theory further proposes that technology necessarily progress societies towards important changes in their operations which may not be revered later because of its permanent nature of effects. Societies adapt to changes brought about by technology in order to benefit from the advantages brought by technology. In addition, new technologies reorganize ways of working, determines how people think and work as well as introducing new modes of communication, interactions and feedback systems

Technological determinism propels social advancement, highlighting the advantages that support its tenacity and is consistent with people's daily experiences embracing innovations without completely comprehending its mechanics or origins. This viewpoint asserts that technological advancements have a significant impact on how people manage their enterprises including ability to multitask across a variety of functions. Despite being generally accepted in society; the deterministic view of technology has also come under intense scrutiny. One of the main issues with technical determinism and the ensuing denial of human responsibility for change is declining human influence on technology. Higher production rates and productivity, more effective material utilization, greater product quality, increased safety, shorter labor workweeks, and shorter lead times in an organization are all benefits that are frequently linked to automation.

This theory provides relevant basis for applying information technology in organization in order to reap its benefits. The county governments' new strategy for revenue collection, which aims to boost effectiveness of its revenue growth and prevent financial fraud, is automation of revenue collection. The system can detect revenue collectors' conduct, which lowers the likelihood of fraud unlike the manual revenue collection methods

2.3 Empirical review

2.3.1 Staff competences and revenue growth

Strengthening human resource capabilities by enhancing skills, knowledge and attitude for better productivity has been severally acknowledged by researchers in human resource management. According to research by Fakhari, H., Ismail, S., Yussof, I. and Hassan, H. (2022) relationship between staff competency, support services, and VAT collection performance in Malaysia, offered findings that is applicable to current study. The study findings showed that staff competency favourably improves VAT collection performance. This emphasizes the need for revenue collection entity to have skilled employees and efficient administration. In order to improve revenue performance, it is imperative to make investments in ongoing training, development, and assistance for revenue collection staff. This finding is also supported by Majeed, Abdulai, Wumbei (2018) who established that enhancing employees' technical knowledge and skills through training programs is crucial for providing them with opportunity to learn new information, grow as professionals, and develop new talents. Shams, B., Eslami, A., Shamsi, A., & Saeidi, M. (2020) supported this view by concluding that training improves one's abilities, skills, and attitude in order to upscale one's capability to work as team in an institution. Accordingly, the modifications and development of new knowledge, skills, and attitudes via practical experience enable successful performance of duty (Sweeney, A., Weaven, S., Herington, C., & Soutar, G. N. 2019).

Jepkoech, J. Tibbs, C. Y., & Tsuma, E. (2021), investigated the connection between Nandi County's (Kenya) revenue collection efficiency and the competency of its revenue employees. According to the research results, revenue collection efficiency was positively and significantly impacted by the competency of the revenue staff. Consequently, the study also identified the need for the employees be trained in information and communication technology (ICT). In addition, Kirer, G., Cheruiyot, P., Rop, W and Langat, P. (2024), examined Kenyan county governments revenue collections. The study concluded that the efficacy of revenue collection impacted by the knowledge, expertise, and training of revenue professionals. Comparatively, the counties with skilled and knowledgeable employees have a higher chance of surpassing their income goals.

2.3.2 Information technology and revenue growth

Application of automated systems for revenue collection has been associated with reducing redundancy, dramatically increasing collections, and standardizing the collection process. These benefits address issues of tax avoidance and evasion, errors in taxpayer payments and tax return details brought on by manual processing of returns as well as lengthy lines experienced when filing tax returns at Kenya Revenue Authority offices (KRA, 2018).

A study by Nyoka, Salifu, and Laar (2023) observed that the Kassena-Nankana Municipal Assembly (KNMA) of Ghana had overcome the difficulties of manual revenue collection methods by creating an electronic payment (E-payment) system to improve revenue mobilization. The study's results demonstrated how electronic payment systems can revolutionize revenue collection procedures by making them more effective and user-friendly. In order to improve local tax collection and management in Ugandan local governments, the United Nations Capital Development Fund (2021) introduced the Integrated tax Administration System (IRAS). The effort was designed to solve issues that had historically impeded local revenue mobilization, insufficient resources and manual tax collection procedures. Adoption of IRAS increased local income collection and reduced reliance on transfers from the federal government.

In Kenyan context, study by Ahmed (2023) established the connection between Kenya Revenue Authority revenue collection and automation. Increased variability in revenue returns following the deployment of iTax suggests a more dynamic revenue collecting environment after automation. Average quarterly revenue collection was positively impacted both during and after the iTax deployment phase. Study recommended that the Kenya Revenue Authority concentrate on encouraging taxpayer to adopt iTax in order to maintain and improve revenue growth. This involves putting in place marketing campaigns and training programs to motivate more taxpayers to make efficient use of the automated system. Henry, J. O., and Bogonko, J. (2018) also investigated implementation of automated systems effects on efficiency of revenue collection in Nakuru County. The results indicated increased efficiency and effectiveness in revenue collection. Chemutai, S., Miroga, D. J., and Juma, (2024) conducted a study on `Lake Region Economic Bloc's digital tax filing and revenue collection among county governments`. The findings highlighted the need for a variety of strategies to improve revenue collection in Kenyan county governments. Investing in the skills of tax collecting staff, involving the public in budgeting procedures, embracing implementing technology solutions, and bolstering institutional capabilities were found to be important tactics.

2.3.3 Revenue growth

Globally, the ability of local governments to maintain their financial stability is understood to be of utmost significance in guaranteeing that public services delivery to present and future generations. Although many countries have implemented programmes to enhance their financial sustainability, local authorities are characterized by differing administrative traditions and achieve diverse outcomes in response to the reforms made (Smith, 2017). Institutional, policies, administration, macroeconomic and microeconomic factors influence local authorities' financial sustainability in England and Spain (Rodríguez Bolívar, M. P., López-Subires, M. D., Alcaide Muñoz, L., & Navarro Galera, A, (2021). Revenue growth in any economy supports the government activities' smooth running by providing financial resources required for service delivery.

Local government revenue growth in countries like Rwanda and South Africa was found to be hampered by poorly defined tax bases, inadequate local government tax enforcement mechanisms, perceived corruption, poor administration and limited accountability. The studies further revealed that own-source revenue mobilization in East African countries was impeded by the general absence of voluntary compliance among taxpayers, weak relationships between tax policy and national development objectives, and difficulties with tax administration (Wawire,2020; IMF, 2019). According to Economic Community of West African States reports (ECOWAS, 2017) there has been large revenue growth through proper revenue administration. United Nations Economic Commission for Africa (2019) support, tax reforms and digitization of tax collection process. The study highlighted importance of expanding tax bases and utilizing digital technologies to improve compliance and collection, thus improving tax administration and boosting government incomes.

The Kenyan experience on digitization of revenue collection showed that majority of Counties fell short of their own-source revenue (OSR) collection goal, bringing in a total of Sh35.9 billion instead of the planned Sh60.4 billion for the fiscal year (ROK, 2022). According to National Treasury disclosures in the draft Budget Policy Document for 2023, only four (4) County Governments (Turkana, Migori, Lamu, and Vihiga) were able to collect more than hundred percent of their annual OSR target in the fiscal year. According to research released in June 2022 by the Commission on Revenue Allocation (CRA, 2022), County Governments can earn Sh215.6 billion annually, or six times what they actually collected during the previous fiscal year. The CRA assumes that use of automatic and cashless payment systems, as well as the counties' simplification of taxation and fee structure, will be able to stop leakages and improve the amount of taxes that they may collect.

III. RESEARCH METHODOLOGY

This study adopted a descriptive survey design to establish causal relationship between revenue collection and revenue growth in County Government of Marsabit. A sample of 106 employees comprising of chief officers, Directors, internal Auditors, Accountants, revenue officers and revenue clerks were the respondents in the study. A pilot study was conducted in Laisamis sub-county of Marsabit County which has similar tax environment to validate the reliability and validity of the data instrument as recommended by (Mugenda & Mugenda,2003). Data

was collected using open and close ended survey questionnaire and analyzed using Correlation, ANOVA and regression analysis.

IV. RESEARCH FINDINGS AND DISCUSSIONS

4.1 Staff competencies

The study sought the opinion of the respondents on the various aspects of staff competencies in relation to revenue growth as shown in 4.1

Table 4.1. Staff competencies and revenue growth in county government of marsabit

Staff Competencies	N	Mean	SD
The staff is supported by the Executives to perform their duties with diligence	106	3.88	0.752
The staff provide enough support to tax payers on how to pay the revenue on timely basis without delay	106	4.03	0.487
The front desk service is always available to provide any information to tax payers when necessary	106	2.54	1.205
Coordinated team work contributes to staff productivity	106	4.87	0.459
Good working relationship enhances, effective and efficient revenue collection hence revenue growth	106	4.36	0.572
Work experience among staffs helps in timely delivery of services	106	4.15	0.474
All staff are committed to work	106	4.48	0.918
Staff work under minimal supervision from their supervisors	106	2.95	1.396
Staff are well qualified in terms of experience	106	4.54	0.987
Staff are equipped with relevant training	106	4.53	0.886
Average Score		**4.03**	**0.814**

Responses on Staff Competencies and Revenue Growth in County Government of Marsabit questionnaires has standard deviation of 0.014 and a mean of 4.03 except for noticeable lower mean in front desk service (2.54) and Staff working under minimal supervision (2.95).

The research also sought to establish the key challenges related to staff competencies that affected revenue collection in the County Government of Marsabit as shown in **figure 4.1.**

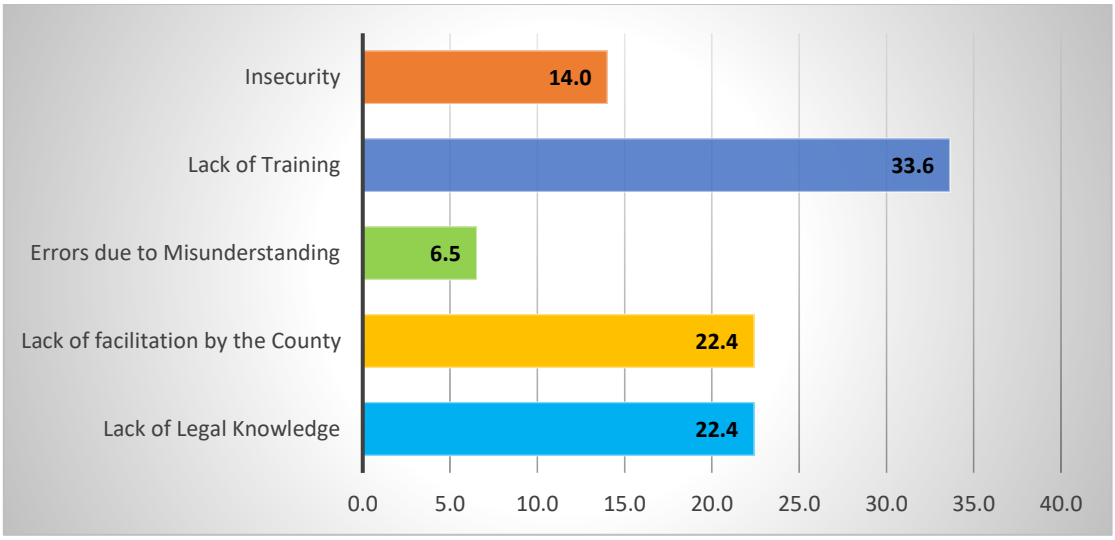

Figure 4.1: Challenges related to staff competencies that affect revenue collection

Majority (33.6%) of the respondents indicated that lack of training among the staff affects revenue collection closely followed by lack of facilitation (22.4%) and lack of legal knowledge22.4%). 6.5% of the respondents indicated that errors due to misunderstanding affected revenue collection in the county government of Marsabit.

4.2 Information technology

The study sought the opinion of the respondents on the various aspects of information technology in relation to revenue growth as shown in 4.2

Table 4.2 Information technology and revenue growth in County Government of Marsabit.

Information Technology	N	Mean	SD
Availability of Internet infrastructure	106	4.92	0.341
Automation of the county revenue collection systems	106	4.79	0.511
Adequacy of internet services are available	106	4.60	0.699
Knowledge to work with information technology equipment	106	4.61	0.670

Current and up-to-date information technology equipment for revenue collection	106	4.61	0.711
Automation for making the work convenient and easy	106	4.75	0.553
Reducing revenue leakages through automation	106	4.75	0.659
Revenue reports preparation and submission using information technology	106	4.79	0.597
Use of information technology to provide accurate revenue data	106	4.76	0.670
Use of Information technology to increase efficiency of revenue collection	106	4.69	0.785
Average Score		**4.73**	**0.619**

Majority of the respondents affirmed that the county government uses information technology to increase efficiency of revenue collection and this accounted to a mean of 4.69 and a standard deviation of 0.785. There is general tendency towards consensus from respondents regarding various uses of information technology in the functions of revenue collection and administration.

Following are the common methods of revenue collections within the county government of Marsabit during the time of the study as shown in figure 4. 2.

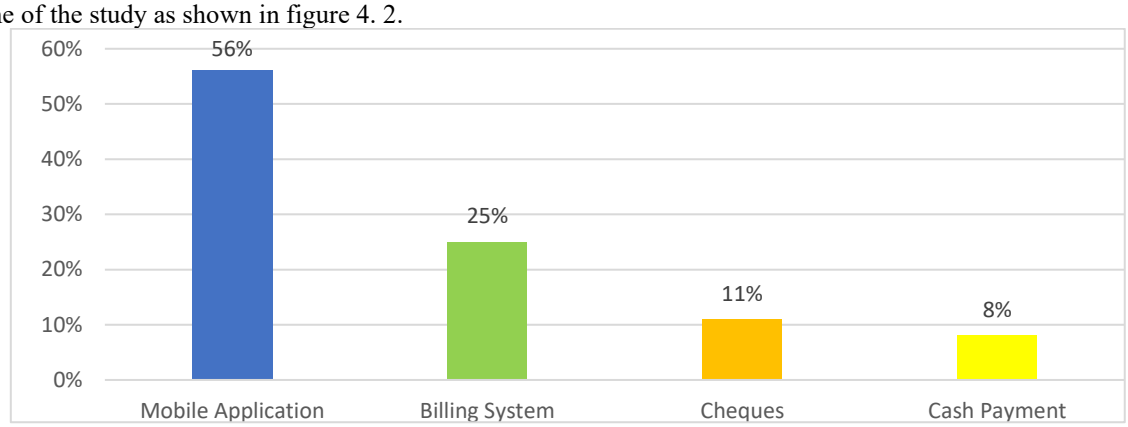

Figure 4.2: Methods of revenue collection within County Government of Marsabit

The study showed that mobile application is widely used in the county and this accounted to 56% with billing system accounting for 25%. Use of Cheques and cash registered 11% and 8% respectively

4.2 Inferential statistics

4.2.1 Correlation analysis

Sekaran (2010) and (Saunders et al., 2009) posits that correlation is a measure of the degree of relatedness of variables. Application of Pearson product moment correlation to compute bivariate correlation values of staff competencies and information technology use in this study gave following result as shown in Table 4.3 and table 4.4

Table 4.3: Pearson product moment correlation on staff competence and revenue growth

Variable		Staff Competence	Revenue Growth
Staff Competence	Pearson Correlation	1	**0.615****
	Sig. (2-tailed)		0.000
	N	106	106
Revenue Growth	Pearson Correlation	**0.615****	1
	Sig. (2-tailed)	.000	
	N	106	106

The results show that the correlation between staff competence and revenue growth had strong correlation (**r** = 0.615, p = 0.000, 95% confidence levels).

Table 4.4: Pearson product moment correlation on information technology use and revenue growth

Variable		Information Technology	Revenue Growth
Information Technology	Pearson Correlation	1	**0.809****
	Sig. (2-tailed)		.000
	N	106	106
Revenue Growth	Pearson Correlation	**0.809****	1
	Sig. (2-tailed)	.000	
	N	106	106

Correlation between information technology use and revenue growth was strong (r= 0.809, p= 0.000, 95% confidence levels).

4.2.2 Regression analysis

The study adopted the following linear regression model

$RG_{i\,t}=\beta 0+\beta_1 SC_{it}+\beta_2 IT_{it}+\beta_3 IC_{it}+\varepsilon$

Where;

β0=Constant

RG=Revenue Growth

SC=Staff Competencies

IT=Information Technology

ε= Error term (the residual error of the regression)

4.2.3 Staff competencies and revenue growth

Linear regression analysis model was conducted to ascertain the relationship between the revenue growth (dependent variable) and staff competencies (independent variable) and findings were presented in the table 4.5.

Table 4.5: Model Summary on Staff Competence and Revenue Growth

8Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	**0.615**[a]	**0.378**	**0.372**	**0.398**
a. Predictors: (Constant), Staff Competences				

The correlation of coefficient (R) was 0.615, the coefficient of determination (R^2) was 0.378 and the adjusted R square was 0.372. Therefore, correlation of coefficient showed that staff competences accounted to 61.5% of variations on revenue growth. Further, the correlation of determination showed that the independent variable accounted to 37.8% of variations on revenue growth. Lastly, the adjusted R square denoted that the explanatory variable accounted to 39.8% of variations on revenue growth in the county government of Marsabit, Kenya.

Table 4.6: Analysis of Variance on Staff Competence and Revenue Growth

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.023	1	10.023	63.263	0.000[b]
	Residual	16.477	104	0.158		
	Total	26.500	105			
a. Dependent Variable: Revenue Growth						
b. Predictor: (Constant), Staff Competences						

The regression results of the analysis of variance (ANOVA) showed an F-statistic of 63.263 which was significant at 5% significance level (p-value 0.000<0.05). Therefore, the null hypothesis $H_0$1: Staff competencies have no significant role on the revenue growth in the county Government of Marsabit was rejected and the study arrived at a conclusion that model summary of the predictor variable was significant at 5% significance level.

Table 4.7: Regression Analysis on Staff Competence and Revenue Growth

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	0.903	0.305		2.965	0.004
	Staff Competences	0.065	0.008	0.615	7.954	0.000
a. Dependent Variable: Revenue Growth						

The model summary results showed that regression equation $Y=\alpha+\beta 1X1+Ɛ$ translated to $Y=0.903+0.065X1+Ɛ$. This implied that holding all the factors constant, revenue growth had a constant of 0.903 implying that, there exist other explanatory variables that result to variations in revenue growth other than the study variable (staff competencies). The regression results indicated that staff competencies had a statistically significant effect on revenue growth (p-value 0.000<0.05). Holding other factors constant, a unit change in staff competencies would lead to change in revenue growth by 0.065. This implied that 1% change in staff competencies results to 6.5% change in revenue growth in county government of Marsabit, Kenya.

Therefore, this is in conformity with statement made by Elnaga & Imra, (2013) that Staff trainings help employees acquire technical knowledge and develop new abilities. The study also shows that work experience, team work and relevant trainings are key variable that affects staff competence. Lack of staff training that relate to staff skills, altitude and perception, facilitation and limited legal knowledge seem to pose major challenges to the revenue collection and administration function of the County (33.6%). In conclusion, staff skills, attitudes,

facilitation, and legal knowledge all essential for efficient tax collection and administration are greatly impacted by a lack of tax collection training. By filling in these training gaps, the County's revenue services can operate more effectively and efficiently.

A study by Akinyi, L. O (2020) on influence of Staff Competencies on Revenue Collection in Customs and Border Control Department of Busia Border Station established that there was a strong positive relationship between employee knowledge and skills, attitude and perception, and motivation on revenue collection. This observation concurred with the findings of the current study.

4.2 Automation and revenue growth

In order to establish the relationship between the revenue growth and information technology us, a linear regression analysis was conducted as shown in Table 4.8.

Table 4.8: Information Technology and Revenue Growth

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.809[a]	0.655	0.652	0.296

a. Predictors: (Constant), Information Technology

The result showed that information technology translated to 80.9% of variations on revenue growth. Further, the correlation of determination showed that the independent variable accounted to 65.5% of variations on revenue in the county government of Marsabit, Kenya.

Table 4.9: Analysis of Variance on Information Technology Use and Revenue Growth

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.365	1	17.365	197.700	0.000[b]
	Residual	9.135	104	0.088		
	Total	26.500	105			

a. Dependent Variable: Revenue Growth

b. Predictor: (Constant), Information Technology

The regression results of ANOVA indicated an F-statistic of 197.700 which was significant at 5% significance level (p-value 0.000<0.05). The null hypothesis $H_0$2: Automation of revenue collections has no significant effect on revenue growth in the county Government of Marsabit was therefore, rejected

Table 4.1: Regression Analysis on Information Technology and Revenue Growth

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	0.749	0.163		4.608	0.000
	Information Technology	0.058	0.004	0.809	14.061	0.000

a. Dependent Variable: Revenue Growth

The results of the study showed a regression equation $Y=\alpha+\beta 2X2+Ɛ$ that expounded to $Y=0.749+0.058X2+Ɛ$. This denoted that ceteris paribus, revenue growth had a constant of 0.749 implying that, there exist other independent variables that result to variations in revenue growth other than the study variable (information technology). The regression results showed that information technology had a statistically significant effect on revenue growth (p-value 0.000<0.05). Holding other factors constant, a unit change in information technology would lead to change in revenue growth by 0.058. This inferred that 1% change in information technology results to 5.8% change in revenue growth in county governments of Marsabit, Kenya. There is some concurrence between current study with other similar study conducted earlier on. Kibera, F.N. (2017), Effects of ICT Support Services on Revenue Collection by Kenya Revenue Authority; This study found that ICT support services significantly improved revenue collection efficiency at the Kenya Revenue Authority (KRA). The implementation of ICT systems led to better data management, reduced errors, and increased transparency, ultimately boosting revenue collection. Harriet Karimi, Kimani E. Maina, and Jesse Maina Kinyua (2017) while investigating `Effect of Technology and Information Systems on Revenue Collection by the County Government of Embu, Kenya` concluded that the adoption of technology and information systems positively impacted revenue collection in Embu County. It was further established that use information technology improved accuracy, reduced fraud, and enhanced overall efficiency in revenue collection (Phoebe Chemosop, P. C. 2019).

V. CONCLUSIONS AND RECOMMENDATIONS

The general findings from the descriptive and inferential statistics showed that staff competencies have a positive effect on revenue growth. Enhancing revenue collection is mostly dependent on the knowledge and abilities of employees. Revenue is also greatly influenced by motivation, attitude, and perception. Information communication technology (ICT) skills are the enablers that revenue staff should possess in order to increase the effectiveness of revenue collection. Based on the results, revenue collection automation ought to be taken into account in order to fully record revenue collecting transactions. The study found that revenue collection was significantly impacted by technology. Nonetheless, the study discovered that technology's accessibility and availability hampered efficient, ideal revenue collection. In addition, mobile applications and billing systems were found as most appropriate methods of revenue collections. Further, the county government need to invest in staff capacity building, timely facilitation of revenue collections teams and enhance staff knowledge on legal aspect relating to revenue collection and administration. It would be prudent for the county government to invest in digitalization of tax collection systems as well as employee training to optimize the use of technology for revenue collection.

REFERENCES

[1]. Adam, C. (2018). *Public finance management and county revenue performance in Kenya*. Kenya Institute for Public Policy Research and Analysis (KIPPRA). https://www.kippra.or.ke/public-finance-management-2018.

[2]. Adu, E. P., Buabeng, T., Asamoah, K., & Damoah, C. M. (2020). Digitization of local revenue collection in Ghana: An evaluation of Accra Metropolitan Assembly (AMA). Electronic Journal of Information Systems in Developing Countries, 86(1), e12112. https://doi.org/10.1002/isd2.12112 University of Ghana

[3]. Ahmed, S. E. (2023). *The relationship between automation and revenue collection by Kenya Revenue Authority* [Master's thesis, University of Nairobi]. University of Nairobi Repository. https://erepository.uonbi.ac.ke/handle/11295/166530

[4]. Akinyi, L. O. (2020). *Influence of staff competencies on revenue collection in Customs and Border Control Department of Busia Border Station* (Master's thesis, Kenyatta University). Kenyatta University Institutional Repository. Retrieved from http://ir-library.ku.ac.ke/handle/123456789/12345

[5]. Becker, G. S. (1964). *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*. University of Chicago Press.

[6]. Chemutai, S., Miroga, D. J., & Juma, D. D. (2024). Digital Tax Filing and Revenue Collection among County Governments under the Lake Region Economic Bloc. Journal of Economics, Management Sciences & Procurement, 3(1), 139–151. Retrieved from https://jemspro.org/index.php/pages/article/view/35.

[7]. Controller of Budget. (2018–2022). *County governments budget implementation review reports* [F/Y 2017/2018–2021/2022]. Office of the Controller of Budget. https://cob.go.ke/

[8]. Commission on Revenue Allocation. (2022, June). *Enhancing own source revenue potential for county governments in Kenya*. https://www.crakenya.org/enhancing-own-source-revenue-potential-for-county-governments-in-kenya/

[9]. Dhungana, R. K., & Acharya, K. K. (2021). Local government's tax practices from a cooperative federalism perspective. Nepal Public Policy Review.

[10]. Economic Community of West African States. (2017). *Revenue growth through proper revenue administration.* ECOWAS.

[11]. Elnaga, A., & Imran, A. (2013). The effect of training on employee performance. *European Journal of Business and Management, 5*(4), 137–147.

[12]. Fakhari, H., Ismail, S., Yussof, I., & Hassan, H. (2022). Staff competence, support services, and VAT collection performance: Evidence from Malaysia. *International Journal of Economics and Management, 16*(1), 23-40.

[13]. Fombad, C. M., & Steytler, N. (Eds.). (2019). *Decentralization and constitutionalism in Africa.* Oxford University Press.

[14]. Gathii, J. T., & Otieno, H. M. (2018). Assessing Kenya's cooperative model of devolution: A situation-specific analysis. *Federal Law Review, 46*(4), 611–640.

[15]. Henry, J. O., & Bogonko, J. (2018). Influence of automation on revenue collection by the county government of Nakuru, Kenya. International Journal of Economics, Commerce and Management, 6(5), 251-270.

[16]. International Monetary Fund. (2019). *Revenue mobilization in sub-Saharan Africa: Challenges from tax compliance*. IMF.

[17]. Jepkoech, J.,Tibbs,C. Y., & Tsuma, E.(2021). Relationship between revenue staff competence and revenue collection efficiency in Nandi County government Reviewed Journal of Financial Management, 2 (1), 10-22

[18]. Karimi, A., Smith, J., & Brown, L. (2017). The role of traditional paper in the modern economic system. Journal of Economic Perspectives, 35(4), 120-135.

[19]. Karimi, H., Maina, K. E., & Kinyua, J. M. (2017). *Effect of technology and information systems on revenue collection by the County Government of Embu, Kenya*. International Academic Journal of Information Sciences and Project Management, 2(1), 32–60.

[20]. Kenya Revenue Authority. (2018). *7th corporate plan: 2018/2019–2020/2021*. Kenya Revenue Authority. https://www.kra.go.ke

[21]. Kibera, F. N. (2017). *Effects of ICT support services on revenue collection by Kenya Revenue Authority* (Master's thesis). University of Nairobi. Retrieved from http://erepository.uonbi.ac.ke/handle/11295/102799.

[22]. Kithinji, J. G., Muturi, W., & Kibati, P. (2025). Revenue Systems Automation and Revenue Collection Performance of County Governments in Kenya. Reviewed Journal International of Financial Management

[23]. Kirer, G., Cheruiyot, P., Rop, W., & Langat, P. (2024). Competencies of revenue collectors and own source revenue targets achievement among selected county governments in Kenya. The Strategic Journal of Business & Change Management, 11(2), 454–461.

[24]. Majeed, A., Wumbei, A., & Abdulai, A. (2018). *The impact of training and development on employee performance: A case study of some selected banks in Ghana*. International Journal of Academic Research and Development, 3(1), 50–57

[25]. Mpofu, F. Y. (2022). Industry 4.0 in financial services: Mobile money taxes, revenue mobilization, financial inclusion, and the realization of sustainable development goals (SDGs) in Africa. Sustainability.

[26]. Mugenda, O. M., & Mugenda, A. G. (2003). Research methods: Quantitative and qualitative approaches. African Centre for Technology Studies.

[27]. Nama, K., Daweti, B., Lourens, M. E., & Chikukwa, T. (2022). The impact of training and development on employee performance and service delivery at a local municipality in South Africa. *Problems and Perspectives in Management, 20*(4), 42–51. https://doi.org/10.21511/ppm.20(4).2022.04

[28]. Ng'ang'a, P. N., Aduogo, P., & Mutero, C. M. (2021). Strengthening community and stakeholder participation in the implementation of integrated vector management for malaria control in western Kenya: A case study.

[29]. Nyoka, M. A., Salifu, A.-M. S., & Laar, D. S. (2023). An electronic payment system for revenue collection in the Kassena Nankana Municipality. Asian Journal of Research in Computer Science, 16(4), 428–437. https://doi.org/10.9734/ajrcos/2023/v16i4402 journalajrcos.com.

[30]. Pescador, M. R. B., & Caelian, M. V. (2022). Revenue generation program of cities: Implementation, effectiveness, challenges, and best practices.

[31]. Rodríguez Bolívar, M. P., López-Subires, M. D., Alcaide Muñoz, L., & Navarro Galera, A. (2021). The financial sustainability of local authorities in England and Spain: a comparative empirical study. International Review of Administrative Sciences, 87(1), 99–117. https://doi.org/10.1177/0020852319834721Riuma+1Cairn.info+1.

[32]. Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students* (5th ed.). Pearson Education Limited

[33]. Shams, B., Eslami, A., Shamsi, A., & Saeidi, M. (2020). Effect of training on the attitude and knowledge of teamwork among anesthesia and operating room nursing students: A quasi-experimental study.

[34]. Schultz, T. W. (1961). *Investment in human capital*. The American Economic Review, 51(1), 1–17.

[35]. Sekaran, U. (2010). *Research methods for business: A skill-building approach* (5th ed.). Wiley.

[36]. Sengupta, J., Banerjee, R., & Dutta, P. (2021). Revisiting revenue collection systems: Challenges, opportunities, and the need for systemic analysis. Journal of Public Administration and Policy Research, 13(2), 45–58. https://doi.org/10.5897/JPAPR2021.0553

[37]. Smith, J. (2017). *Financial sustainability reforms in local authorities: Administrative traditions and outcomes*. Oxford University Press.

[38]. Stubbs, T., Reinsberg, B., Kentikelenis, A., & King, L. (2020). Taxing the People, Not Trade: The International Monetary Fund and the Structure of Taxation in Developing Countries. *Studies in Comparative International Development*, 55(3), 278–304. https://doi.org/10.1007/s12116-020-09307-4

[39]. United Nations Economic Commission for Africa. (2019, March). *Tax Reform, Digitization Key to Financing Africa's Development – ECA Report.*

[40]. Sweeney, A., Weaven, S., Herington, C., & Soutar, G. N. (2019). *Multi-stakeholder learning and value creation in complex service systems: A skills-based perspective*. Journal of Service Theory and Practice, 29(4), 516–538. https://doi.org/10.1108/JSTP-09-2018-0203.

[41]. United Nations Capital Development Fund. (2021, April 13). Leveraging digital technologies for enhanced local revenue collection and management in local governments in Uganda. https://www.uncdf.org/article/6688/leveraging-digital-technologies-for-enhanced-local-revenue-collection-and-management-in-local-governments-in-ugandaUNCDF

[42]. Veblen, T. (1921). *The Engineers and the Price System*. New York: B. W. Huebsch.

[43]. Wawire, N. H. W. (2020). *Determinants of revenue performance in Kenya*. African Economic Research Consortium.