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Access to Credit and Training on Performance of Small and Medium Enterprises in Kenya: Evidence from Taita Taveta County

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ABSTRACT: Small and Medium Enterprises (SMEs) play a vital role in Kenya's economic growth, contributing significantly to employment creation and income generation. Despite this importance, the performance and sustainability of SMEs in many counties, including Taita Taveta, remain constrained by limited access to credit, inadequate business training, and weak internal business structures. This study examined the influence of county business training programs, access to credit, and business characteristics on the performance of SMEs in Taita Taveta County. The study adopted a descriptive research design and targeted 4,042 registered SMEs, from which 364 respondents were selected using stratified random sampling. Data were collected using structured questionnaires and analyzed using both descriptive and inferential statistics, including correlation analysis. The findings revealed that county business training programs have a significant positive effect on SME performance by enhancing managerial competence, financial management practices, and customer handling skills. Access to credit also demonstrated a strong and significant influence on SME growth, enabling enterprises to restock, expand operations, and improve sales output. Additionally, business characteristics such as size, age, and structure were found to moderate the relationship between training, credit access, and performance, with more established SMEs benefiting more from available support mechanisms. The regression model showed that the three variables jointly explained 87.7Percent of the variation in SME performance, indicating a strong predictive capacity. The study concluded that improving access to affordable credit, strengthening county training programs, and enhancing SME internal structures are critical for boosting performance. The findings provide valuable insights for both county and national governments in designing integrated SME support frameworks and contribute to the broader literature on enterprise development in Kenya. Several recommendations are proposed. First, there is a need to strengthen county training programs. Second, improving access to affordable credit by developing flexible and SME-friendly loan products. Third, the county should promote enterprise formalization and capacity building by supporting business registration drives. Additionally, the county government should strengthen monitoring and evaluation systems to track the effectiveness of training and credit. Finally, the study recommends the adoption of integrated SME support models that combine financial access, training, mentorship, and strategic advisory services.

KEYWORDS: Credit accessibility, Entrepreneurship training, Enterprise characteristics, Small business growth, Financial performance.

INTRODUCTION

Background of the Study

Small and Medium Enterprises (SMEs) are widely recognised as important drivers of employment creation, innovation, poverty reduction and inclusive economic development. Globally, SMEs constitute approximately 99% of business enterprises and provide about 70% of employment opportunities, demonstrating their importance in promoting economic and social well-being (OECD, 2016, 2017). Their contribution is especially significant in developing economies, where they create livelihoods and provide opportunities for individuals who may not be absorbed into formal employment. Nevertheless, SME growth and sustainability are frequently constrained by inadequate financing, limited managerial capabilities, unfavourable regulations, intense competition and rapidly changing economic conditions (Hallberg, 2000; Nabintu, 2013).

In Kenya, SMEs occupy a central position in the national development agenda because of their contribution to employment, household incomes and economic growth. The sector is recognised in Kenya Vision 2030 as an important mechanism for transforming Kenya into a competitive middle-income economy (Republic of Kenya, 2007). Its development is also supported by policy instruments such as Sessional Paper No. 2 of 2005 and the Micro and Small Enterprises Act, 2012, which address financing, skills development, taxation, technology and institutional support (Government of Kenya, 2005, 2013). Despite these interventions, many Kenyan SMEs continue to experience financial exclusion, inadequate working capital and limited access to business-development services.

The sustainability of SMEs remains a major policy concern. Between 2011 and 2015, approximately 2.2 million enterprises ceased operations, with an average closure age of 3.8 years. About 46% closed within their first year, while the proportion increased to 61% by the end of the second year. Financial exclusion and insufficient operating capital were identified among the major reasons for business closure (Republic of Kenya, 2012, 2016). The FinAccess Business Survey similarly established that access to financial services remained a major obstacle to SME growth (Financial Sector Deepening Kenya, 2013). These findings demonstrate that many SMEs lack the financial resources necessary to maintain operations, acquire productive assets and exploit market opportunities.

Access to affordable credit can strengthen SME performance by enabling enterprises to purchase stock, improve production, acquire assets, expand operations and manage short-term cash-flow difficulties. However, SMEs frequently encounter high interest rates, stringent collateral requirements, inadequate credit histories and complex lending procedures (Kauffmann, 2005; Kenya Bankers Association, 2019). Previous studies have generally established a positive relationship between financing and SME growth. Hussein (2017) found that external financing positively influenced SME growth in Langata Constituency, while Thuku (2017) reported a positive relationship between credit access and enterprise growth in Nyeri County. Similarly, Mbugua and Moronge (2016) established that capital financing significantly improved SME performance in Kiambu County.

The Government of Kenya has introduced various programmes to address SME financing constraints, including the Youth Enterprise Development Fund, Women Enterprise Fund and Uwezo Fund. These initiatives provide financing alternatives for entrepreneurs who may not satisfy conventional bank-lending requirements. County governments have also established enterprise funds and credit programmes intended to support local businesses. Nevertheless, the effectiveness of these initiatives may be limited when entrepreneurs receive inadequate amounts or lack the knowledge required to manage borrowed resources effectively.

Entrepreneurship training is therefore an essential complement to financial support. Training develops competencies in bookkeeping, financial management, marketing, inventory management, customer service and business planning. Entrepreneurship education can enhance the ability of enterprise owners to identify opportunities, allocate resources and respond effectively to market changes (O'Connor, 2012; Lewrick, 2011). Empirical evidence supports the contribution of training to enterprise performance. Idris et al. (2020) established a positive and significant relationship between training and SME performance, while Omolo (2015) found that training and development improved the performance of SMEs in Kisumu County. Mbugua and Moronge (2016) similarly reported that training positively influenced SME outcomes in Kiambu County.

The extent to which SMEs benefit from credit and training may depend on their individual characteristics. Enterprise size, age, sector, structure and location, together with the education and experience of the owner-manager, can influence business performance (Islam et al., 2011; Mothibi, 2015). Blackburn et al. (2013) identified enterprise size and age as important determinants of small-business performance. Education can strengthen the owner-manager's analytical and decision-making abilities, while experience supports effective resource allocation and business governance (Li-Jen et al., 2015; Zannah et al., 2017).

Taita Taveta County has approximately 4,042 registered and licensed businesses distributed across about 150 trading centres, with retail enterprises constituting the largest proportion. The County Government supports SMEs through credit facilities, training, grants and ward-based enterprise programmes. However, local enterprises continue to experience financing constraints, inadequate managerial knowledge, increasing operating costs, taxation and weak market demand. Accordingly, the study examined the influence of access to credit and county business training programmes on SME performance in Taita Taveta County while considering the contribution of business characteristics.

Statement of the Problem

Small and Medium Enterprises are recognised under Kenya Vision 2030 and Sessional Paper No. 2 of 2005 as important instruments for economic transformation, employment creation, income generation and national development. Government policies and programmes consequently emphasise the provision of appropriate financial services, entrepreneurship training and institutional support as essential conditions for SME growth. These interventions were expected to strengthen enterprise sustainability and increase the sector's contribution to economic growth. However, SME failure rates remain high despite the existence of these supportive frameworks and programmes.

Between 2011 and 2015, approximately 2.2 million enterprises in Kenya ceased operations, with the average enterprise closing after only 3.8 years. About 46% of the enterprises closed within their first year of operation. Financial exclusion, insufficient working capital, inadequate managerial capabilities and other operational challenges were identified among the major reasons for these closures. Taita Taveta County was also substantially affected, with the project reporting that approximately 48% of its businesses had closed. This situation raises concerns regarding the effectiveness of existing credit and training interventions in improving SME performance and sustainability.

Although the national and county governments have introduced credit facilities and business training programmes, many enterprises continue to experience limited access to affordable finance, restrictive lending requirements and inadequate business-management skills. Moreover, available support may not generate uniform outcomes because enterprises differ in terms of age, size, ownership structure, sector, location and managerial experience. Such characteristics may determine an enterprise's capacity to acquire, absorb and effectively utilise credit and training.

Previous studies have reported inconsistent findings regarding the influence of credit and training on SME performance. Some established positive effects, while others found weak or insignificant relationships. Several studies concentrated on microfinance and household welfare rather than enterprise performance, while others were undertaken in countries or counties with institutional and economic conditions different from those of Taita Taveta County. Studies conducted in Ghana, Cameroon, Poland, Kiambu, Kisumu, Nyeri and selected parts of Nairobi may therefore not be directly generalisable to SMEs in Taita Taveta County.

Methodological limitations were also evident in earlier studies, including narrow sectoral coverage, relatively small samples and insufficient consideration of relevant diagnostic tests. Additionally, few studies incorporated business characteristics as a moderating variable when examining credit, training and SME performance. Consequently, an empirical, contextual and methodological gap remained. This study addressed that gap by examining the influence of access to credit and county business training programmes on SME performance across Taita Taveta County and determining how business characteristics moderated these relationships.

Objective of the Study

The study was guided by three objectives:

i). To examine the influence of county business training programs on performance of small and medium enterprises in Taita Taveta County.

ii). To determine the effectiveness of access to credit on performance of small and medium enterprises in Taita Taveta County.

iii). To establish the moderating effects of business characteristics on the relationship between access to credit and training policy on performance of small and medium enterprises in Taita Taveta County, Kenya.

Research Questions

The study sought to answer the following research questions:

i). What is the effect of county training programs on performance of small and medium enterprises in Taita Taveta County, Kenya?

ii). What is the influence of access to credit on performance of SMEs in Taita Taveta County, Kenya?

iii). What are the moderating effects of business characteristics on performance of SMEs in Taita Taveta County, Kenya?

REVIEW OF LITERATURE

The study was anchored on the Theory of Fiscal Decentralisation, Theory of the Firm and Resource-Based Theory. Collectively, these theories explain the role of county government support, the performance objectives of SMEs and the contribution of resources and capabilities to enterprise competitiveness.

The Theory of Fiscal Decentralisation draws from Musgrave's (1959) conception of government's economic functions of allocation, distribution and stabilisation. The theory maintains that public services should be provided by the lowest level of government capable of delivering them efficiently because local authorities possess better information about community needs. Within Kenya's devolved governance system, county governments are therefore appropriately positioned to design and implement enterprise-support programmes. The theory supports county interventions involving credit provision, entrepreneurship training and business regulation because these services respond to local economic needs. Nevertheless, the effectiveness of decentralisation can be undermined by corruption, weak planning, bureaucracy and inadequate technical capacity. The theory consequently explains why similar county interventions may produce different outcomes depending on local institutional effectiveness.

The Theory of the Firm originates from classical and neoclassical contributions associated with Smith (1776), Knight (1921), Coase (1937) and subsequent scholars. It views a firm as an economic entity that organises inputs and outputs to maximise profit, increase production and minimise costs. In this study, SMEs were treated as firms seeking to improve their performance subject to constraints such as inadequate capital and limited managerial competence. Access to credit increases the resources available for purchasing inputs, expanding operations and exploiting market opportunities, while training improves managerial decision-making and resource utilisation. A limitation of the theory is its emphasis on profit maximisation, which may overlook non-financial dimensions of SME performance such as employment creation, customer growth, resilience and business continuity.

The Resource-Based Theory, advanced by Wernerfelt (1984), proposes that business performance and competitive advantage depend on the resources and capabilities controlled by an organisation. Because SMEs usually experience resource scarcity, they may obtain external resources to supplement their limited internal capacity. Credit provides the financial resources required to acquire stock, technology and productive assets, whereas training develops intangible capabilities such as financial literacy, managerial competence and marketing knowledge. The theory also suggests that business characteristics influence an enterprise's ability to deploy these resources effectively. Established firms with stronger structures and greater experience may derive more value from credit and training than younger enterprises. However, the theory gives inadequate attention to regulations, taxation, insecurity, competition and broader macroeconomic conditions.

Together, the three theories provide a complementary explanation of SME performance: fiscal decentralisation explains county-level interventions, the Theory of the Firm explains enterprise performance objectives, and Resource-Based Theory explains how financial and knowledge resources generate competitive outcomes.

Conceptually, this study proposes that SME performance is influenced by access to credit and county business training programmes. Access to credit was assessed through financing availability and its contribution to stock, sales, assets, employment and business expansion. Training was represented by improvements in managerial, financial and customer-management capabilities. SME performance was measured through profitability, sales growth, employment, customers, assets and branch expansion. Business characteristics moderated the relationships between the independent variables and SME performance.

Existing empirical literature identifies limited access to finance as one of the most persistent constraints affecting SME performance. Kenyan SMEs frequently depend on personal savings, relatives and costly short-term borrowing because formal financial institutions impose high interest rates, collateral requirements, transaction charges and credit-history conditions. Studies undertaken in Kenya and other developing economies have consistently identified insufficient financing as a barrier to business establishment, continuity and expansion.

Hussein (2017) established a positive relationship between access to external financing and SME growth in Langata Constituency. Similarly, Thuku (2017) found that credit access positively influenced SME growth in Nyeri County, although the study concentrated on agricultural enterprises. Mbugua and Moronge (2016) reported that capital financing had a positive and significant effect on SME performance in Kiambu County. Studies undertaken in South Africa and other contexts likewise identified financing constraints, limited collateral and restrictive lending practices as major barriers. However, the geographical and sectoral focus of these studies limits the generalisation of their findings to Taita Taveta County.

Evidence also demonstrates that entrepreneurship training can strengthen SME performance. Idris, Johnstone and Saridakis (2020) found a positive and significant relationship between training and SME performance in the United Kingdom. In Kenya, Mbugua and Moronge (2016) established that training positively affected enterprise performance, while Omolo (2015) associated training and development with improved SME performance in Kisumu County. Nevertheless, variations in research design, analytical methods and institutional settings created a need for context-specific evidence.

Business characteristics also influence enterprise outcomes. Previous studies identify age, gender, education, motivation, work experience and managerial competence as important determinants of SME performance. Education enhances literacy, numeracy and decision-making, while prior managerial and sectoral experience can improve resource utilisation and enterprise survival. However, findings concerning experience are inconsistent, with some studies reporting positive relationships and others finding no significant association.

Overall, the literature suggests that credit and training improve SME performance, but the evidence remains mixed and context-dependent. Few studies have examined these variables jointly while incorporating business characteristics as a moderator. Moreover, no sufficiently comprehensive study had addressed these relationships across Taita Taveta County, thereby establishing the empirical and contextual justification for the study.

CONCEPTUAL FRAMEWORK

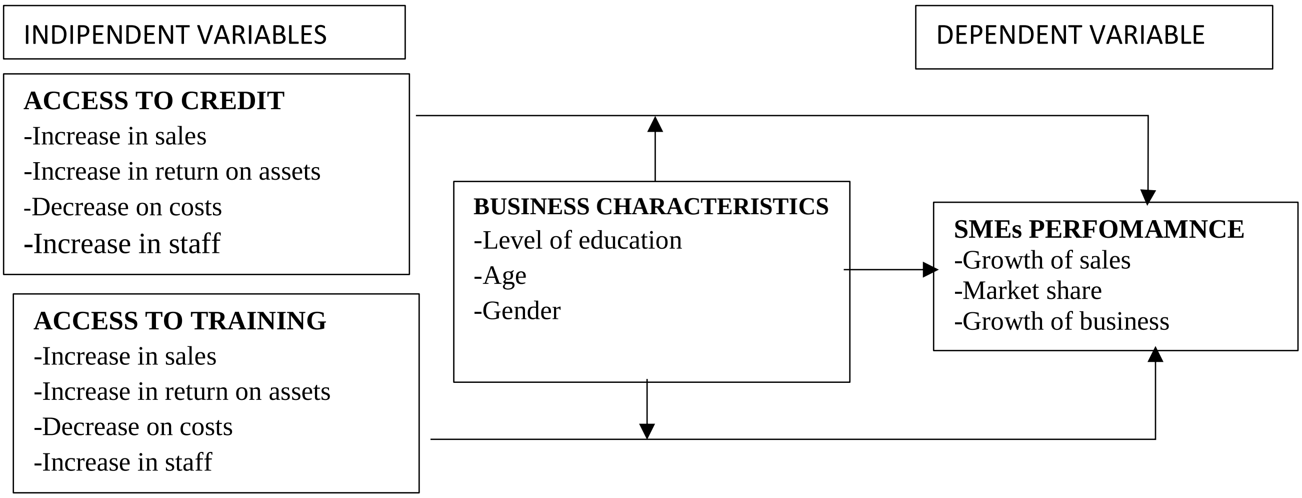

Figure 1: Conceptual Framework

MATERIALS AND METHODS

Research Design

The study adopted a descriptive research design to examine the relationships between access to credit, county business training programmes, business characteristics and SME performance in Taita Taveta County. The design facilitated systematic collection of quantitative data from respondents without manipulating the study variables and enabled the researcher to describe conditions and assess relationships among the variables.

Target Population and Sampling Technique

The study targeted 4,042 registered and licensed SMEs operating in Taita Taveta County. These enterprises constituted the population from which the findings were generalised. Stratified random sampling was employed to ensure that SMEs from the different business categories were adequately represented. The sample size was calculated using Kothari's formula at a 95% confidence level and a 5% margin of error. Based on the total target population, a sample of 364 SMEs was obtained. Stratification enhanced representation of the heterogeneous SME population, while random selection within each stratum minimised selection bias and provided every eligible enterprise with an opportunity to participate in the study.

Instrumentation and Data Collection Procedure

Primary data were collected using a structured questionnaire administered to the selected SME owners and managers. The instrument incorporated closed-ended questions measured on a five-point Likert scale to promote uniformity and facilitate quantitative analysis. Respondents were allowed adequate time to provide considered responses. Before the main survey, the questionnaire was piloted among 36 SME respondents in Kajiado County, representing approximately 10% of the sample. Kajiado County was selected because it shared characteristics with Taita Taveta County but was outside the study area. Expert review, pilot findings and validity tests were used to refine unclear items, while Cronbach's alpha confirmed that the instrument demonstrated satisfactory internal consistency.

Data analysis

Completed questionnaires were examined for errors, omissions, inconsistencies and incorrect entries before coding and analysis. Categorical responses were assigned numerical values, while related responses were grouped according to the study variables. Quantitative data were analysed using a statistical software package. Descriptive statistics, including frequencies, percentages, means, minimum and maximum values, and standard deviations, were used to summarise respondent characteristics and describe patterns in access to credit, county business training, business characteristics and SME performance. Inferential statistics were employed to establish relationships among the variables and generalise findings from the sample to the target population. Correlation analysis determined the direction and strength of associations, while regression analysis assessed the individual and combined influence of credit access, training programmes and business characteristics on SME performance. The analysis also established the moderating role of business characteristics in the relationships between credit, training and performance. Reliability was evaluated using Cronbach's alpha, while relevant diagnostic tests were undertaken to confirm that the data satisfied the assumptions required for statistical analysis. Findings were presented using tables and explanatory narratives.

Ethical Considerations

Ethical approval was obtained from the Taita Taveta University Ethics Review Committee. Participation was voluntary, and all respondents provided informed consent before taking part in the study. Participants' anonymity was protected through the use of unique identification codes, while the collected data were securely stored and accessible only to authorized persons. Throughout the data collection process, enumerators conducted themselves professionally and treated all respondents with dignity and respect.

RESULTS

A total of 364 questionnaires were issued to respondents, with 319 filled and returned. The returned questionnaires formed a response rate of 87.7% as shown in Table 1.

Table 1: Response Rate

Questionnaire	Frequency	Percent
Returned	319	87.7
Non returned	45	12.3
Total	**364**	**100.0**

Demographic Information Analysis

Table 2: Demographic Data

Variable	Category	Percentage
Gender	Male	58
	Female	42
Age	20–25 years	12
	26–30 years	25
	31–35 years	28
	36–40 years	20
	Above 40 years	15
Education Level	Secondary	30
	Diploma	35
	Bachelor's Degree	25
	Master's Degree	8
	Doctorate	2
Business Ownership Period	Less than 1 year	10
	1–5 years	45
	6–10 years	30
	Above 10 years	15

B. Business Characteristics

Variable	Category	Percentage
Business Type	Retail	74
	Wholesale	26
Business Category	Shop/Book shops	24
	Hotel	10
	Salon	8
	Grocer	18
	Bar & Restaurant	7
	Mitumba	5
	Matatu/Boda Boda	18

	Petrol Station	3
	Chemist/Agrovet	4
	Health Centre	1
	Others	2

C. Sources of Capital

Variable	**Category**	**Percentage**
Source of Capital	Own Savings	40
	Friends	8
	Shylocks	5
	SACCOs	11
	Mobile Loan	12
	County Support	8
	NGOs	3
	Bank	13
	Other	2

D. Access to County Business Support

Variable	**Category**	**Percentage**
Access to Credit	Yes	57
Access to Credit	No	43
	Ksh. 2,000–5,000	12
	Ksh. 6,000–10,000	20
	Ksh. 11,000–15,000	18
	Ksh. 16,000–20,000	15
	Ksh. 21,000–25,000	10
	Ksh. 26,000–30,000	8
	Ksh. 31,000–35,000	6
	Ksh. 36,000–40,000	5
	Ksh. 41,000–45,000	3
	Ksh. 46,000–50,000	2
	Above 51,000	1

E. Effects of County Credit Support

Variable	Category	Percentage
Effect of Credit	Increased profits	35
	Added stock	28
	Increased sales volume	20
	Hired more employees	10
	Opened branches	7

Key Findings

The descriptive analysis demonstrated that access to credit positively contributed to several dimensions of SME performance. Overall, 57% of the respondents had accessed credit, while 43% had not. However, most beneficiaries received relatively small amounts. The most common credit range was KSh. 6,000–10,000 (20%), followed by KSh. 11,000–15,000 (18%) and KSh. 16,000–20,000 (15%). Only a small proportion accessed amounts exceeding KSh. 40,000, suggesting that many SMEs continued to operate with limited external financing.

Regarding the effects of credit, 35% of respondents reported increased profits, 28% used the funds to increase stock, and 20% experienced improved sales volumes. Credit contributed most strongly to increased sales (M = 3.65, SD = 1.02), customer growth (M = 3.62, SD = 0.98), increased sales volume (M = 3.57, SD = 1.04), improved returns on assets (M = 3.40, SD = 1.10), and increased stock (M = 3.38, SD = 1.08). Its contribution to employment growth (M = 2.93, SD = 1.18) and the opening of new branches (M = 2.65, SD = 1.20) was comparatively limited.

County business training programmes also produced generally positive operational outcomes. Training contributed most strongly to increased sales (M = 3.60, SD = 1.08), customer growth (M = 3.60, SD = 0.99), and increased sales volume (M = 3.56, SD = 1.05). It also supported improved returns on assets and increased stock, both recording a mean of 3.36. Cost reduction received a moderate assessment (M = 3.29, SD = 1.14). However, training had relatively weaker effects on staff expansion (M = 2.98, SD = 1.19) and opening new branches (M = 2.68, SD = 1.21).
Overall, credit and training mainly enhanced the immediate operational performance of SMEs through increased sales, customers, stock and profitability. Their contribution to longer-term structural growth, particularly employment creation and geographical expansion, remained modest..

Table 3: Access to Credit and Performance of SMEs

Credit Impact	Strongly Disagree	Disagree	Moderately Agree	Agree	Strongly Agree	Mean	Std. Dev.
Increase in sales	5.9%	9.4%	21.3%	40.7%	22.7%	3.65	1.02
Increase in return on assets	8.1%	12.5%	28.0%	34.2%	17.2%	3.40	1.10
Reduction of costs	7.5%	17.0%	25.7%	33.9%	15.9%	3.33	1.12
Increase in staff	13.4%	23.1%	31.0%	21.6%	10.9%	2.93	1.18
Open new branches	19.8%	28.6%	25.9%	17.7%	8.0%	2.65	1.20
Increase in stock	6.8%	15.1%	27.9%	33.6%	16.7%	3.38	1.08
Increase in sales volume	6.3%	10.7%	23.6%	38.5%	20.9%	3.57	1.04
Increase in customers	5.2%	9.5%	24.8%	39.3%	21.1%	3.62	0.98

Table 4: Access to Training and Performance of SMEs Frequencies

Training Effect	Strongly Disagree	Disagree	Moderately Agree	Agree	Strongly Agree	Mean	Std. Dev.
Increase in sales	6.5%	10.2%	22.4%	38.9%	22.0%	3.60	1.08
Increase in return on assets	9.3%	12.7%	27.6%	32.9%	17.5%	3.36	1.12
Reduction of costs	8.7%	18.1%	25.1%	31.4%	16.7%	3.29	1.14
Increase in staff	12.3%	22.7%	30.6%	23.4%	11.0%	2.98	1.19
Open new branches	18.7%	29.4%	26.3%	17.0%	8.6%	2.68	1.21
Increase in stock	7.9%	14.8%	27.0%	34.1%	16.2%	3.36	1.10
Increase in sales volume	6.2%	11.4%	22.9%	39.1%	20.4%	3.56	1.05
Increase in customers	5.7%	9.8%	24.5%	40.0%	20.0%	3.60	0.99

Correlation Analysis

Correlation analysis was conducted to determine whether a statistically significant relationship existed between the performance of SMEs (dependent variable) and the three independent variables, namely county business training programs, access to credit, and business characteristics as the moderating factor. This analysis was guided by contemporary methodological recommendations, which emphasize the use of correlation as an essential preliminary step prior to conducting predictive modelling to establish the strength and direction of associations among variables (Hair et al., 2022; Saunders, Lewis & Thornhill, 2023).

Table 5: Correlation Matrix for Study Variables

	Y	X1	X2	X3
SME Performance (Y)	1	.653**	.763**	.800**
Access to Credit (X1)	.653**	1	.598**	.780**
Training Programs (X2)	.763**	.598**	1	.872**
Business Characteristics (M)	.800**	.780**	.872**	1

The correlation results presented in the matrix indicate strong and statistically significant relationships among all the study variables at the 0.01 significance level. SME performance shows a positive and strong correlation with access to credit (r = 0.653), suggesting that increased access to financial resources is associated with improved business outcomes such as growth, profitability, and operational expansion. This aligns with recent empirical findings that highlight credit availability as a central driver of SME performance in developing economies (Mwangi & Wanjiru, 2023).
Similarly, SME performance also demonstrates a strong positive relationship with county business training programs (r = 0.763). This implies that training interventions offered by the county significantly contribute to improved managerial skills, customer service, financial literacy, and overall enterprise efficiency. These results are consistent with contemporary literature which emphasizes that structured entrepreneurship training enhances business survival and competitiveness (Mensah, 2024).
The strongest correlation exists between SME performance and business characteristics (r = 0.800), indicating that internal attributes of an enterprise such as size, sector, years in operation, ownership structure, and managerial capacity play a key role in determining performance levels. This finding supports recent studies which show that firm-specific characteristics significantly influence growth trajectories and capacity to leverage external support such as credit and training (Irungu, 2024).

The relationships among the independent variables are also notably strong. Access to credit correlates positively with both training programs (r = 0.598) and business characteristics (r = 0.780), implying that SMEs with better structural characteristics and training exposure are more likely to access financial services. Likewise, training programs show a very strong correlation with business characteristics (r = 0.872), suggesting that enterprises with more established structures and operational experience actively take advantage of capacity-building programs. Collectively, these correlations indicate that the independent variables are mutually reinforcing and collectively enhance SME performance.

Overall, the correlation analysis reveals a network of strong positive associations among SME performance, access to credit, training programs, and business characteristics, confirming that these variables are interconnected and jointly contribute to the growth and sustainability of SMEs in Taita Taveta County.

Regression Analysis

The model summary results indicate a strong relationship between the predictor variables and the performance of SMEs in Taita Taveta County. The multiple correlation coefficient was R = 0.936, demonstrating a very strong positive association between access to credit, county training programmes, business characteristics and SME performance. The coefficient of determination was $R^2 = 0.877$, implying that the predictors jointly explained 87.7% of the variation in SME performance. The remaining 12.3% was attributable to other factors not included in the model, such as market conditions, competition, technological capabilities, government regulations and managerial practices. The adjusted coefficient of determination was 0.868, indicating that the model explained approximately 86.8% of the variation in SME performance after adjusting for sample size and the number of predictors. The small difference between the R^2 and adjusted R^2 values suggests that the predictors made meaningful contributions to the model and that there was limited inflation in explanatory power. Furthermore, the standard error of the estimate was 0.033767, indicating a relatively small average discrepancy between the observed and predicted SME performance values. Overall, the results demonstrate that the model possessed strong explanatory and predictive power in accounting for differences in SME performance.

The model summary results are presented in Table 6.

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.936	.877	.868	.033767

Table 7: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.233	4	.308	513.33	.000
	Residual	.173	314	.0006		
	Total	1.406	318			

The analysis of variance results assessed whether the regression model provided a statistically significant explanation of SME performance. The model recorded a regression sum of squares of 1.233, compared with a residual sum of squares of 0.173 and a total sum of squares of 1.406. These results show that a substantial proportion of the total variation in SME performance was accounted for by the predictor variables, while only a relatively small proportion remained unexplained. The reported F-statistic was 513.33, with a significance value of $p < 0.001$. Since this probability value was below the conventional 0.05 significance level, the null hypothesis that the regression coefficients were jointly equal to zero was rejected. Consequently, access to credit, county training programmes and business characteristics collectively provided a statistically significant prediction of SME performance in Taita Taveta County. The findings therefore support the suitability of the regression model for explaining performance variations among the surveyed enterprises. They further demonstrate that SME performance is better explained by considering financial access, entrepreneurial capacity-building and enterprise characteristics jointly rather than separately. However, the reported regression degrees of freedom were four, whereas the coefficients table presented three predictors. The ANOVA degrees of freedom and mean-square values should therefore be verified and reconciled before journal publication to ensure consistency across the regression outputs.

Table 8: Regression Coefficient Results

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	1.347	0.258		5.221	.000
Access to Credit	0.347	0.103	0.439	3.369	.001
Training Programs	0.196	0.077	0.226	2.545	.011
Business Characteristics	0.338	0.138	0.402	2.449	.018

The regression coefficients indicate that all three predictor variables had positive and statistically significant effects on SME performance. The estimated regression equation was:

$$\boldsymbol{Y = 1.347 + 0.347X_1 + 0.196X_2 + 0.338M}$$

Where; Y represents SME performance, X_1 access to credit, X_2 training programmes and M, business characteristics. The constant was positive and significant ($B = 1.347$, $t = 5.221$, $p < 0.001$), representing the predicted performance level when all predictors were held constant.

Access to credit had a positive and significant effect ($B = 0.347$, $\beta = 0.439$, $t = 3.369$, $p = 0.001$). Thus, a one-unit increase in credit access was associated with a 0.347-unit improvement in SME performance, holding other variables constant. Training programmes also positively and significantly influenced performance ($B = 0.196$, $\beta = 0.226$, $t = 2.545$, $p = 0.011$). Business characteristics similarly had a significant positive effect ($B = 0.338$, $\beta = 0.402$, $t = 2.449$, $p = 0.018$). Based on the standardised coefficients, access to credit was the strongest predictor, followed by business characteristics and training programmes.

Interpretation of Findings

The findings indicate that access to credit, county business training programmes and business characteristics significantly enhanced SME performance in Taita Taveta County. Access to credit emerged as the strongest predictor, confirming that financing enables enterprises to purchase stock, increase sales, attract customers and improve profitability. This finding supports Hussein (2017), Thuku (2017), and Mbugua and Moronge (2016), who established positive relationships between credit access and SME growth. However, the limited effects on employment and branch expansion suggest that the amounts accessed were insufficient to facilitate substantial long-term growth.

Training programmes improved financial management, marketing, customer service and entrepreneurial decision-making, consistent with the findings of Omolo (2015) and Idris et al. (2020). Business characteristics also significantly influenced performance, supporting Blackburn et al. (2013) and Mothibi (2015), who identified enterprise age, size and managerial experience as important performance determinants. Overall, the findings affirm Resource-Based Theory by demonstrating that financial resources and managerial capabilities jointly strengthen competitiveness and performance (Wernerfelt, 1984). Sustainable SME development therefore requires integrated credit, training and enterprise-capacity interventions.

Practical Implications

The findings provide practical guidance to county governments, financial institutions and SME owners. The County Government of Taita Taveta should integrate affordable credit, practical business training, mentorship and market-linkage services within its enterprise-development programmes. Financial institutions, SACCOs and microfinance providers should develop flexible loan products with simplified application procedures, reasonable interest rates and repayment terms aligned with SME cash flows. Training should emphasise bookkeeping, financial literacy, digital marketing, inventory management, taxation and customer relations. Follow-up mentorship should be provided to ensure that entrepreneurs apply acquired knowledge. SME owners should maintain reliable financial records, formalise their enterprises and strengthen internal management systems to improve creditworthiness and resource utilisation. Specialised assistance should target young and small enterprises because their limited structures may restrict their ability to benefit from credit and training interventions.

Theoretical Implications

The findings support the Theory of Fiscal Decentralisation by demonstrating that county-level credit and training interventions can improve local enterprise performance. County governments are suitably positioned to identify and address the financial and capacity-building needs of SMEs within their jurisdictions. The results also support the Theory of the Firm because access to finance and managerial knowledge enabled enterprises to increase sales, control costs and improve profitability. Furthermore, the findings reinforce Resource-Based Theory by showing that financial resources and entrepreneurial capabilities are important sources of competitiveness and improved performance. Business characteristics influenced enterprises' capacity to deploy these resources effectively. However, the study demonstrates that financial resources alone are insufficient. Sustainable SME performance requires the complementary interaction of credit, managerial knowledge, experience and appropriate organisational structures, thereby extending the practical application of the theories.

Limitations of the Descriptive Analysis

The descriptive analysis summarised respondents' perceptions using frequencies, percentages, means and standard deviations, but it could not establish causal relationships between credit, training and SME performance. Because the findings were based on self-reported questionnaire responses, they may have been affected by recall errors, social desirability and subjective assessments of business performance. The use of cross-sectional data captured enterprise conditions at one point and could not reveal changes over time. Moreover, reliance on perceived performance measures rather than audited financial records may have reduced measurement precision. Mean scores may also conceal variations among business sectors, locations, sizes and ages. Consequently, the descriptive findings should be interpreted as general patterns and supplemented with inferential and longitudinal analysis.

CONCLUSIONS AND RECOMMENDATIONS

The study concluded that access to credit, county business training programmes and business characteristics are important determinants of SME performance in Taita Taveta County. Collectively, these factors explained a substantial proportion of the variation in enterprise performance, demonstrating that SME development requires an integrated combination of financial support, entrepreneurial capacity-building and favourable internal business conditions.

Access to credit emerged as the strongest predictor of SME performance. Adequate and timely financing enabled enterprises to purchase additional stock, increase sales, improve profitability, acquire productive assets and expand their customer bases. However, the relatively small amounts accessed by most respondents limited the contribution of credit to employment creation and the establishment of new branches. The study therefore concludes that financial access improves immediate operational performance, but meaningful long-term expansion requires adequate, affordable and appropriately structured financing.

County business training programmes also significantly enhanced SME performance. Training strengthened entrepreneurs' competencies in financial management, bookkeeping, marketing, customer relations, inventory management and business decision-making. Nevertheless, its comparatively modest effect on employment and branch expansion indicates that training should be accompanied by mentorship, financing and continued technical support. Business characteristics, including enterprise age, size, structure and owner-manager experience, also influenced performance by shaping the ability of firms to absorb and utilise credit and training effectively.

The study recommends that the County Government of Taita Taveta strengthen its business training programmes by increasing their frequency, accessibility and practical relevance. Training should prioritise financial literacy, digital marketing, record keeping, customer management, innovation, taxation and business continuity planning. Structured mentorship and post-training follow-up should be incorporated to support the practical application of acquired knowledge.

Financial institutions, SACCOs, microfinance institutions, fintech lenders and government enterprise funds should develop affordable and flexible credit products tailored to SMEs. Lending procedures should be simplified, repayment periods aligned with business cash flows and alternative credit-assessment mechanisms adopted for enterprises lacking conventional collateral.

The County Government should increase allocations to enterprise-support funds while strengthening transparency, monitoring and evaluation to ensure that resources reach eligible businesses and generate measurable outcomes. Enterprise formalisation should also be encouraged through simplified registration, tax education and advisory support. Finally, policymakers should adopt an integrated SME-support framework that combines credit, training, mentorship, market linkages and strategic business advisory services. Special assistance should be provided to younger, smaller and less-structured enterprises because they may lack the capacity to benefit fully from existing interventions.

Future Research Directions

Future studies should compare several counties to establish whether the effects of credit access and business training on SME performance vary across geographical, institutional and economic contexts. Longitudinal research is also recommended to determine whether improvements in sales, profitability, employment and enterprise survival persist over time. Further studies should examine the contribution of digital financial services, mobile lending, financial technology and digital literacy to SME financing and performance. Researchers could also investigate gender differences in access to credit and training to establish whether women-owned and men-owned enterprises encounter distinct barriers or realise different outcomes. Impact evaluations of county enterprise funds and training programmes would provide evidence regarding their efficiency, inclusiveness and sustainability. Future research should test the moderating role of business characteristics using explicit interaction terms or hierarchical regression analysis. Additional variables, including entrepreneurial orientation, innovation capability, market access, competition, regulatory conditions and economic turbulence, should also be examined to explain the proportion of SME performance not accounted for in the present study.

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ETHICAL DECLARATIONS

Funding: This study received no external funding.

Conflict of Interest: The authors declare that they have no competing interests.

Data Availability: The data supporting the findings of this study may be obtained from the corresponding author upon reasonable request.

Ethical Approval and Informed Consent: Ethical approval was obtained from Taita Taveta University. All participants voluntarily provided informed consent before participating in the study.

RECOGNITIONS OF THE AUTHOR CONTRIBUTION

Vincent Onyinge Ogola - Conceptualization, methodology, data collection, data analysis, writing.

Maurice Juma Ogada - Supervision, refining methodology, reviewing and editing.

Rehema Swalehe - Supervision, validation, editing and reviewing.

DATA AVAILABILITY

The complete dataset is not publicly accessible due to confidentiality requirements. However, anonymised data and related supporting materials may be obtained from the corresponding author upon reasonable request.

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