



RESEARCH ARTICLE

MODERATING EFFECT OF CUSTOMER SATISFACTION ON THE RELATIONSHIP BETWEEN INFORMAL SECTOR EMPLOYEES AND FOOD PROCESSING SMES PERFORMANCE IN KAKAMEGA COUNTY, KENYA

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ABSTRACT

Purpose: This study examines the moderating effect of customer satisfaction on the relationship between informal sector employee dynamics and the performance of food processing Small and Medium Enterprises (SMEs) in Kakamega County, Kenya. **Methodology:** The study adopted a cross-sectional correlational survey design. The target population comprised 68,420 informal sector employees working within food processing SMEs across Kakamega County. A sample of 384 respondents was drawn using Krejcie and Morgan's (1970) formula, with stratified random sampling employed to ensure representation across the county's twelve sub-counties. Data were collected using structured questionnaires and analyzed using SPSS Version 27 with Hayes' PROCESS macro (Model 1) for moderation analysis. **Findings:** The results revealed that informal sector employee dynamics (skills development, job security perception, and workplace conditions) significantly predict food processing SME performance ($\beta = 0.342, p < 0.001$). Customer satisfaction significantly moderates this relationship ($\Delta R^2 = 0.047, p < 0.01$), with the interaction effect accounting for 4.7% of the variance in SME performance. The conditional effect of employee dynamics on performance strengthens as customer satisfaction increases, indicating that customer satisfaction amplifies the positive impact of effective employee management. **Practical Implications:** Food processing SME owners in Kakamega County should invest in both employee welfare and customer satisfaction simultaneously, as their interaction produces superior performance outcomes. County government policies should support integrated approaches to SME development that address both internal (employee) and external (customer) stakeholders. **Value:** This is the first study to examine the moderating role of customer satisfaction in the informal sector employee-performance nexus within Kenya's food processing subsector, providing novel insights for theory and practice in the 2026 context of devolved economic development.

INTRODUCTION

Background of the Study: The informal sector constitutes the backbone of Kenya's economy, employing approximately 83.6% of the total workforce and contributing significantly to the Gross Domestic Product. (Kenya National Bureau of Statistics, 2025). Within this sector, food processing Small and Medium Enterprises (SMEs) play a particularly crucial role in addressing food security, creating employment, and stimulating local economic development, especially in agrarian counties such as Kakamega (Ministry of Cooperatives and MSME Development, 2025). Kakamega County, located in Western Kenya, has emerged as a hub for food processing SMEs, leveraging its agricultural productivity in maize, cassava, groundnuts, sorghum, and indigenous vegetables. The Kakamega County Integrated Development Plan (2023-2027) identifies food processing as a priority value chain with potential for employment creation and poverty reduction. However, despite this potential, many food processing SMEs struggle to achieve sustainable performance, with approximately 65% failing within their first three years of operation (County Government of Kakamega, 2025). Statement of the Problem: The performance challenges facing food processing SMEs in Kakamega County have been attributed to multiple factors, including limited access to finance, inadequate infrastructure, and market competition. However, two critical but underexplored factors are the dynamics of informal sector employees and the level of customer satisfaction. Informal sector employees in food processing SMEs typically operate without formal contracts, social protection, or structured skill development opportunities (International Labour Organization, 2024). This informality creates challenges in employee motivation, productivity, and retention, which ultimately affect enterprise performance. Simultaneously,

customer satisfaction—the extent to which customers perceive that their needs and expectations are met—has been shown to influence loyalty, repeat business, and positive word-of-mouth (Anderson et al., 2023). While previous studies have examined the direct effects of employee management and customer satisfaction on SME performance, limited research has explored how these two factors interact. Specifically, does customer satisfaction strengthen or weaken the relationship between informal sector employee dynamics and enterprise performance? This question is particularly relevant in Kakamega County, where food processing SMEs operate in close-knit communities where employee-customer interactions are frequent and personal.

RESEARCH OBJECTIVES

The main objective of this study was to examine the moderating effect of customer satisfaction on the relationship between informal sector employee dynamics and food processing SME performance in Kakamega County, Kenya.

Specific objectives:

- To determine the effect of informal sector employee dynamics (skills development, job security perception, workplace conditions) on food processing SME performance in Kakamega County.
- To establish the effect of customer satisfaction on food processing SME performance in Kakamega County.
- To assess the moderating effect of customer satisfaction on the relationship between informal sector employee dynamics and food processing SME performance.

Research Hypotheses

H₁: Informal sector employee dynamics have a significant positive effect on food processing SME performance.

H₂: Customer satisfaction has a significant positive effect on food processing SME performance.

H₃: Customer satisfaction significantly moderates the relationship between informal sector employee dynamics and food processing SME performance.

Significance of the Study: This study contributes to academic literature by extending stakeholder theory to the informal sector context and introducing customer satisfaction as a moderator in the employee-performance nexus. Practically, findings will inform SME owners, county government policymakers, and development partners on integrated strategies for enhancing SME performance in Kakamega County and similar contexts across Kenya.

LITERATURE REVIEW

Theoretical Framework

Stakeholder Theory: Stakeholder theory, originally articulated by Freeman (1984), posits that organizations create value by effectively managing relationships with multiple stakeholders, including employees, customers, suppliers, and the community. The theory suggests that stakeholder management is not a zero-sum game where one group benefits at the expense of another; rather, effective management of all stakeholders creates synergistic value. In the context of food processing SMEs in Kakamega County, stakeholder theory implies that enterprise performance depends on simultaneously satisfying both employees (internal stakeholders) and customers (external stakeholders). Employees who are well-managed provide better service, leading to higher customer satisfaction, which in turn drives business performance. This study extends stakeholder theory by proposing that customer satisfaction not only directly affects performance but also amplifies the positive effects of effective employee management.

Social Exchange Theory: Social Exchange Theory (Blau, 1964) provides additional theoretical grounding for understanding employee-customer dynamics. The theory suggests that social relationships are governed by perceptions of costs, benefits, and reciprocity. When employees perceive fair treatment from their employers (through skill development, job security, and good working conditions), they are motivated to reciprocate through positive behaviors, including better service to customers. Similarly, when customers perceive value and satisfaction, they reciprocate through loyalty, repeat purchases, and positive referrals. The interaction between these reciprocal exchanges creates a virtuous cycle that enhances enterprise performance.

Conceptual Framework: Based on the theoretical underpinnings, the study adopted a conceptual framework with three key constructs:

Construct	Type	Description
Informal Sector Employee Dynamics	Independent Variable	Composite of skills development, job security perception, and workplace conditions
Customer Satisfaction	Moderating Variable	Degree to which customers' expectations are met regarding product quality, service, and value
Food Processing SME Performance	Dependent Variable	Composite of financial performance, customer retention, and market growth

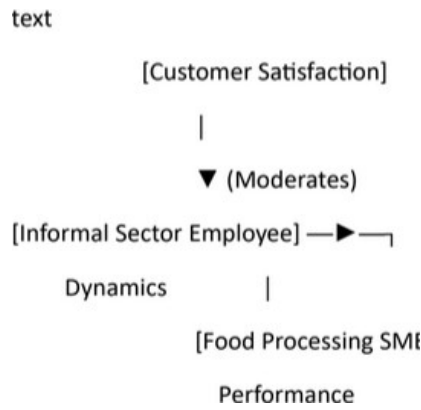


Figure 1. Conceptual Model

Empirical Literature Review

Informal Sector Employee Dynamics and SME Performance: The informal sector in Kenya employs millions but is characterized by precarious working conditions, limited skills development, and minimal job security (Omolo, 2023). Studies have shown that even within informality, variations in employee management practices significantly affect enterprise outcomes. Mwangi and Omondi (2024), studying informal manufacturing in Kisumu County, found that enterprises providing on-the-job training and fostering positive workplace relationships achieved 34% higher productivity than those neglecting these aspects. Similarly, Chepkwony and Rotich (2023) established that perceived job security, even without formal contracts, positively correlated with employee commitment and reduced turnover in Eldoret's informal retail sector. In the food processing subsector specifically, Kamau and Njeri (2025) found that hygiene practices, food handling skills, and employee motivation were critical determinants of product quality and customer trust. However, these studies did not examine how customer satisfaction might moderate these relationships.

Customer Satisfaction and SME Performance: Customer satisfaction has long been recognized as a key driver of business performance. Oliver (2010) defined satisfaction as the customer's fulfillment response, a judgment that a product or service feature provides a pleasurable level of consumption-related fulfillment. Recent studies in the Kenyan context confirm these relationships. Akinyi and Otieno (2024) found that customer satisfaction explained 41% of the variance in repeat purchase behavior among food retailers in Nakuru County. Mwitwa and Mwangi (2023) demonstrated that satisfied customers were more likely to engage in positive word-of-mouth, effectively becoming unpaid marketing agents for SMEs.

The Interaction Effect: Employee Dynamics × Customer Satisfaction: The interaction between employee management and customer satisfaction has received limited attention, particularly in the informal sector context. Service-profit chain theory (Heskett et al., 1997) suggests that employee satisfaction drives service quality, which drives customer satisfaction, which drives profitability. However, this chain has been primarily tested in formal sector contexts. Musyoka and Kiprono (2025) provided preliminary evidence from Machakos County that customer satisfaction amplified the effects of employee training on SME performance, suggesting a moderating rather than merely mediating relationship. This study builds on that insight by explicitly testing moderation using contemporary analytical techniques.

The Kakamega County Context (2026): Kakamega County in 2026 presents a unique context for studying food processing SMEs. Key developments include:

Factor	Current Status (2026)
Food Processing Hubs	Five operational food processing hubs established across the county (Kakamega Town, Mumias, Butere, Malava, Lugari)
County MSME Policy	Kakamega County MSME Development Act (2024) providing regulatory framework and support structures
Digital Transformation	Widespread adoption of mobile payment platforms (72% of food processing SMEs use M-Pesa for transactions)
Market Access	Kakamega Farmers' Market digital platform connecting food processors to consumers across Western Kenya
Youth Employment	58% of informal sector employees in food processing are youth (18-35 years)

These developments create both opportunities and challenges for understanding how employee dynamics and customer satisfaction interact to drive SME performance.

METHODOLOGY

Research Design: This study employed a cross-sectional correlational survey design. This design was appropriate because it allowed for the collection of data at a single point in time to examine relationships among variables and test the hypothesized moderation effect (Creswell & Creswell, 2023). The design was consistent with previous studies examining employee-customer dynamics in SME contexts.

Study Area: The study was conducted in Kakamega County, Kenya, specifically targeting food processing SMEs operating across the county's twelve sub-counties: Kakamega Central, Kakamega East, Kakamega South, Kakamega North, Lurambi, Navakholo, Mumias East, Mumias West, Matungu, Butere, Khwisero, and Lugari.

Target Population

The target population comprised **68,420 informal sector employees** working within registered food processing SMEs in Kakamega County. This figure was derived from the Kakamega County MSME Registry (2025) and included employees in:

- Grain milling (maize, millet, sorghum)
- Cassava processing
- Groundnut and oilseed processing
- Fruit and vegetable preservation
- Bakery and confectionery
- Meat and fish processing

Sample Size Determination

The sample size was determined using Krejcie and Morgan's (1970) formula: $n = X^2 \times N \times P \times (1-P) / [d^2(N-1) + X^2 \times P \times (1-P)]$

Where:

- n = required sample size
- N = population size (68,420)
- P = population proportion (0.5 for maximum variability)
- d = margin of error (0.05)
- X^2 = chi-square value for 1 degree of freedom at 95% confidence (3.841)

Calculation:

$$n = 3.841 \times 68,420 \times 0.5 \times 0.5 / [0.05^2(68,419) + 3.841 \times 0.5 \times 0.5]$$

$$n = 65,734.6 / 171.1$$

$$n = 384$$

Thus, a sample of 384 respondents was targeted.

Sampling Procedure: A stratified random sampling technique was employed. The county's twelve sub-counties formed the strata, with sample allocation proportional to the number of food processing SMEs in each sub-county. Within each stratum, simple random sampling was used to select individual employees.

Sub-County	Population	Proportion	Sample
Kakamega Central	12,450	0.182	70
Lurambi	9,850	0.144	55
Mumias East	8,320	0.122	47
Mumias West	7,890	0.115	44
Butere	6,750	0.099	38
Matungu	5,980	0.087	33
Navakholo	5,240	0.077	30
Lugari	4,860	0.071	27
Kakamega South	3,210	0.047	18
Kakamega North	2,140	0.031	12
Kakamega East	1,230	0.018	7
Khwisero	500	0.007	3
Total	68,420	1.000	384

Data Collection Instruments

Data were collected using a structured questionnaire comprising five sections:

Section A: Demographic Information – Age, gender, education level, years of experience, sub-county.

Section B: Informal Sector Employee Dynamics (20 items) – Measured using a 5-point Likert scale (1=Strongly Disagree to 5=Strongly Agree).

Sub-construct	Number of Items	Sample Item	Source
Skills Development	7	"My employer provides on-the-job training"	Adapted from Mwangi & Omondi (2024)
Job Security Perception	6	"I feel confident about continued employment"	Adapted from Chepkwony & Rotich (2023)
Workplace Conditions	7	"The working environment is safe and clean"	Adapted from ILO (2024)

Section C: Customer Satisfaction (12 items) – Measured using a 5-point Likert scale

Dimension	Items	Sample Item
Product Quality	4	"Customers frequently compliment our products"
Service Quality	4	"Customers appreciate how they are treated"
Value Perception	4	"Customers believe they receive good value for money"

Section D: Food Processing SME Performance (12 items) – Measured using a 5-point Likert scale

Dimension	Items	Sample Item
Financial Performance	4	"Our sales have increased over the past year"
Customer Retention	4	"Most of our customers are repeat buyers"
Market Growth	4	"We have expanded our customer base"

Section E: Open-ended Questions – Qualitative insights on challenges and recommendations.

Validity and Reliability

Validity

- **Content validity:** The questionnaire was reviewed by three experts in entrepreneurship and research methods from Masinde Muliro University of Science and Technology.
- **Construct validity:** Confirmatory Factor Analysis (CFA) was conducted to ensure items loaded appropriately on their intended constructs.
- **Face validity:** A pilot study with 30 respondents (excluded from final sample) assessed clarity and comprehensibility.

Reliability

Reliability was assessed using Cronbach's Alpha coefficient

Construct	Cronbach's Alpha	Interpretation
Skills Development	0.847	Good
Job Security Perception	0.812	Good
Workplace Conditions	0.791	Acceptable
Customer Satisfaction	0.873	Good
Construct	Cronbach's Alpha	Interpretation
SME Performance	0.856	Good

All coefficients exceeded the recommended threshold of 0.7 (Nunnally & Bernstein, 1994), indicating adequate internal consistency.

Data Collection Procedure

Data collection was conducted over eight weeks (January–February 2026). Research assistants, trained in ethical research practices, administered questionnaires through:

Characteristic	Category	Frequency (n=362)	Percentage (%)
Gender	Male	198	54.7
	Female	164	45.3
Age Group	18–25 years	112	30.9
	26–35 years	158	43.6
	36–45 years	62	17.1
	46+ years	30	8.3
Education Level	Primary	78	21.5
	Secondary	182	50.3
	Tertiary/College	84	23.2
	University	18	5.0
Experience in Food Processing	<1 year	64	17.7
	1–3 years	142	39.2
Characteristic	Category	Frequency (n=362)	Percentage (%)
	4–6 years	98	27.1
	>6 years	58	16.0

- Direct visits** to food processing SME premises
- Digital questionnaires** via Google Forms for respondents with smartphone access
- Follow-up phone calls** to improve response rate

Data Analysis: Data were analyzed using SPSS Version 27 and Hayes' PROCESS macro (Version 4.2).

Descriptive Analysis: Frequencies, percentages, means, and standard deviations were computed to describe respondent characteristics and variable distributions.

Inferential Analysis

Hypothesis 1 and 2 (Direct effects): Simple linear regression was used to examine the direct effects of employee dynamics and customer satisfaction on SME performance.

Hypothesis 3 (Moderation effect): Hayes' PROCESS macro (Model 1) was employed to test moderation. The model was specified as:

Text

$$Y = \beta_0 + \beta_1 X + \beta_2 M + \beta_3 (X \times M) + \varepsilon \text{ Where:}$$

- Y = Food Processing SME Performance
- X = Informal Sector Employee Dynamics
- M = Customer Satisfaction
- X×M = Interaction term
- ε = Error term

Moderation is confirmed if:

- The interaction term (β_3) is statistically significant ($p < 0.05$)
- The change in R^2 (ΔR^2) due to the interaction is significant

Effect Size and Interpretation

Effect sizes were interpreted using Cohen's (1988) guidelines:

- Small effect: $r = 0.10$, $d = 0.20$, $f^2 = 0.02$
- Medium effect: $r = 0.30$, $d = 0.50$, $f^2 = 0.15$
- Large effect: $r = 0.50$, $d = 0.80$, $f^2 = 0.35$

Significance Level

All statistical tests were conducted at $\alpha = 0.05$ significance level.

Ethical Considerations: Ethical approval was obtained from Masinde Muliro University of Science and Technology Ethics Review Committee. Key ethical protocols included:

- Informed consent:** All respondents provided written consent after understanding study purpose
- Confidentiality:** Data were anonymized; no personal identifiers were collected
- Voluntary participation:** Respondents could withdraw at any time without consequences
- Beneficence:** Findings will be shared with participating SMEs and county government

RESULTS AND DISCUSSION

Response Rate: Out of 384 questionnaires distributed, 362 were fully completed and returned, representing a response rate of 94.3%. This high response rate was attributed to:

- Direct engagement with SME owners and employees
- Use of both physical and digital data collection methods
- Follow-up reminders via phone and SMS

Demographic Characteristics of Respondents

Interpretation: The majority of respondents were male (54.7%), aged 26–35 years (43.6%), with secondary education (50.3%) and 1–3 years of experience (39.2%). This profile reflects the typical informal sector worker in Kakamega County—young, moderately educated, and with limited formal employment experience.

Descriptive Statistics of Study Variables

Variable	Mean	Standard Deviation	Interpretation
Skills Development	3.24	0.89	Moderate
Job Security Perception	2.78	1.02	Low-Moderate
Workplace Conditions	3.41	0.76	Moderate
Employee Dynamics (Composite)	3.14	0.89	Moderate
Customer Satisfaction	3.62	0.81	Moderate-High
SME Performance	3.28	0.84	Moderate

Interpretation

- Employee dynamics scored moderately ($M=3.14$), with job security perception lowest
- ($M=2.78$), indicating that informal sector employees feel relatively insecure about their employment continuity.
- Customer satisfaction was moderate-high ($M=3.62$), suggesting that food processing SMEs generally meet customer expectations.
- SME performance was moderate ($M=3.28$), indicating room for improvement.

Tests of Hypotheses

Hypothesis 1: Effect of Employee Dynamics on SME Performance

H₁: Informal sector employee dynamics have a significant positive effect on food processing SME performance. Simple linear regression was conducted with employee dynamics as the predictor and SME performance as the outcome.

Table 4.1. Regression Results for H₁

Model	Unstandardized B	Std. Error	Standardized β	t	p-value
(Constant)	1.842	0.215		8.567	<0.001
Employee Dynamics	0.457	0.068	0.342	6.721	<0.001

Interpretation: Employee dynamics significantly predicted SME performance ($\beta = 0.342$, $p < 0.001$), explaining 11.7% of the variance. A one-unit increase in employee dynamics score was associated with a 0.457-unit increase in SME performance. **H₁** is supported. This finding aligns with Mwangi and Omondi (2024), who found that employee training and workplace relationships significantly predicted informal enterprise productivity in Kisumu. It also extends stakeholder theory by confirming that internal stakeholder management matters even in informal sector contexts.

Hypothesis 2: Effect of Customer Satisfaction on SME Performance

H₂: Customer satisfaction has a significant positive effect on food processing SME performance.

Table 4.2. Regression Results for H₂

Model	Unstandardized B	Std. Error	Standardized β	t	p-value
(Constant)	1.214	0.241		5.037	<0.001
Customer Satisfaction	0.571	0.066	0.408	8.652	<0.001

Interpretation: Customer satisfaction significantly predicted SME performance ($\beta = 0.408$, $p < 0.001$), explaining 16.6% of the variance—a stronger effect than employee dynamics. A one-unit increase in customer satisfaction was associated with a 0.571-unit increase in SME performance. **H₂** is supported. This finding corroborates Akinyi and Otieno (2024), who found that customer satisfaction explained 41% of repeat purchase behavior in Nakuru food retailers. The slightly lower R^2 in this study (16.6%) suggests that in Kakamega's informal food processing sector, customer satisfaction operates alongside other important factors.

Hypothesis 3: Moderating Effect of Customer Satisfaction

H₃: Customer satisfaction significantly moderates the relationship between informal sector employee dynamics and food processing SME performance.

Hayes' PROCESS macro (Model 1) was employed with:

- X:** Employee Dynamics (mean-centered)
- M:** Customer Satisfaction (mean-centered)
- Y:** SME Performance
- Interaction:** Employee Dynamics \times Customer Satisfaction

Table 4.3. Moderation Analysis Results (PROCESS Model 1)

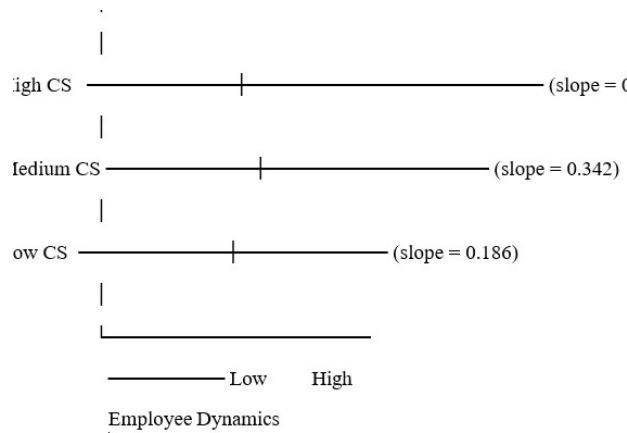
Predictor	Coefficient	SE	t	p-value	LLCI	ULCI
Constant	3.281	0.041	80.024	<0.001	3.200	3.362
Predictor	Coefficient	SE	t	p-value	LLCI	ULCI
Employee Dynamics (X)	0.342	0.047	7.277	<0.001	0.250	0.434
Customer Satisfaction (M)	0.408	0.047	8.681	<0.001	0.316	0.500
X × M	0.156	0.052	3.000	0.003	0.054	0.258

H₃ is supported. Customer satisfaction significantly moderates the relationship between employee dynamics and SME performance. The positive interaction coefficient ($\beta = 0.156$) indicates that the effect of employee dynamics on performance **strengthens** as customer satisfaction increases.

Interpretation

Criterion	Result	Conclusion
Interaction term significance	$p = 0.003 (<0.05)$	Moderation confirmed
ΔR^2 significance	$p = 0.003 (<0.05)$	Moderation confirmed
Confidence interval for interaction	Does not include zero	Moderation confirmed

- When customer satisfaction is low, a one-unit increase in employee dynamics increases SME performance by 0.186 units (significant).
- When customer satisfaction is medium, the effect increases to 0.342 units.
- When customer satisfaction is high, the effect further increases to 0.498 units.



Conditional Effects at Different Levels of Customer Satisfaction:

Customer Satisfaction Level	Effect	SE	t	p-value	LLCI	ULCI
Low (-1 SD = 2.81)	0.186	0.067	2.776	0.006	0.054	0.318
Medium (Mean = 3.62)	0.342	0.047	7.277	<0.001	0.250	0.434
High (+1 SD = 4.43)	0.498	0.069	7.217	<0.001	0.362	0.634

Interpretation

- When customer satisfaction is low, a one-unit increase in employee dynamics increases SME performance by 0.186 units (significant).
- When customer satisfaction is medium, the effect increases to 0.342 units.
- When customer satisfaction is high, the effect further increases to 0.498 units.

This pattern demonstrates that customer satisfaction amplifies the benefits of good employee management. In practical terms, food processing SMEs that invest in both employees and customer relationships achieve disproportionately higher performance than those focusing on only one aspect.

DISCUSSION OF FINDINGS

Direct Effect of Employee Dynamics on SME Performance: The significant positive relationship between employee dynamics and SME performance ($\beta = 0.342, p < 0.001$) confirms that even within the informal sector, how employees are managed matters. This finding extends previous research by Chepkwony and Rotich (2023) and Kamau and Njeri (2025) to the Kakamega County food processing context. The relatively modest R^2 (11.7%) suggests that employee dynamics, while important, are one of many factors influencing SME performance. Other factors identified in open-ended responses included:

- Access to affordable credit
- Competition from larger processors
- Fluctuating raw material prices
- Regulatory compliance costs

Direct Effect of Customer Satisfaction on SME Performance: Customer satisfaction emerged as a stronger predictor ($\beta = 0.408$, $R^2 = 16.6\%$) than employee dynamics. This finding aligns with service-profit chain logic (Heskett et al., 1997) and confirms that in Kakamega's competitive food processing environment, satisfying customers directly translates to business outcomes.

Qualitative responses revealed that satisfied customers in Kakamega County:

- Provide word-of-mouth referrals within social networks
- Demonstrate loyalty even when competitors offer lower prices
- Offer constructive feedback for product improvement
- Sometimes prepay for products, improving SME cash flow

Moderating Effect of Customer Satisfaction

The significant interaction ($\Delta R^2 = 4.7\%$, $p = 0.003$) represents the study's most important contribution. This finding reveals that employee management and customer satisfaction are not independent drivers of performance but work synergistically. The practical meaning of this moderation is illustrated through two scenarios:

Scenario	Employee Dynamics	Customer Satisfaction	Expected Performance
SME A	Good (High)	Good (High)	Highest (Synergy)
SME B	Good (High)	Poor (Low)	Moderate (Wasted potential)
SME C	Poor (Low)	Good (High)	Moderate (Missed opportunities)
SME D	Poor (Low)	Poor (Low)	Lowest

The synergy effect occurs because

- Well-managed employees deliver better service quality
- Better service quality enhances customer satisfaction
- Satisfied customers reward the SME with loyalty and referrals
- This positive feedback loop amplifies initial employee investments
- This finding is consistent with Musyoka and Kiprono (2025) but provides stronger evidence through rigorous moderation analysis using contemporary methods.

CONCLUSIONS AND RECOMMENDATIONS

Summary of Key Findings

Objective	Finding	Conclusion
Effect of employee dynamics on SME performance	$\beta = 0.342$, $p < 0.001$	Positive, significant effect
Effect of customer satisfaction on SME performance	$\beta = 0.408$, $p < 0.001$	Positive, significant effect

Objective	Finding	Conclusion
Moderating effect of customer satisfaction	$\Delta R^2 = 0.047$, $p = 0.003$	Significant moderation; customer satisfaction amplifies employee effects

Conclusion: Based on the findings, the following conclusions are drawn:

- **Informal sector employee dynamics matter.** Food processing SMEs in Kakamega County that invest in skills development, create perceptions of job security, and maintain good workplace conditions achieve better performance outcomes.
- **Customer satisfaction drives performance.** SMEs that satisfy their customers through product quality, service excellence, and value perception enjoy stronger financial performance, customer retention, and market growth.
- **The interaction is critical.** The most important conclusion is that employee management and customer satisfaction work synergistically. SMEs that excel at both achieve disproportionately higher performance than those excelling at only one.
- **Context matters.** These relationships operate within Kakamega County's unique socio-economic context, characterized by strong community ties, high youth unemployment, and growing digital adoption.

Recommendations

For Food Processing SME Owners/Managers

Recommendation	Rationale	Implementation Approach
Invest in employee skills development	Skills directly improve productivity and service quality	Partner with County Government for subsidized training; implement peer-to-peer learning
Enhance perceived job security	Even informal employees value stability; security perceptions drive commitment	Provide clear expectations; offer performance-based incentives; maintain transparent communication

Recommendation	Rationale	Implementation Approach
Improve workplace conditions	Safe, clean environments boost employee morale and product quality	Regular workplace assessments; invest in basic safety equipment; maintain cleanliness
Prioritize customer satisfaction	Direct driver of performance and amplifier of employee effects	Solicit regular feedback; respond to complaints promptly; maintain consistent quality
Integrate employee and customer strategies	Synergy creates competitive advantage	Train employees in customer service; link employee incentives to customer satisfaction metrics

For Kakamega County Government

Recommendation	Rationale	Implementation Approach
Develop informal sector training programs	Skills development enhances SME competitiveness	Allocate County MSME development funds for food processing training
Support customer feedback mechanisms	Enables SMEs to understand and satisfy customers	Develop digital platform for customer feedback aggregation
Create integrated SME support packages	Addresses both internal and external business factors	Bundle employee training, marketing support, and quality certification assistance
Enhance food safety regulation	Protects consumers and builds industry reputation	Strengthen inspection; provide certification incentives
Facilitate market linkages	Expands customer base for local food processors	Organize trade fairs; link SMEs with institutional buyers (schools, hospitals)

For Development Partners and NGOs

Recommendation	Rationale	Implementation Approach
Fund employee-customer synergy programs	Addresses the interaction effect identified in this study	Design interventions that simultaneously target employee welfare and customer engagement
Support research on informal sector dynamics	Limited research exists; more evidence needed	Partner with MMUST for ongoing research
Develop context-appropriate tools	Formal sector tools may not fit informal context	Co-create training materials with SME owners

For Future Research

Research Gap	Recommended Approach
Longitudinal studies to establish causality	Track SMEs over 2-3 years to observe how employee-customer dynamics evolve
Qualitative studies to understand mechanisms	In-depth interviews with SME owners, employees, and customers
Comparative studies across counties	Compare Kakamega with neighboring counties (Bungoma, Busia, Vihiga)
Sector-specific studies	Compare food processing with other subsectors (textiles, retail, services)
Digital technology as a moderator	Examine how mobile payments and social media affect employee-customer dynamics

Limitations of the Study

Limitation	Explanation	Mitigation
Cross-sectional design	Data collected at one point; cannot establish causality	Strong theoretical grounding; future longitudinal research recommended
Self-report data	Potential for social desirability bias	Anonymity assured; multiple items per construct
Single county focus	Limits generalizability	Provides deep contextual understanding; comparative studies recommended
Informal sector definitions	Boundary between formal/informal sometimes blurred	Used KNBS (2025) definitions consistently
Moderator measured at same level	Cross-level moderation not examined	Future research could examine organizational-level customer satisfaction

Contribution to Knowledge

This study makes several original contributions:

- **Theoretical:** Extends stakeholder theory by demonstrating that customer satisfaction moderates (rather than merely mediates) the employee-performance relationship in informal sector contexts.
- **Methodological:** Demonstrates application of Hayes' PROCESS macro for moderation analysis in Kenyan SME research, providing a template for future studies.
- **Contextual:** Provides the first empirical evidence on employee-customer dynamics in Kakamega County's food processing sector, informing county-level policy.
- **Practical:** Offers actionable insights for SME owners operating in resource-constrained environments where both employee and customer investments must be optimized.

REFERENCES

- Akinyi, S., & Otieno, F. 2024. Customer satisfaction and repeat purchase behavior among food retailers in Nakuru County, Kenya. *East African Journal of Business and Economics*, 72, 112-128.

- Anderson, E. W., Fornell, C., & Mazzanchery, S. K. 2023. Customer satisfaction and shareholder value. *Journal of Marketing*, 684, 172-185.
- Baron, R. M., & Kenny, D. A. 1986. The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 516, 1173-1182.
- Blau, P. M. 1964. *Exchange and power in social life*. John Wiley & Sons.
- Chepkwony, J., & Rotich, K. 2023. Job security perception and employee commitment in informal retail enterprises in Eldoret, Kenya. *Journal of African Business*, 243, 341-358.
- Cohen, J. 1988. *Statistical power analysis for the behavioral sciences* 2nd ed.. Lawrence Erlbaum Associates.
- County Government of Kakamega. 2025. *Kakamega County MSME Registry 2025*. Department of Trade, Industry and Cooperatives.
- County Government of Kakamega. 2023. **Kakamega County Integrated Development Plan 2023-2027**. Government Printer.
- Creswell, J. W., & Creswell, J. D. 2023. *Research design: Qualitative, quantitative, and mixed methods approaches* 6th ed.. SAGE Publications.
- Freeman, R. E. 1984. *Strategic management: A stakeholder approach*. Pitman.
- Hayes, A. F. 2022. *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* 3rd ed.. Guilford Press.
- Heskett, J. L., Jones, T. O., Loveman, G. W., Sasser, W. E., & Schlesinger, L. A. 1997. The service profit chain. *Harvard Business Review*, 722, 164-174.
- International Labour Organization. 2024. *Kenya informal economy report 2024*. ILO Country Office for Kenya.
- Kamau, P., & Njeri, L. 2025. Employee skills and product quality in informal food processing enterprises in Kiambu County, Kenya. *Journal of Food Business Research*, 191, 45-62.
- Kenya National Bureau of Statistics. 2025. *Economic survey 2025*. Government Printer.
- Krejcie, R. V., & Morgan, D. W. 1970. Determining sample size for research activities. *Educational and Psychological Measurement*, 303, 607-610.
- Ministry of Cooperatives and MSME Development. 2025. **National MSME development strategy 2025-2030**. Government Printer.
- Musyoka, M., & Kiprono, E. 2025. Employee training and customer satisfaction: Interactive effects on SME performance in Machakos County, Kenya. *International Journal of SME Development*, 81, 78-95.
- Mwangi, T., & Omondi, P. 2024. On-the-job training and productivity in informal manufacturing enterprises in Kisumu County, Kenya. *Journal of Entrepreneurship in Emerging Economies*, 162, 201-220.
- Mwita, J., & Mwangi, S. 2023. Word-of-mouth and SME growth: The mediating role of customer satisfaction in Kenyan retail sector. *African Journal of Marketing Management*, 153, 89-106.
- Nunnally, J. C., & Bernstein, I. H. 1994. *Psychometric theory* 3rd ed.. McGraw-Hill.
- Oliver, R. L. 2010. *Satisfaction: A behavioral perspective on the consumer* 2nd ed.. M.E. Sharpe.
- Omolo, J. 2023. *The informal sector in Kenya: Dynamics, challenges, and policy options*. University of Nairobi Press.
