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Research Article

The Influence of Innovativeness on the Performance of Textile-Based Manufacturing Small Enterprises in Kenya

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Abstract

This study investigates the influence of innovativeness on the performance of textile-based manufacturing small enterprises (SMEs) in Kenya, with a focus on product, market, and process innovations. SMEs are a vital component of Kenya's economy, contributing significantly to GDP and employment. However, their growth and survival rates are a concern, particularly in the textile manufacturing sector. A mixed-method research design was employed, encompassing quantitative and qualitative approaches. The target population for this study was 1,353 SMEs across various economic blocs in Kenya. After stratified sampling a total of 292 respondents were involved in the study. Quantitative data were analyzed using SPSS, employing descriptive and inferential statistics. Qualitative data underwent content analysis. The findings reveal a substantial positive relationship between innovativeness and SME performance. Innovativeness, as reflected in product, market, and process innovations, emerged as a critical determinant of success. Innovativeness contributed 80.2% of the variation in the performance of textile-based manufacturing small enterprises in Kenya. SMEs that embraced innovation exhibited better performance outcomes. Practical recommendations are offered, including the promotion of creativity, allocation of resources for research and development, and the establishment of platforms for idea generation and collaboration. In conclusion, fostering a culture of innovation is imperative for textile-based manufacturing SMEs in Kenya. This study sheds light on the pivotal role of innovativeness in enhancing performance and competitiveness. By implementing the recommended strategies, these enterprises can navigate the dynamic business landscape effectively, positioning themselves for sustainable growth and success.

Keywords

Innovativeness, Textile-based Manufacturing, Small Enterprises, Performance

1. Introduction

The contribution of textile-based manufacturing Micro and Small Enterprises (MSEs) to economic, industrial, and social development is immense. In Kenya, SMEs constitute a significant proportion (93.7%) of enterprises and contribute 3 percent of the GDP while creating approximately 30 percent of jobs yearly [9], aver that SMEs contribute approximately 33 percent in value-addition, especially in the manufacturing sector. The growth and survival rate of SMEs in Kenya is in doubt, considering that only a third survive beyond three years from the date of inception. Policymakers must ensure entrepreneurs are well entrepreneurially oriented Numerous studies in developed economies concerning EO and the perfor-

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mance of textile-based manufacturing enterprises suggest that entrepreneurs exposed to EO record better performance than those who run businesses without any orientation [12]. Entrepreneurs who support their employees to initiate new production methods and allow sufficient room to experiment with novel ideas perform better than those who ignore the benefit of exploring new ideas [1]. Risk propensity related to an entrepreneur with a high degree to venture into a business refers to the extent to which entrepreneurs are prepared to venture into a business without the facts of the probable outcomes [11]. A proactive entrepreneur is expected to be a market leader who can spot business opportunities [1].

1.1. Study Objective

The primary objective of this study is to evaluate the influence of innovativeness on the performance of textile-based manufacturing small enterprises in Kenya. Specifically, we seek to understand how various dimensions of innovation, including product innovation, process innovation, and innovative marketing strategies, influence the overall performance and survival rates of these enterprises. By exploring the relationship between innovativeness and performance, we aim to provide insights that can inform policy and strategy development to support the growth and sustainability of these crucial economic contributors in Kenya.

1.2. Problem Statement

Running a successful enterprise necessitates a comprehensive grasp of Entrepreneurial Orientation (EO) dimensions, both at the individual level and within top management. Achieving desired performance requires entrepreneurs to demonstrate innovation, pursue opportunities aggressively, allocate resources to risk, and proactively engage competitors in the market. Empirical studies in developed countries indicate that EO practices enable manufacturing businesses to harness technology and improve overall performance [13].

Between 1963 and 1986, Kenya's SMEs in textile manufacturing experienced notable success, with 52 textile mills producing an average of 83 million square meters of materials annually and employing over 42,000 individuals [2]. However, subsequent events led to a significant decline in manufacturing capacities by 1993, resulting in the closure of numerous textile manufacturing enterprises. Previous studies revealed a strong connection between the excessive closures of textile mills and diverse personality traits and lower levels of Entrepreneurial Orientations among entrepreneurs [6].

Entrepreneurial behavior, characterized by innovativeness, risk-taking, proactiveness, and competitive aggressiveness, plays a pivotal role in making effective decisions to enhance business performance [6]. These entrepreneurial dimensions were found to be lacking in textile-based manufacturing SMEs. Various studies on SME performance indicate that the absence of entrepreneurial behavior deprives these enterprises of several advantages, including the lack of an innovative strategic posture, a failure to adopt a proactive approach to global market trends, an inability to identify opportunities for new inventions, and a lack of competitive aggressiveness [3-5, 10].

The consequences of SMEs' failure to practice EO have resulted in the excessive closure of textile-based manufacturing enterprises. The government has attempted to address challenges affecting manufacturing SMEs through policy measures, recognizing SMEs as key drivers of industrial transformation, enhancing market access, supporting entrepreneurial and technical skills development, coordinating sector players, providing subsidies, and collaborating with development partners [7].

However, despite the government's initiatives to revitalize textile manufacturing SMEs, the results have yet to materialize [8, 9, 14]. The decline in the performance of textile-based Manufacturing MSEs raises a critical question: Could there be a missing link in the implementation of EO concerning the performance of textile-based manufacturing SMEs? Several studies recommend further studies to determine the influence of EO on manufacturing enterprises [15, 19, 21]. Therefore, this study seeks to examine the effect of EO on the performance of textile-based manufacturing MSEs in Kenya, moderated by competitive advantage.

2. Review of Related Literature

The historical context of entrepreneurship theories, as introduced by Richard Cantillon in the 1700s, laid the foundation for understanding entrepreneurs as risk-takers in economic endeavors. This perspective aligns with the idea that entrepreneurship involves taking calculated risks to create value in the market [22, 23]. According to this view, entrepreneurship is not just about managing existing resources but also about introducing new goods or services, a fundamental function in business [24].

The Schumpeterian model, heavily relied upon in this study, emphasizes the role of innovation in creating value and outperforming competitors in a dynamic economic environment. This theory underscores that individual entrepreneurs' ability to innovate and navigate competitive challenges can lead to a significant advantage and enhance enterprise performance.

In addition to these economic theories, psychological entrepreneurship theory sheds light on how individual personality traits influence entrepreneurial behavior [23]. This theory suggests that specific psychological traits, such as risk-taking propensity, need for high achievement, proactiveness, and creativity, among others, influence an individual's inclination towards entrepreneurship. This aligns with the idea that an entrepreneur's willingness to take risks, set goals, and thrive in competitive environments is shaped by their psychological constitution [16, 18, 22].

Furthermore, the Diffusion of Innovation (DOI) Theory, developed by E. M. Rogers in 1962, plays a crucial role in understanding technology adoption and innovation dissemination in enterprises. This theory emphasizes that the ac-

ceptability and adoption of innovations are influenced by the nature of the innovation itself and the characteristics of those promoting it. In the context of textile-based manufacturing enterprises, the DOI theory is relevant as it explains how innovations spread among consumers and impact behavior in favor of the product or service [13, 17]. This theory, therefore, contributes to the understanding of how innovation can be leveraged to enhance the performance of such enterprises.

In summary, these theories provide a valuable backdrop for investigating the influence of innovativeness on the performance of textile-based manufacturing small enterprises in Kenya. They offer insights into the roles of entrepreneurship, personality traits, and innovation adoption in shaping the behavior and outcomes of these enterprises.

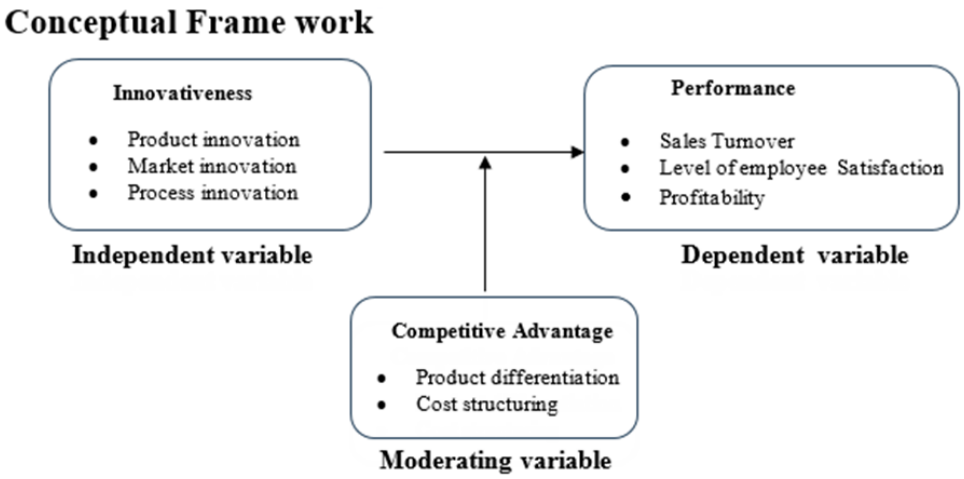

Figure 1. *Conceptual Framework.*

Innovation and Performance of Textile–based Manufacturing SMEs

Innovation is when an entrepreneur creates new wealth-producing resources or endows existing resources with enhanced potential for creating wealth. An entrepreneur can take a unique approach to innovation depending on the availability of resources that separate the established and start-ups in the business arena [20, 22, 24]. The studies found that enterprises in the neophyte growth stage utilize available resources within their reach, while established businesses with heavy capital resources opt for radical innovations supported by new skills. Enterprises that record sterling performance are driven by research and development, which enhance innovation efforts supported by top management and heavy budget towards implementation of the new product or service [16]. Enterprises that embrace market innovation focus their energies on customers' pain points by creating value propositions to minimize customers' struggle to access new product offerings and enhance their sales performance. Other studies posit that manufacturing enterprises that involve themselves in radical marketing methods or strategies that significantly depart from competitors relying on conventional marketing methods post very positive performance records [19, 22].

When well managed, innovation leads to introducing a substantially improved good or a new product and creating a competitive advantage and customer loyalty [3]. However, other scholars noted that new products faced a market challenge due to an excellent need for product validation in the face of global brands. As a result, significant changes in manufacturing techniques are demanded to enhance quality and reduce production costs. The study measured the enterprises' market innovativeness by analyzing the sub-construct capturing the number of new entries in the market, market share, and new marketing processes. This study used a simple binary measure for process innovation that indicates whether an enterprise has introduced at least one process innovation or not within a certain period [19, 22].

3. Methodology

To address the research objective, a mixed-method research design was employed, combining both quantitative and qualitative research methods. This approach was selected for its ability to provide a comprehensive understanding of the phenomenon under investigation, enabling the formation of objective and scientifically sound conclusions [20, 23]. The qualitative component played a pivotal role in the study, complementing the quantitative data by delving into the "how" and "why" aspects of the variables under scrutiny. It facilitated the collection of crucial data, identification of trends, and exploration of relationships based on respondents' insights.

The target population for this study encompassed 1,353 Small and Medium Enterprises (SMEs) operating in the textile manufacturing sector. These SMEs were registered members selected from five of Kenya's economic blocs: Lake Region Economic Bloc (LREB), North Rift Economic Bloc (NOREB), Jumuia Ya Kaunti Za Pwani, South Eastern Kenya Economic Bloc, and Mt Kenya and Aberdares Region Eco-

nomic Bloc, as well as Nairobi.

The study utilized a combination of purposive, stratified, and simple random sampling techniques. Purposive sampling allowed for the selection of case subjects with specific information and characteristics relevant to the research objectives. The sampling frame encompassed all production and technical supervisors within the 1,353 registered textile manufacturing SMEs in Kenya, as per the KAM Annual Report of 2018.

Quantitative data underwent processing and analysis using the Statistical Package for Social Sciences (SPSS) version 23. This process involved coding, data entry, and resolution of any data inconsistencies. Descriptive statistics, including frequencies, measures of central tendency, and measures of dispersion, were employed to analyze descriptive variables. Inferential statistics, such as factor analysis and correlation analysis, were used to assess the relationships and directional influences between predictor and criterion variables.

Qualitative data, on the other hand, underwent content analysis. This involved categorizing qualitative data and subsequently analyzing these categories through conceptual and relational analyses. Conceptual analysis aimed to identify the presence and frequency of concepts, themes, or characters within the data, while relational analysis explored the connections among these concepts within the text. The outcomes of these analyses informed inferences about the study's phenomenon.

Data presentation was tailored to the nature of the data. Quantitative data were presented using tables, while qualitative data were presented descriptively. This comprehensive approach facilitated the development of robust conclusions and recommendations aligned with the study's objective.

4. Findings

4.1. Response Rate

Response rate is the extent to which final data sets include all sampled members. It is the percentage of respondents who successfully responded to the survey. The researcher distributed 300 questionnaires, of which 292 were received, translating to an overall response rate of 97%. In a study on the relationship between governmental laws and the entrepreneurial orientation of small and medium firms in Kenya, recent studies in entrepreneurship concentrating on SMEs revealed a 97% response rate [13]. Scholars state state that a response rate of 50% is acceptable, a response rate of 60% is good, and a response rate of more than 70% is great [15].

Overall Reliability statistics

Table 1. *Overall Reliability Statistics.*

S/No.	Variable	No of Items	Cronbach's Alpha	Remarks
1.	Performance	9	.900	Accepted
2.	Product innovation	8	.815	Accepted
3.	Market Innovation	8	.724	Accepted
4.	Process innovation	10	.876	Accepted

The study sought to establish whether the research instrument was consistent by correlating the items in the tool to yield a correlation coefficient referred to as Cronbach's Alpha (α). A tool is consistent when the value of Cronbach's Alpha is equal to or is more significant than 0.7; otherwise, it is inconsistent [2]. From Table 1, shown below, Cronbach's Alpha test results for the dependent variable and independent variables showed that the variables were significant with greater values than 0.6 hence were all accepted.

4.2. Company's Innovativeness

The study examined the extent to which textile -based SMEs implemented innovation as a dimension of EO in manufacturing. Previous studies have argued that EO implementation can improve enterprise performance in broad areas such as product innovation, market innovation, and process innovation [12, 17, 19]. From Table 2 below, the study revealed that 55.9% (M=3.14, SD=1.45) of respondents agreed that most of the production and technical staff had relevant skills and expertise which they applied innovatively in production. Whether the company employs internal and external resources to gather information for idea generation, 50.7% (M=3.08, SD=1.4) of the respondents agreed.

Previous studies confirms that progressive companies keep their doors open in a quest for new information to enhance their technology and improve performance [16]. When asked whether the company screened and developed concepts out of ideas generated by employees, 46.7% (M=2.96, SD=1.51) of the respondents agreed with the statement adding that the concepts were also tested for real-world viability. In addition, 53.7% (M= 3.25, SD 1.45) of respondents indicated that the

company rewarded innovative employees who generated new product ideas. The results concur with previous findings acknowledging that product innovation can bring about corporate success [24]. A cumulative 73.2% (M=2.23, SD=1.24) of respondents indicated that their company had collaborated with other strategic partners to boost its product innovation. The study observed that 52.6% (agreed that their company scans the market environment before making a strategic commitment. While 68.5% (M=3.05, SD=1.47) of the respondents opined that the company had efficient customer and competitor relationship management, increasing its market effectiveness. In the study, 85.7% (M=1.98, SD=0.90) of the respondents noted that the company did not introduce a new product yearly. Previous studies posit the importance of improving company performance by continuously implementing product innovation strategies because consumers are more intelligent in choosing and deciding where and what products to consume as their needs and desires are fulfilled [21]. At the same time, 49.6% (M=2.93, SD=1.48) of the respondents opined that the company always relied on market research to improve its production process. Finally, 84.6% (M=4.04, SD=1.02) of the respondents confirmed that the company ensured that the products were rigorously tested at every stage in the production process before they were released to the consumers.

A further examination of the means revealed that some companies implemented EO to some extent the highest being rewarding employees (M=4.164), who came up with new product ideas. The findings validated comments made by production and technical managers through an interview that most textile-based SMEs were aware of EO dimensions and had attempted to implement them in their manufacturing processes.

Table 2. *Company's innovativeness.*

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD
Most production and technical staff have relevant skills and expertise that they apply innovatively.	51 (18.8)	65 (23.9)	4 (1.5)	100 (36.8)	52 (19.12)	3.14	1.45
The company employs internal and external resources to gather information for idea generation.	47 (17.3)	69 (25.4)	18 (6.6)	92 (33.8)	46 (16.9)	3.08	1.40
The generated ideas are screened and developed into concepts and then tested for real-world viability.	67 (24,8)	58 (21.5)	19 (7.0)	72 (26.7)	54 (20.0)	2.96	1.51
The company's management reward employees who come up with new product ideas.	37 (13.6)	76 (27.9)	13 (4.8)	75 (27.6)	71 (26.1)	3.25	1.45
The company collaborates with other strategic partners to boost its product innovation.	17(6.3)	44 (16.2)	12 (4.4)	111(40.8)	88(32.4)	2.23	1.24
The company scans the market environment before making a strategic commitment.	56 (20.6)	68 (25.0)	5 (1.8)	93 (34.2)	50 (18.4)	3.05	1.47
The company has efficient customer and competitor relationship management, increasing its market effectiveness.	27 (10.0)	43 (15.9)	15 (5.6)	137(50.7)	48(17.8)	2.50	1.24
The company introduces a new production process every 12 months in terms of design to improve quality and its production processes.	9 (3.3)	11 (4.0)	19 (7.0)	159(58.5)	74(27.2)	1.98	0.90
The company always relies on market research to improve its production process.	73 (26.8)	48 (17.7)	16 (5.9)	96 (35.3)	39 (14.3)	2.93	1.48
The company ensures that the products are rigorously tested at every stage in the production process before they are released to the consumers.	16 (5.9)	7 (2.6)	19 (7.0)	139 (51.1)	91 (33.5)	4.04	1.02

Regression Analysis of the influence innovativeness on the performance of textile-based manufacturing small enterprises in Kenya.

The first objective of the study was designed to evaluate the influence of innovativeness on the performance of textile-based manufacturing small enterprises in Kenya. The literature that was reviewed in this study as well as the theoretical reasoning associated innovativeness and the performance of textile-based manufacturing small enterprises in Kenya. The performance was measured by sales turnover,

level of employee satisfaction, profitability. While on the other hand, innovativeness was measured by product, market and process innovations. Following the theoretical arguments, the following hypothesis was formulated and tested.

4.3. Inferential Analysis

4.3.1. Tests of Normality

The normality tests for the data, using the Kolmogorov-Smirnov and Shapiro-Wilk tests, indicated that the distribution of variables related to innovativeness and performance approximated normality: Performance of the enterprises had a Shapiro-Wilk statistic of 0.964 (p = 0.065), suggesting a normal distribution. Product differentiation, cost structuring, product innovation, market innovation, and process innovation also showed p-values above 0.05, implying no significant deviation from normality for each variable.

Table 3. *Test of Normality.*

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
Performance of the enterprises	.129	292	.065	.964	292	.065
product differentiation	.067	292	.076	.990	292	.076
cost structuring	.098	292	.109	.967	292	.109
product innovation	.095	292	.085	.970	292	.085
market innovation	.083	292	.070	.971	292	.070
process innovation	.086	292	.084	.985	292	.084

a. Lilliefors Significance Correction

4.3.2. Autocorrelation Test

The Durbin-Watson statistic was 2.009, which fell within the acceptable range of 1.5 to 2.5, indicating no significant autocorrelation in the residuals. This outcome supports the independence of errors, an assumption crucial for the regression model's validity.

Table 4. *Autocorrelation Test.*

Test Statistic (Durbin-Watson)	Critical Values	Conclusion
2.009	1.5 < d < 2.5	No significant autocorrelation

4.3.3. Homoscedasticity Test

The homoscedasticity test returned a test statistic of 195 with a p-value of 0.98, leading to a failure to reject the null hypothesis of homoscedasticity. This suggests that the variance of residuals was constant across the values of innovativeness variables, satisfying another assumption for regression.

Table 5. *Homoscedasticity Test.*

Test Statistic	p-value	Conclusion
195	0.98	Fail to reject the null hypothesis

4.3.4. Multicollinearity Analysis

Table 6. *Multicollinearity Test.*

		Tolerance	VIF
1	(Constant)		
	product innovation	.367	2.723
	market innovation	.156	6.390
	process innovation	.191	5.247

Multicollinearity among the innovativeness variables was evaluated using Tolerance and Variance Inflation Factor (VIF): Product innovation had a tolerance of 0.367 and a VIF of 2.723, indicating low multicollinearity. Market innovation displayed a tolerance of 0.156 and a VIF of 6.390, suggesting moderate multicollinearity, which may indicate some overlap with other predictors. Process innovation had a tolerance of 0.191 and a VIF of 5.247, also suggesting moderate multicollinearity but remaining within an acceptable range.

Overall, the data were suitable for regression analysis, with assumptions of normality, independence, homoscedasticity, and acceptable levels of multicollinearity met. This implies that innovativeness dimensions can be effectively used to analyze their influence on the performance of textile-based manufacturing SMEs.

The model summary indicates a strong relationship between the predictors (product innovation, market innovation, and process innovation) and the performance of the enterprises: The R value of 0.897 suggests a high correlation between the independent variables (innovation dimensions) and the dependent variable (performance). The R Square value of 0.805 shows that 80.5% of the variance in performance is explained by the combined effect of product, market, and process innovation. The Adjusted R Square of 0.803, which adjusts for the number of predictors, reinforces the model's robustness.

Table 7. *Model Summary.*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.897[a]	.805	.803	.342313

a. Predictors: (Constant), process innovation, product innovation, market innovation
b. Dependent Variable: Performance of the enterprises

The ANOVA test further confirms the model's significance: The model has a F-value of 395.235 with a significance level (p-value) of 0.000, indicating that the predictors collectively have a statistically significant effect on enterprise performance.

Table 8. *Anova Results.*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	138.939	3	46.313	395.235	.000[b]
	Residual	33.747	288	.117		
	Total	172.686	291			

a. Dependent Variable: Performance of the enterprises
b. Predictors: (Constant), process innovation, product innovation, market innovation

The regression coefficients provide insights into the individual influence of each type of innovation on performance: Product innovation has a coefficient (B) of 0.339, with a highly significant t-value (8.591, $p < 0.001$). The positive coefficient implies that a one-unit increase in product innovation is associated with a 0.339 increase in enterprise performance, highlighting its significant role. Market innovation shows a stronger effect, with a coefficient of 0.448 and a significant t-value (6.701, $p < 0.001$). This indicates that market innovation plays a crucial role in enhancing enterprise performance. Process innovation has a coefficient of 0.136 with a t-value of 2.429 ($p = 0.016$), indicating a statistically significant but smaller effect on performance compared to the other two types of innovation.

Table 9. Coefficients Table.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.313	.093		3.379	.001
	product innovation	.339	.039	.369	8.591	.000
	market innovation	.448	.067	.441	6.701	.000
	process innovation	.136	.056	.145	2.429	.016

4.3.5. Interpretation of Correlations Among Innovation Variables

The correlation matrix provides insights into the relationships between different innovation-related factors (product differentiation, cost structuring, product innovation, market innovation, and process innovation): Strongly correlated with process innovation ($r = 0.896$, $p < 0.01$), indicating that enterprises emphasizing product differentiation often also focus on refining processes to support unique product offerings. Positively correlated with market innovation ($r = 0.791$, $p < 0.01$) and product innovation ($r = 0.718$, $p < 0.01$), suggesting that market and product innovation efforts align closely with differentiation strategies. Moderately correlated with cost structuring ($r = 0.560$, $p < 0.01$), which may imply that cost management plays a role in enabling effective product differentiation.

4.3.6. Cost Structuring

Strongly correlated with market innovation ($r = 0.789$, $p < 0.01$) and product innovation ($r = 0.706$, $p < 0.01$), which indicates that effective cost structuring can support various forms of innovation, potentially by allowing more resources to be allocated towards innovative activities.

Positively correlated with process innovation ($r = 0.690$, $p < 0.01$), showing a linkage between cost strategies and improvements in processes that may optimize efficiency and reduce expenses.

4.3.7. Product Innovation

Strongly correlated with market innovation ($r = 0.793$, $p < 0.01$) and process innovation ($r = 0.740$, $p < 0.01$), suggesting that organizations focusing on product innovation often engage in market innovations and process enhancements to support new product introductions or improvements.

4.3.8. Market Innovation

Highly correlated with process innovation ($r = 0.899$, $p < 0.01$), indicating that market innovations often go hand-in-hand with process innovations, as improvements in operations may enable more effective market positioning and responses to market demands.

4.3.9. Process Innovation

Exhibits the highest correlations with both product differentiation ($r = 0.896$, $p < 0.01$) and market innovation ($r = 0.899$, $p < 0.01$), highlighting that process improvements are fundamental to enhancing both differentiation and market-driven initiatives.

All correlations are statistically significant at the 0.01 level, which suggests that these innovation dimensions are interrelated, with process and market innovation showing particularly strong relationships with other aspects of innovation and differentiation. This implies that a holistic approach to innovation—encompassing market, product, and process elements—is likely beneficial for enterprises aiming to enhance their competitive positioning.

4.3.10. Correlations

Table 10. Correlations for Process Innovation.

		product differentiation	cost structuring	product innovation	market innovation	process innovation
product differentiation	Pearson Correlation	1	.560**	.718**	.791**	.896**
	Sig. (2-tailed)		.000	.000	.000	.000

		product differentiation	cost structuring	product innovation	market innovation	process innovation
	N	292	292	292	292	292
	Pearson Correlation	.560**	1	.706**	.789**	.690**
cost structuring	Sig. (2-tailed)	.000		.000	.000	.000
	N	292	292	292	292	292
	Pearson Correlation	.718**	.706**	1	.793**	.740**
product innovation	Sig. (2-tailed)	.000	.000		.000	.000
	N	292	292	292	292	292
	Pearson Correlation	.791**	.789**	.793**	1	.899**
market innovation	Sig. (2-tailed)	.000	.000	.000		.000
	N	292	292	292	292	292
	Pearson Correlation	.896**	.690**	.740**	.899**	1
process innovation	Sig. (2-tailed)	.000	.000	.000	.000	
	N	292	292	292	292	292

**. Correlation is significant at the 0.01 level (2-tailed).

H01: There is no significant influence of innovativeness on the performance of textile-based manufacturing small enterprises in Kenya.

Table 11. *Model Summary of the influence innovativeness on the performance of textile-based manufacturing SEs in Kenya.*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.675a	.456	.454	.56932

a. Predictors: (Constant), InnoV of the textile-based manufacturing SEs

The model summary in Table 11 indicated that the model had a good fit, with an R-square value of 0.456, meaning that 45.6% of the variance in the performance of the textile-based manufacturing SEs can be explained by the innovativeness while the other dimensions explain the remaining proportion.

Table 12. *ANOVA of the influence innovativeness on the performance of textile-based manufacturing small enterprises in Kenya.*

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	78.690	1	78.690	242.780	.000b
	Residual	93.995	290	.324		
	Total	172.686	291			

a. Dependent Variable: PerF of the textile-based manufacturing SEs
b. Predictors: (Constant), InnoV of the textile-based manufacturing SEs

In Table 12 the ANOVA was used to show the overall model significance. Since the p- value was less than the 0.05, it indicated that then there is a significant relationship between innovativeness and the performance of the textile-based manufacturing

SEs (F = 242.780 and p value <0.05).

Table 13. *Regression Coefficients of the influence innovativeness on the performance of textile-based manufacturing small enterprises in Kenya.*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.353	.136		9.970	.000
	Innovativeness of the enterprises	.640	.041	.675	15.581	.000

a. Dependent Variable: PerF of the textile-based manufacturing SEs

From Table 13, the regression equation can be written as:

$$PerF = 1.353 + 0.640\ InnoV \quad (1)$$

The regression equation (1) shows that the unstandardized coefficient (B) for innovativeness is 0.640. This suggests that for every one-unit increase in innovativeness, the performance of the textile-based manufacturing SEs increases by 0.640 units. The standardized coefficient (Beta) is 0.675, indicating that innovativeness has a strong positive impact on the performance of the textile-based manufacturing SEs. Since the p-value was less than 0.05 then there is enough evidence to warrant rejection of the null hypothesis and conclusion that there is a significant relationship between innovativeness and the performance of textile-based manufacturing small enterprises in Kenya.

Furthermore, the t-value of 15.581 is highly significant (p <.005), indicating that the relationship between innovativeness and performance is robust and unlikely to be due to chance. In summary, the findings suggest that innovativeness plays a significant role in determining the performance of textile-based manufacturing small enterprises in Kenya. Higher levels of innovativeness are associated with better performance outcomes for these textile-based manufacturing SEs.

Discussion of the influence innovativeness on the performance of textile-based manufacturing small enterprises in Kenya.

The results of the study provide important insights into the relationship between innovativeness and the performance of textile-based manufacturing small enterprises in Kenya. The findings indicate that innovativeness has a significant positive influence on the performance of these enterprises. The high R-square value of 0.456 suggests that approximately 45.6% of the variance in the performance of the enterprises can be explained by innovativeness. This indicates that innovativeness is a key factor in determining the success and performance of textile-based manufacturing small enterprises in Kenya.

The significant p-value in the ANOVA table further strengthens the validity of the findings, indicating that the relationship between innovativeness and performance is not due to chance. The regression model is statistically significant, supporting the idea that innovativeness plays a crucial role in the performance outcomes of these enterprises. The coefficient analysis reveals that for every one-unit increase in innovativeness, the performance of the enterprises increases by 0.640 units. This indicates a strong positive relationship between these variables. The standardized coefficient (Beta) of 0.675 confirms that innovativeness has a substantial impact on the performance of the enterprises.

The high t-value of 15.581 underscores the robustness of the relationship between innovativeness and performance. It indicates that the relationship is not only statistically significant but also practically meaningful. These results have important implications for textile-based manufacturing small enterprises in Kenya. The findings suggest that fostering innovativeness within these enterprises can lead to improved performance outcomes. By encouraging and implementing innovative practices, such as adopting new technologies, developing novel products, or implementing efficient production processes, these enterprises can enhance their competitiveness and achieve better performance in the industry.

Furthermore, policymakers and stakeholders can utilize these findings to develop strategies that support and promote innovation within the textile-based manufacturing sector in Kenya. This could include providing access to resources, training programs, and financial incentives that encourage small enterprises to innovate and stay ahead in the market. Numerous studies have highlighted the positive relationship between entrepreneurial orientation and firm performance [5, 6].

The relationship between innovativeness and organizational performance has been increasingly recognized in contemporary research, with findings suggesting that firms that prioritize innovation tend to experience superior performance outcomes. Studies indicate that innovativeness enables organizations to differentiate themselves in competitive markets by offering unique products and services that meet evolving

customer needs [9]. This differentiation not only enhances market share but also contributes to customer loyalty and satisfaction, further driving overall performance. Recent studies found that companies with robust innovation strategies reported higher profitability and growth rates compared to their less innovative counterparts, highlighting the critical role of innovation in achieving sustainable competitive advantage [11].

Moreover, the findings emphasize the significance of a supportive organizational culture in fostering innovativeness. Research shows that organizations that cultivate a culture of creativity and risk-taking are more likely to generate innovative ideas and solutions [17]. This cultural alignment encourages employees to collaborate, experiment, and share knowledge, resulting in a more dynamic and innovative work environment. By prioritizing employee engagement and promoting an inclusive atmosphere where all ideas are valued, organizations can enhance their capacity for innovation.

Furthermore, the correlation between innovativeness and performance underscores the importance of strategic alignment between innovation initiatives and organizational objectives. Organizations that effectively integrate innovation into their strategic planning processes are more likely to realize significant performance improvements [2]. This alignment ensures that innovation efforts are not only targeted at enhancing products or services but also at meeting broader organizational goals such as improving operational efficiency and increasing market penetration.

In summary the hypothesis was tested as shown in Table 14.

Table 14. *Summary the hypothesis.*

Objectives of Study	Hypothesis	Significance Value	Decision
Objective 1: To evaluate the influence of innovativeness on the performance of textile-based manufacturing small enterprises in Kenya.	H0: B= 0 H1: B> 0	.000	Reject H0

5. Conclusions

In conclusion, this study has shed light on the significant and positive impact of innovativeness on the performance of textile-based manufacturing small enterprises in Kenya. The findings underscore the importance of prioritizing innovation within these enterprises, as those that introduce new products or processes are more likely to achieve better performance outcomes. To enhance the competitiveness and sustainability of textile-based manufacturing small enterprises, it is imperative to foster a culture of innovation. This can be achieved by promoting creativity, allocating resources for research and development, and establishing platforms for idea generation and collaboration. Embracing these recommendations will not only bolster the performance of these enterprises but also position them favorably in the dynamic and competitive business landscape of Kenya.

Based on the findings of the study, it is evident that fostering a culture of innovation is crucial for enhancing the performance and competitiveness of textile-based manufacturing small enterprises in Kenya. To achieve this, the following recommendations are proposed:

Promote Creativity: Encourage and nurture creativity within these enterprises. Create an environment that values and rewards innovative thinking and problem-solving. Encourage employees to think outside the box and explore novel ideas.

Allocate Resources for Research and Development: Allocate adequate resources, both financial and human, to support research and development efforts. This includes investing in technology, providing training, and facilitating access to relevant information and expertise.

Establish Idea Generation Platforms: Create structured platforms for idea generation and collaboration. Encourage cross-functional teams to work together and share insights. Implement mechanisms for employees to submit and discuss innovative concepts.

By implementing these recommendations and fostering a culture of innovation, textile-based manufacturing small enterprises in Kenya can better position themselves to introduce new products and processes, leading to improved performance and competitiveness.

Abbreviations

ANOVA	Analysis of Variance
df	Degrees of Freedom
P Value	Probability Value
PerF	Performance of Enterprises
R	Correlation Coefficient
R^2	Coefficient of Determination
Sig.	Significance
SMEs	Small and Medium Enterprises
Std. Error	Standard Error
VIF	Variance Inflation Factor

Conflicts of Interest

The authors declare no conflicts of interest.

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