

Customer Focus, Supplier Partnerships and Operational Resilience of Manufacturing SMES in Kenya

 Chenuos Nehemiah Kosgei¹,  Busolo Hillary² and Chelulei Chelagat Irene³

¹Department of Management Science, Communication and Development Studies, Alupe University, PO Box 845 Busia, Kenya

²Department of Marketing, Hospitality and Human Resource, Alupe University, PO Box 845 Busia, Kenya

³I & M Bank LTD, Eldoret, Kenya

Abstract

In Kenya, SMEs play a fundamental role in the economy, representing approximately 98% of all enterprises and supporting employment for over 14 million individuals. The SME sector makes substantial contributions by driving innovation, opening new markets, contributing significantly to tax revenues, and creating employment opportunities, all essential factors in the fight against poverty. The question is, are they resilient enough to sustain shocks from uncertainties? This study aims to analyse how manufacturing firms in Kenya maintain their operational resilience through customer focus and supplier partnership. The study was guided by Dynamic Capabilities Theory and employed a quantitative research design targeting manufacturing SMEs operating in Nairobi County. A final sampling frame was developed by cross-referencing the Nairobi County licensing office records with the Kenya Association of Manufacturers (KAM) database. A sample of 100 SMEs was drawn from a population of 134 registered manufacturing SMEs using probability sampling, with the sample size determined through Taro Yamane's formula. Data were analyzed using Hayes Process Macro Model 4, a mediation model, to assess the direct and indirect effects of customer focus (X) on operational resilience (Y) via supplier partnerships (M). Mediation effects were estimated using the bootstrap method, providing insight into the mechanisms through which customer focus enhances SME resilience. The results revealed that customer focus significantly influences supplier partnerships ($\beta = 0.586$, $p < .001$), which in turn significantly impacts operational resilience ($\beta = 0.319$, $p < .001$). The direct effect of customer focus on operational resilience also remained significant ($\beta = 0.168$, $p < .001$), while the indirect effect through supplier partnerships was statistically significant ($\beta = 0.187$, 95% CI [0.072, 0.326]). These findings demonstrate that SMEs that prioritize

customer needs and maintain strategic supplier relationships enhance their ability to adapt to disruptions. Reliable suppliers ensure consistent access to raw materials, components, and services, reducing the risk of disruptions due to supply shortages. Strong partnerships allow SMEs and their suppliers to share information and jointly develop strategies for managing risks. This proactive approach helps mitigate potential disruptions before they impact operations.

Keywords: Customer focus, supplier partnership, operational resilience, SMEs, manufacturing

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Correspondence: kchenuos@gmail.com

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Introduction

Background of the study

Operational resilience is an emerging research area that has gained attention, particularly in light of major disruptions in the dynamic economic landscape, such as the 2008 financial crisis and the recent COVID-19 pandemic. These events often lead to financial losses, supply chain disruptions, business interruptions, customer attrition, intense market competition, limited growth and innovation, prolonged recovery periods, and sometimes even business closures. In Kenya, COVID-19 restrictions have disproportionately impacted SMEs compared to larger firms (Nyamboga & Ali, 2021). This is mainly because SMEs typically have lower capital reserves,

smaller asset bases, and consequently lower productivity. Research during the pandemic has shown varied effects on SMEs: some face potential closure, others are barely surviving, and a few are managing to cope with the challenges. For example, Masago et al. (2020) reported that more than half of SMEs were contemplating closure if the situation continued.

SMEs play a crucial role in achieving the Sustainable Development Goals (SDGs) worldwide. They are essential for job creation, promoting inclusive and sustainable economic growth, reducing inequality, and accelerating industrial growth and innovation. The success of

these contributions largely depends on a supportive business environment (OECD, 2017). However, the COVID-19 pandemic has severely disrupted SME operations, prompting many governments to implement measures to revive their economies. The OECD's June 2020 Outlook projected a significant global GDP decline of 6 per cent, with a 7.5 per cent decrease anticipated if a prolonged second wave of the pandemic occurred. A survey by the ILO (2020) reported a double-digit GDP decline in most countries, leading to increased unemployment and economic instability.

In Kenya, SMEs are the backbone of the economy, comprising about 98 per cent of all businesses and employing over 14 million people. The SME sector significantly contributes to fostering innovation, creating new markets, providing a substantial tax base, and generating employment opportunities, all of which are crucial for combating poverty (Kinuthia, 2020; Katua, 2014). The onset of the Coronavirus in early 2020 severely impacted virtually every economic sector. SMEs were particularly hard hit, with tourism, manufacturing, transport, and trade nearly coming to a standstill, leading to widespread job losses. Many SMEs had to close, resulting in massive wage losses for workers in the informal sector. Restrictions on movement, lockdowns, and curfews disrupted SME operations, and limitations on individual trips to markets and other activities further hindered business operations (Policy Brief, 2020).

A study by the Kenya Private Sector Alliance (2020) highlighted that the cancellation of business-related travels significantly impacted business activities in Kenya. Travel bans, particularly those restricting international travel, greatly affected the tourism sector. Border closures intended to contain the pandemic severely hit many SMEs. The hotel industry along the Kenyan coast was among the hardest hit by government measures to

control the virus's spread. These measures adversely affected income generation and the demand and supply of goods and services. Selective purchasing of products resulted in cutbacks and worker layoffs (Policy Briefs, 2020; Strathmore Business Club, 2020).

SMEs in Kenya play a significant role in the economy by providing employment opportunities and offering convenience to shoppers by supplying almost all household items under one roof (Karuga & Ntungwe, 2017). However, the sector faces supply chain disruptions, leading to annual losses. Many retail supermarkets are adopting supply chain resilience measures to mitigate the challenges posed by the unforeseen global pandemic. Effective supply chain management, including inventory control, cycle and lead times, overall productivity, agility, timely deliveries, quality, and reliability, remains vulnerable to disruptions. This vulnerability forces supermarkets to foster supply chain collaborations to achieve supplier resilience, ensuring they can bounce back and continue meeting performance targets. In Kenya, the performance of SMEs in the context of supermarket enterprises is a relatively new focus, emphasising the ability to absorb disruptions. Effective performance enables retail chain stores to overcome supply chain disruptions, ensuring continuous supply and meeting the expectations of markets, shareholders, and other stakeholders. According to Nemuel (2017), strategic sourcing, supply chain re-engineering, operational flexibility, and risk awareness enhance manufacturing capabilities in responding to supply chain disruptions. Retail chain stores are also under immense pressure to improve product or process quality, delivery lists, execution, and responsiveness, especially in the face of the COVID-19 pandemic, while simultaneously reducing costs. Firms resort

to supplier collaboration to ensure efficient operations, recover losses due to disruptions, and achieve resilience. Muricho and Muli (2021) asserted that effective supply chain collaboration can help manage disruptions, foster supplier resilience, and improve enterprise performance. Supply chain disruptions jeopardise firm performance (Kapsali, Roehrich & Akhtar, 2019), prompting enterprises to focus on recovering losses and ensuring continuous, efficient operations.

Many researches including a study by Private Sector Development (2020) reported that SMEs continued to face significant challenges due to a lack of funds and liquidity, employees, customers, and technology. During the early months of the pandemic, most SMEs struggled to serve their customers, pay wages, and fulfil commitments to suppliers. Consequently, many SMEs risked going out of business during the COVID-19 period. Research by the International Trade Centre (2020) found that the coronavirus outbreak caused a global health emergency and an economic slowdown, significantly affecting trade, investment, growth, and employment. The crisis also posed a substantial threat to achieving the United Nations Sustainable Development Goals. According to a study by Private Sector Development (2020), COVID-19 severely impacted the world economy, causing suffering related to employment, poverty, and food security. The study highlighted the need for turnaround strategies for SMEs and recommended providing credit facilities to help them resume operations.

The dependence of SMEs on a steady, continuous demand for goods has left many struggling to survive. They are likely to continue facing staff shortages due to employees' fear of contracting the disease or needing to stay home to care for family members during school closures. The study projects high rates of bankruptcy

in countries with fragile economies like Iraq, Afghanistan, and Myanmar. A 2020 survey by the International Labor Organization (ILO) found that the coronavirus pandemic has globally affected many economies, with SMEs being the hardest hit. They faced significant challenges in the demand and supply of goods and services, including a reduction in labour supply. Government measures to contain the disease, such as lockdowns, curfews, and quarantines, negatively impacted SME operations. The survey reported that supply chain interruptions led to massive shortages of goods in both local and international markets. Reduced demand and revenues caused severe liquidity losses for SMEs. Consumers, experiencing income loss and fearing virus contraction, reduced their spending. These factors, combined with layoffs, made SMEs particularly vulnerable to collapse. The SME sector also faced greater difficulty in instituting social distancing compared to larger firms (ILO, 2020).

Problem statement

Despite SMEs being regarded as the backbone of the economy in many nations (Cowling et al., 2015), their resilience is less frequently examined. Most studies focus on operational performance and excellence, with limited attention to resilience. This study aims to investigate and understand how customer focus and supplier partnerships contribute to enhancing the operational resilience of manufacturing SMEs in Nairobi. By doing so, it seeks to fill a critical gap in the existing literature through a case study of manufacturing SMEs in Nairobi, Kenya.

According to a KPMG study (2020), operational resilience is crucial as it enables businesses to be more adaptable and effective in responding to disruptions. It also provides other significant benefits, such as faster and more effective crisis management, improved customer and

investor trust and loyalty, accelerated innovation, sustainable business models, the ability to leverage synergies, and improved decision-making. A study on Chinese SMEs indicated that over 66% of these enterprises could not sustain operations beyond the second month based on their existing cash flows (Lu et al., 2020). Similar findings were observed in the United Kingdom, where reports showed that over 40% of SMEs had ceased operations within a few months due to the disruptions caused by the COVID-19 pandemic, with an additional 35% on the brink of closure (Nyamboga & Ali, 2021).

Manufacturing SMEs today cannot underestimate the strategic importance of quality in maintaining their market position. Research by Wanjau et al. (2013) revealed that SMEs often lose between 5% to 15% of their sales income due to inadequate attention to quality, while those that prioritize quality achieve better outcomes. The effectiveness of SME manufacturing enterprises has been shown to benefit positively from total quality management (TQM) practices such as customer focus and supplier partnerships (Dhieu, 2019). Implementing TQM practices like customer focus significantly enhances operational performance (Keinan & Karugu, 2018). This study aims to contribute to the existing literature by investigating how customer focus and supplier partnerships impact the operational resilience of manufacturing SMEs in Kenya.

Research objectives

- i. To analyse the impact of customer focus on the operational resilience of manufacturing SMEs in Kenya.
- ii. To investigate the influence of supplier partnerships on the operational resilience adopted by manufacturing SMEs in Kenya.
- iii. To assess the mediating role of supplier partnerships in the relationship

between customer focus and operational resilience of manufacturing SMEs in Kenya.

Research hypothesis

- H_{01} : Customer focus does not have any significant effect on the operational resilience of manufacturing SMEs in Kenya.
- H_{02} : Supplier partnerships do not influence operational resilience adopted by manufacturing SMEs in Kenya
- H_{03} : Supplier partnerships do not mediate the relationship between customers focus and the operational resilience of the manufacturing SMEs in Kenya

Empirical Reviews of Literature

Customer focus and operational resilience

According to Sharabi (2015), customer focus entails satisfying the current and future needs of clients by understanding their requirements and delivering perceived value. This approach aims to create value for customers, fostering their loyalty and ultimately enhancing firm profitability. In a globalised market, prioritising customer satisfaction through consumer-focused strategies is crucial. This involves aligning internal processes with customer needs to establish strong connections and ensure sustained business success. Today's corporate operations must integrate this crucial quality management aspect. Operational resilience, to be effective, should be centred on customer needs. Businesses need to ensure that their products and services are aligned with customer perspectives to deliver on their promises effectively. A customer-centric approach to resilience enables firms to

build trust, make timely decisions based on data, and proactively address issues before they affect customers, thereby preventing service disruptions. Despite previous studies on the impact of customer focus on operational performance, there remains a gap in understanding how customer focus specifically influences operational resilience.

Kangethe's (2015) study explored the connection between customer quality focus and operational performance within Kenyan government-owned entities. The research concluded that emphasising customer quality focus significantly influences these entities, enabling them to concentrate on core business competencies and enhance service delivery. Building upon this, the present study aims to investigate a similar relationship, focusing specifically on how customer focus impacts operational resilience within manufacturing SMEs in Nairobi County. This study seeks to contribute insights into how customer-centric strategies can enhance the ability of SMEs to withstand disruptions and maintain operational continuity in Nairobi's manufacturing sector.

Huo et al. (2023) investigated the relationship between supply chain resilience, customer satisfaction, and financial performance among Chinese manufacturers, finding a positive link between supply chain resilience and customer satisfaction. However, they noted that customer resilience did not directly contribute to financial performance. Building on this research, the present study aims to explore a similar theme, focusing on how customer focus influences operational resilience in manufacturing SMEs in Nairobi County, thereby bridging contextual and geographical gaps.

In another study, Kwabena (2023) examined 255 SMEs in Ghana's eastern region to assess the impact of customer

focus on performance. The findings highlighted that a customer-focused strategy significantly enhances SME performance across various dimensions, including customer satisfaction, financial outcomes, internal business processes, and learning and growth. This study intends to provide a fresh perspective by investigating how critical customer focus influences the operational resilience of Kenyan manufacturing SMEs. By addressing these gaps and leveraging insights from diverse contexts, this research aims to contribute valuable knowledge on the relationship between customer focus and operational resilience in the specific setting of Nairobi County's manufacturing SMEs.

Supplier partnership and operational resilience

According to Alshurideh et al. (2019), supplier chain reliance involves managing how a company engages with its suppliers to enhance the effectiveness of processes related to the supply of goods and services. Supplier relationship management aims to optimise interactions between a firm and its suppliers. Nenavani & Jain's (2022) research focused on the impact of supply chain responsiveness on operational success within India's manufacturing sector. They found that strategic supplier partnerships and customer relationships significantly influence supply chain responsiveness. Their findings suggest that by fostering strategic partnerships with suppliers and strengthening customer connections, organisations can improve supply chain responsiveness, thereby enhancing overall operational performance. The study highlights several factors that influence a firm's supplier relationships, including improved coordination, early supplier involvement in product development, and collaborative efforts. The research recommends that manufacturing managers prioritise investment in key

suppliers and develop responsive strategies to better navigate environmental volatility and uncertainties.

Memon et al. (2018) found that strategic supplier partnerships play a crucial role in linking various components of supply chain management to the performance of Pakistani pharmaceutical manufacturing firms. Their study demonstrated a significant correlation between strategic partnerships with suppliers and the success of pharmaceutical manufacturing companies. Strategic partnerships involve collaborative efforts between multiple businesses to support each other in essential areas like product development, production, marketing, and distribution.

Additionally, Khan et al. (2015) highlighted that collaboration with suppliers and integration of information significantly impact firm performance. Given these insights, this research seeks to explore whether there is a comparable association between operational resilience and supplier partnerships. Specifically, it aims to investigate how robust supplier partnerships contribute to the operational resilience of manufacturing firms, potentially enhancing their ability to withstand disruptions and maintain performance in challenging environments.

Mwangi et al. (2021) explored the relationship between supplier collaboration and the performance of retail stores in Nairobi County, with a focus on the intervening role of supply chain resilience. Their findings indicated that supplier collaboration significantly and positively influences the performance of retail stores, and that supply chain resilience plays a significant intervening role in this relationship. Specifically, enhancing supply chain resilience through effective supplier collaboration contributes significantly to the performance of retail stores in Nairobi.

Building on this context, the current study aims to fill a significant gap by investigating how supplier partnerships mediate the relationship between customer focus and operational resilience in manufacturing SMEs located in Nairobi County. By examining this mediation process, the research seeks to provide insights into how strategic supplier collaborations can enhance the ability of manufacturing SMEs to maintain operational resilience amidst various challenges and disruptions.

Theoretical Review

This study was guided by Dynamic Capabilities Theory (DCT), initially developed by Teece, Pisano, and Shuen (1997), extends the Resource-Based View (RBV), explains how firms integrate, build, and reconfigure internal and external competencies to address rapidly changing environments. The core argument of DCT is that competitive advantage in turbulent markets stems not merely from possessing valuable resources, but from the firm's ability to dynamically adapt these resources to match environmental changes (Teece, 2007). This theory emphasizes three core capabilities: sensing opportunities and threats, seizing opportunities, and transforming or reconfiguring organizational resources.

Customer focus, as a dynamic capability, reflects a firm's ability to sense changes in customer needs and preferences and to reconfigure its processes to deliver value accordingly. In Kenya's manufacturing sector, SMEs that actively engage with customers and gather feedback are better positioned to adapt their product offerings and customer service strategies. Dynamic capabilities enable these firms to develop agile market-sensing mechanisms, personalize offerings, and create customer-centric innovations (Wang & Ahmed, 2007). This ability not

only strengthens customer relationships but also builds brand loyalty, enhancing long-term competitiveness in a highly fragmented and price-sensitive market.

Dynamic Capabilities Theory also illuminates the importance of forming strategic supplier partnerships. These partnerships are not static relationships but are continuously reshaped to meet shifting production demands and supply chain realities. Kenyan manufacturing SMEs often operate in uncertain environments where access to quality raw materials and timely delivery is critical. Through dynamic capabilities, firms develop the ability to co-evolve with suppliers, co-create value, and reconfigure supply networks when disruptions occur (Teece, 2014). For instance, a resilient SME might quickly switch to alternative suppliers or renegotiate contracts in response to geopolitical disruptions or currency fluctuations. Such agility enhances supply chain resilience and ensures business continuity.

Operational resilience, which refers to an organization's comprehensive ability to anticipate, adequately prepare for, effectively respond to, and efficiently recover from various disruptions, thereby ensuring the uninterrupted continuity of critical business functions, is a direct outcome of effective dynamic capabilities. When manufacturing SMEs in Kenya successfully develop and strategically leverage their customer focus capabilities manifesting as the ability to sense shifts in demand and adapt products accordingly and their supplier partnership capabilities evidenced by securing flexible supply chains and engaging in co-innovation they are, in essence, actively exercising their dynamic capabilities. These integrated capabilities empower the SMEs to proactively manage potential risks, rapidly reconfigure their operations when confronted with disruptions such as supply chain breakdowns, sudden changes in

market demand, or economic downturns, and ultimately recover with remarkable efficiency. Therefore, operational resilience is not a static attribute but rather a dynamic and evolving outcome, continuously influenced and strengthened by the persistent application of customer-centric and supplier-collaborative capabilities. These capabilities critically enable the SME to learn valuable lessons from past disruptions and strategically reconfigure its resources to better address future challenges, thereby substantially enhancing its long-term resilience.

Conceptual Framework

From this research, customer focus refers to the strategic orientation of SMEs towards understanding and meeting the needs and expectations of their customers effectively. It involves aligning internal processes, products, and services with customer preferences and requirements to enhance satisfaction and loyalty. Supplier partnerships entail collaborative relationships between manufacturing SMEs and their suppliers. These partnerships involve mutual support in critical areas such as procurement, production, distribution, and innovation. Operational resilience is the ability of SMEs to maintain and recover their core business functions and adapt to disruptions, both internal and external. It involves strategies and capabilities that enable SMEs to continue operations and deliver products and services despite challenges.

Supplier partnerships act as a mediator in the relationship between customer focus and operational resilience. They facilitate effective supply chain management, enhance responsiveness to market demands, and improve agility in responding to disruptions. By strengthening supplier partnerships, SMEs can leverage external resources and

capabilities to enhance their operational resilience.

The direct relationship suggests that SMEs that prioritise understanding and meeting customer needs are better equipped to maintain operational resilience by aligning their operations with customer expectations. This pathway of supplier partnerships to operational resilience illustrates that effective partnerships with suppliers enable SMEs to

enhance their operational resilience through improved supply chain management, collaboration, and shared resources. The mediating role of supplier partnerships is hypothesised to mediate the relationship between customer focus and operational resilience. This implies that strong supplier relationships facilitate the implementation of customer-focused strategies, thereby enhancing SMEs' ability to withstand disruptions and maintain operational efficiency.

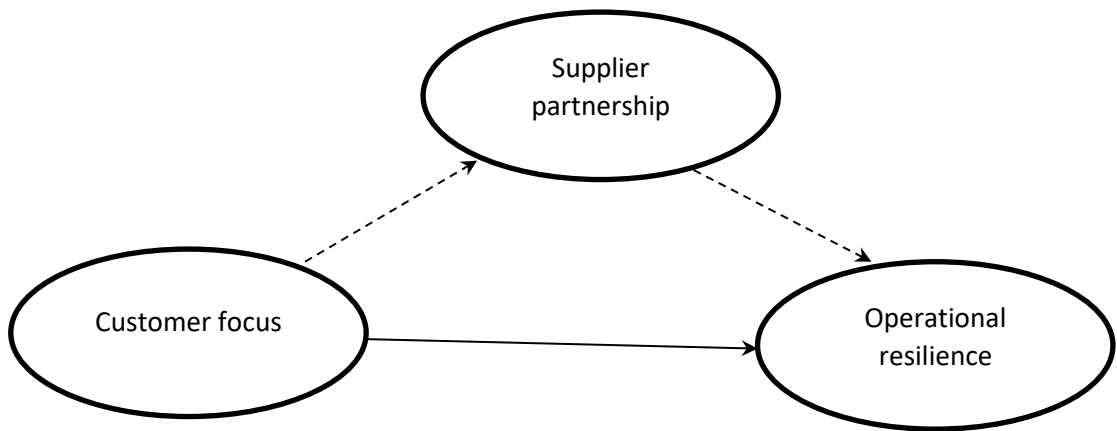


Figure 1: Conceptual framework of the research

Methodology

The research methodology involved all the data collection procedures, target population and sampling method together with the model specification.

Target population and sampling

The study focused on manufacturing SMEs (Small and Medium Enterprises) operating within Nairobi County. The initial list of manufacturing SMEs was obtained from official records maintained by the Nairobi County licensing office. A cross-checking was done on the initial list with registered manufacturing SMEs listed with the Kenya Association of Manufacturers (KAM). The final study population compiled a final list of manufacturing SMEs that meet the study

criteria (registered and operational within Nairobi County).

Sampling

The probability sampling was employed, where each member of the population has an equal chance of being included in the sample (Burns & Grove, 2014). Out of the initial target population of 134 manufacturing SMEs, a total of 100 respondents were selected. The sample size was determined using Taro Yamane's (1973) formula, as updated by Singh & Masuku (2014), which was deemed appropriate for the study's design.

$$n = \frac{N}{1 + Ne^2} \dots \dots \dots 1$$

Where:
 n= Desired Sample Size
 N= Population

e = Margin of Error at 5% (standard value of 0.05) The size of the sample in this research will be:

$$n = \frac{134}{1 + 134(0.05)^2} = 100 \dots \dots \dots 2$$

Specification of the model

The study used Hayes Model 4, a mediation model used to examine the indirect effect of an independent variable (X) on a dependent variable (Y) through a mediator variable (M). It's particularly useful for understanding how and to what extent the mediator variable influences the relationship between X and Y. Hayes Model 4 can be applied to the conceptual framework of the effect of customer focus and supplier partnerships on operational resilience of manufacturing SMEs in Kenya: In this context, Customer focus is the independent variable (X): X represents the degree to which manufacturing SMEs focus on understanding and meeting customer needs effectively. Supplier Partnerships are the mediator (M): M represents the

strategic collaborations and partnerships between manufacturing SMEs and their suppliers. Finally, Operational Resilience is the dependent variable (Y): Y denotes the ability of manufacturing SMEs to maintain operational continuity and adaptability amidst disruptions.

The hypothesised relationships: Path a: The effect of Customer Focus (X) on Supplier Partnerships (M). Path b: The effect of Supplier Partnerships (M) on Operational Resilience (Y), controlling for Customer Focus (X). Total Effect (c): The direct effect of Customer Focus (X) on Operational Resilience (Y). Direct Effect (c'): The direct effect of Customer Focus (X) on Operational Resilience (Y), after accounting for the mediation effect of Supplier Partnerships (M). Indirect Effect (ab): The indirect effect of Customer Focus (X) on Operational Resilience (Y) through Supplier Partnerships (M).

These relationships can be depicted in the analytical model as shown by Figure 2.

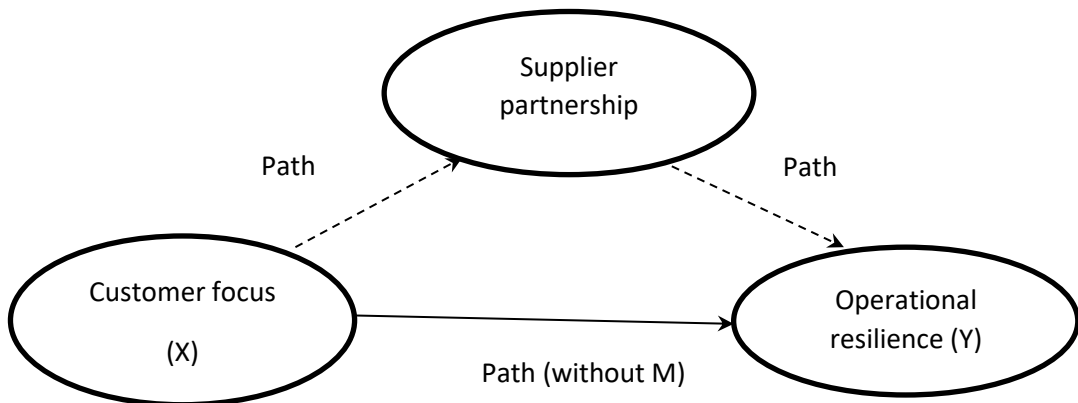


Figure 2: Analytical model

Test Paths:

Path *a*: M is regressed on X to determine the effect of customer focus on supplier partnerships.

Path *b*: Y is regressed on M to determine the effect of supplier partnerships on operational resilience, controlling for customer focus.

Paths *c* and *c'*: Direct effects of customer focus on operational resilience, with and without mediation by supplier partnerships.

Indirect effect (*a*b*) is calculated using a bootstrapping method to estimate the indirect effect of customer focus on operational resilience through supplier partnerships.

Results and Discussions

This study employed Hayes' PROCESS Macro Model 4 to examine the mediating role of supplier partnerships in

the relationship between customer focus and operational resilience in manufacturing SMEs in Kenya. The findings are presented in Table 1 below.

Table 1: Hayes Model 4 (Mediation Results)

Variables	Supplier Partnership (M) Coef. (SE)	Operational resilience(Y) Coef. (SE)
Customer Focus (X)	<i>path a</i> = 0.586***(0.090)	Path <i>c'</i> = 0.168*** (0.089)
Supplier Partnership (M)		Path <i>b</i> = 0.319.***(.085)
Constant	=1.51***(0.359)	=2.042***(0.320)
	$R^2 = 0.3168$	$R^2 = 0.2925$
	F=42.203	F=18.607
	P> F= 0.000	P> F= 0.000
	Index	SE (Boot)
Mediation	0.187	0.065
		Boot 95% CI
		0.072 0.326

Note: Coef. = coefficient, SE = standard error, CI = confidence interval.

95% confidence interval for conditional direct and indirect effect using Bootstrap.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

The direct effect of customer focus on supplier partnerships was positive and statistically significant ($\beta = 0.586$, $p < 0.001$), confirming Path a. This aligns with Otieno (2021) who found that SMEs in Nairobi that prioritize customer satisfaction tend to form deeper strategic alliances with their suppliers, as such relationships are essential for meeting dynamic customer demands. Likewise, the effect of supplier partnerships on operational resilience (Path b) was also significant ($\beta = 0.319$, $p < 0.001$) supporting the existing literature that stresses the strategic value of collaborative supplier relationships in enhancing firm adaptability. research by Kipruto and Namusonge (2021) on third-party Logistics Service Providers (LSPs) in Kenya highlighted how embracing comprehensive supply chain collaboration including with suppliers, internal teams, and customers significantly enhanced operational performance. Further reinforcing these findings, Bor (2021) investigated the

impact of an integrated supply chain on the performance of Kenyan food and beverage manufacturing companies. Using multiple regression and correlation analysis, the study revealed a significant and positive influence of strong supplier agreements on the performance of these manufacturing enterprises, directly contributing to reduced supply chain inefficiencies further validating the critical role of supplier partnerships in promoting robust operational capabilities.

The direct effect of customer focus on operational resilience (Path *c'*) remained significant ($\beta = 0.168$, $p < 0.001$), shows that customer orientation alone also is key to promoting resilience. This supports the view by Amajuoyi, Benjamin and Adeusi (2024) that customer-focused SMEs are more agile and better equipped to anticipate and respond to market changes. Being attuned to customer needs enables SMEs to align internal processes with external expectations, thus boosting resilience. Additionally, the indirect effect

($a \times b = 0.187$) was significant, as indicated by the 95% bootstrap confidence interval [0.072, 0.326], which does not include zero. This confirms that supplier partnerships partially mediate the relationship between customer focus and operational resilience. This indicates that SMEs which develop a strong customer orientation indirectly strengthen their operational resilience by building supplier partnerships that deliver flexibility and responsiveness. A study by Gitonga (2021) emphasized this chain effect, illustrating that customer feedback often shapes

supplier performance metrics, thereby creating a cycle of improved supply chain efficiency and firm performance.

Hypothesis testing summary

To evaluate the theoretical assumptions of the study, four hypotheses were tested using Hayes' Process Macro Model 4. These hypotheses were based on the proposed mediation framework assessing how customer focus influences operational resilience directly and indirectly through supplier partnerships among manufacturing SMEs in Kenya.

Table 2: Hypothesis testing summary

Hypothesis	Path Tested	Result	Decision
H0 ₁ : Customer focus has no effect on supplier partnerships	$X \rightarrow M$	$\beta = 0.586, p < .001$	Reject H0 ₁
H0 ₂ : Supplier partnerships have no effect on operational resilience	$M \rightarrow Y$	$\beta = 0.319, p < .001$	Reject H0 ₂
H0 ₃ : Customer focus has no direct effect on operational resilience	$X \rightarrow Y (c')$	$\beta = 0.168, p < .001$	Reject H0 ₃
H0 ₄ : Supplier partnerships do not mediate the relationship between customer focus and operational resilience	Indirect $a \times b$	$\beta = 0.187, CI [0.072-0.326]$	Reject H0 ₄

Table 2 presents the results of hypothesis testing. The findings indicate statistically significant relationships among all the variables. The direct effect of customer focus on supplier partnerships was significant ($\beta = 0.586, p < .001$), leading to the rejection of H0₁. Similarly, the effect of supplier partnerships on operational resilience was also significant ($\beta = 0.319, p < .001$), resulting in the rejection of H0₂. The direct path from customer focus to operational resilience remained significant even when the mediator was accounted for ($\beta = 0.168, p < .001$), rejecting H0₃. Finally, the indirect effect of customer focus on operational resilience through supplier partnerships was also significant ($\beta = 0.187$), with the 95% bootstrap confidence interval [0.072, 0.326] not containing zero.

This confirms partial mediation and leads to the rejection of H0₄.

Path analysis of the mediation model

To visually represent the hypothesized relationships and mediation mechanism within the conceptual framework, Figure 2 illustrates the path analysis based on Hayes Process Macro Model 4. The figure demonstrates the structural model involving the direct and indirect relationships among customer focus (X), supplier partnerships (M), and operational resilience (Y) among manufacturing SMEs in Kenya.

The path analysis model confirms that customer focus significantly enhances supplier partnerships ($\beta = 0.586, p < .001$), which in turn substantially boosts operational resilience ($\beta = 0.319, p < .001$).

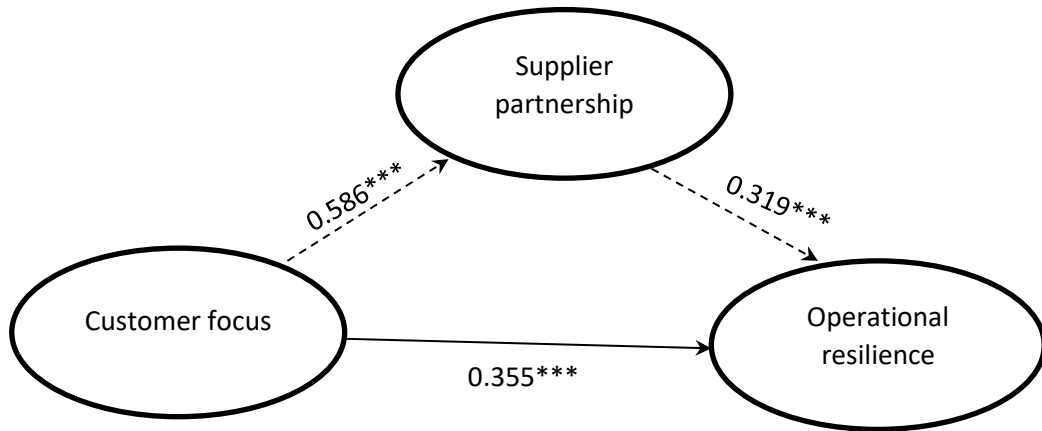


Figure 2: Path Analysis

Significantly, customer focus retains a direct and significant influence on operational resilience ($\beta = 0.168$, $p < .001$), even after accounting for the mediating role of supplier partnerships. The statistically significant indirect effect ($\beta = 0.187$, 95% CI [0.072, 0.326]) validates the mediating influence of supplier partnerships in the relationship between customer focus and operational resilience. These findings suggest that manufacturing SMEs that prioritize understanding and meeting customer needs are better positioned to establish strategic supplier collaborations. Such partnerships facilitate the exchange of critical information on customer preferences, market trends, and supply chain dynamics enabling SMEs to align their operations closely with market demand (Hamisi, 2011). Consistently meeting customer expectations promotes trust and loyalty, ensuring a stable revenue stream even during periods of disruption. Additionally, close supplier relationships promote innovation through access to new technologies and flexible processes, enhancing SMEs' capacity to adapt to volatile market conditions. The integration of customer focus with robust supplier partnerships thus builds a dynamic and resilient operational framework that supports SMEs in navigating uncertainty, sustaining performance, and thriving in

increasingly competitive and disruptive environments (Ndiema et al., 2025).

Conclusion

SMEs that prioritise customer focus often differentiate themselves in the market based on superior customer service and product quality. This differentiation can create a competitive advantage and attract more customers. Further, the significance of supplier partnership indicates that improved supply chain reliability by collaborating closely with suppliers fosters trust and reliability in the supply chain. Reliable suppliers ensure consistent access to raw materials, components, and services, reducing the risk of disruptions due to supply shortages. Strong partnerships allow SMEs and their suppliers to share information and jointly develop strategies for managing risks. This proactive approach helps mitigate potential disruptions before they impact operations.

Co-operative partnerships allow SMEs and suppliers to plan and forecast demand more accurately. Through understanding customer preferences and market trends through shared insights, SMEs can adjust production schedules and inventory levels proactively, minimising stockists and overages. Suppliers can contribute to risk management strategies

by providing alternative sourcing options, buffer stocks, or contingency plans. This collaborative approach helps SMEs mitigate supply chain disruptions and maintain operational continuity during crises.

Recommendations

Based on the understanding of how supplier partnerships can mediate the relationship between customer focus and operational resilience in manufacturing SMEs;

Manufacturing SMEs need to strengthen supplier partnerships by regularly communicating and collaborating with suppliers to align strategies, exchange market insights, and co-develop solutions. They need to provide support and incentives for suppliers to improve their capabilities, quality standards, and responsiveness.

They also need to continuously gather and analyse customer feedback to understand evolving needs and preferences. Implementing these recommendations, manufacturing SMEs may enhance their operational resilience by leveraging strong supplier partnerships and a customer-focused approach. These strategies not only mitigate risks and improve supply chain efficiency but also position SMEs to sustain long-term growth and competitiveness in dynamic market environments.

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