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SUPPLY CHAIN MANAGEMENT RESILIENCE: HOW IT WORKS TO THE SUSTAINABILITY OF CULINARY SMES THROUGH DECADE

Dian Inda Sari[1], Rizky Saputra, Dewa Handinata

Department of Management, Sekolah Tinggi Ilmu Ekonomi Graha Kirana
Jl. Kirana Raya No. 20-22 Medan 20112, Indonesia

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ABSTRACT

Background: The culinary industry has become a favored choice for startup entrepreneurs, primarily due to its accessibility and the potential for immediate financial returns. However, it's essential to recognize that success in this domain hinges on proactive and well-considered strategies and actions. Entrepreneurs must employ these strategies, including effective Supply Chain Management (SCM), to ensure customer satisfaction.
Purpose: The objective is to investigate the relationship between these four factors and the performance dimensions of culinary SMEs that manage to sustain their operations for at least a decade.
Design/methodology/approach: This study adopts a quantitative research approach to assess the resilience of Culinary SMEs SCM, with a focus on the variables of agility, robustness, flexibility, and service quality. Structural Equation Modeling (SEM) with Smart PLS is used to examine the research hypothesis model.
Findings/Result: The findings from data analysis reveal that these four variables have a positive impact on the performance of culinary SMEs that have successfully operated throughout the decade.
Conclusion: SCM resilience plays a pivotal role in helping Culinary SMEs navigate the prevailing uncertain business landscape while maintaining their competitive edge. It has been revealed that SCM resilience has a constructive impact on the long-term performance of Culinary SMEs, a resilience that can withstand the test of time.
Originality/value (State of the art): The state-of-the-art research is to develop an SCM framework starting from the primary inquiry: how can Culinary SMEs segment materials to facilitate smoother supply processes? The research also explores how such segmentation can enhance Culinary SMEs' resilience and logistics strategies. This necessitates establishing priorities to ensure service quality, ultimately leading to the identification of key SMEs Culinary SCM resilience performance by using four variables measures.

Keywords: culinary smes scm, scm resilience, scm agility, scm flexibility, service quality

[1] Corresponding author:
Email: sari.dianinda@gmail.com

INTRODUCTION

Supply chain management (SCM) involves the systematic control of decision-making process, the execution of task, and the flow of material, information, and money within an operation. The primary objective is to align these processes across various stages of the supply chain to meet the demand of the end customer. Notably, the relationship between SCM and the performance of Small and Medium Enterprises (SMEs) has been explored in the literature, with varying findings. SCM is negatively related to the performance of Small and Medium Enterprises (SMEs) (Arend, 2005). These results are obtained from three considerations: 1) factors that influence strategic choices, 2) factors that influence performance outcomes and 3) results. However, it is essential to note that several researchers argue that SCM has an impact, especially in increasing competitive advantage in real-time (Li et al. 2006), (Chadge, 2014) related to improving customer service, reducing logistics costs, improving planning and scheduling (Koech & Ronoh, 2015) and its role in the green economy (Ali, 2022).

SMEs play an important role in every economy. Nowadays, the culinary business is a favorite choice for startups. This business allows everyone to enter. Previous research suggests that passion for doing business plays an important role in the resilience of culinary SMEs to sustaining through decade (Rasyid, et al. 2022). This study will explore the operational activities of culinary SMEs by highlighting the importance of SCM resilience.

The primary objective of this study is to emphasize the critical importance for culinary SMEs to be well-prepared to navigate the uncertainties that accompany business operations. The establishment of a dependable supply chain (SC) is fundamental to the success of a culinary enterprise in effectively managing this uncertainty. In the context of the culinary business, SCM pertains to the interactions and partnerships between SMEs and the entities upon which they rely to fulfill orders and ensure customer satisfaction. In cases where an SME's supply chain is inadequate, there is a heightened risk of working with non-standard materials, which can result in delays for customers, the accrual of unnecessary costs, the production of unsatisfactory products, and, ultimately, the potential loss of business. Customers are generally unconcerned with the intricacies of where problems arise within the supply chain; their primary concern is receiving a product that aligns with their expectations.

Typically, the regulatory framework and guidelines for adherence to sustainability standards are established by the purchasing firm (M. Tachizawa & Yew Wong, 2014). Therefore, in their pursuit of a transparent Supply Chain (SC), it is ideally expected that the purchasing firm independently monitors all relationships with upstream suppliers (Wilhelm et al. 2016).

In the context of SCM for culinary SMEs, it encompasses five essential activities: sourcing raw materials, logistics, production, sales, and inventory management. The integration of these activities, driven by the objective of meeting consumer demand for high-quality food products, commences with the effective management of the food supply chain. This comprehensive approach not only facilitates the prevention of issues that can lead to wastage but also ensures that SMEs can have confidence in the materials they receive, allowing them to sustain their operations with a reliable supply of goods that are available on time, in the correct quantities, and at the expected prices. This is the essence of effective SCM in the culinary business.

Globalization has introduced considerable challenges for SMEs due to intensified competition, resulting in a relatively high rate of SMEs exit the business. Building upon this context, the problem statement for this study seeks to address how the concept of SCM in Culinary SMEs can facilitate integrated and enduring relationships between suppliers, production units, and end consumers. This inquiry is of paramount importance given that many startups and SMEs often fail to recognize the advantages of SCM in effecting transformative changes in their business processes, ultimately yielding positive outcomes such as improved service quality, cost reduction, and heightened efficiency (Chin et al. 2012). This awareness is crucial for minimizing the incidence of SME exit this business. The objectives of this study revolve around evaluating the influence of SCM resilience on the performance of culinary SMEs in Medan City, with a specific focus on those capable of sustaining their operations for more than a decade. The examination will consider four resilience dimensions: agility, robustness, and flexibility (Alshahrani, 2022), along with perceived service quality. The research endeavors to explore the interrelationships between these four aspects and the

dimensions of SME performance that enable them to persevere over the course of a decade. Additionally, the study will investigate the overall impact of Supply Chain resilience as a construct on SME performance.

METHODS

This study involves gathering firsthand information directly from 31 traditional culinary SMEs in Medan City that have sustained operations for more than a decade. Judgmental Sampling was employed as the predetermined selection criteria to screen and identify eligible businesses, focusing on specific criteria to ensure the validity and generalizability of the findings. The selection criteria included culinary destination status and excellence in their food menu offerings.

The survey questions were formulated to measure the perspectives of these of culinary SMEs on how they have been able to maintain their SCM operations. The Table 1 provides the types of SMEs that participated in this study.

The objective of this study is to assess the influence of SCM resilience on the performance of culinary SMEs in Medan City that have sustained their operations through more than a decade. This investigation is framed around four key dimensions of resilience, specifically agility, robustness, flexibility (Alshahrani, 2022) and perceived service quality. The research approach aims to delve into the interrelationships between these four aspects and their impact on various dimensions of SME performance. Moreover, this study seeks to explore the overall effect of SCM resilience as a construct on SME performance. To achieve these objectives, a research model has been formulated as follows (Figure 1).

This study will address the following hypotheses:
H1: Agility, defined as the ability of culinary SMEs to swiftly adapt to changing customer preferences, market trends, and operational demands, is expected to positively influence service quality. This hypothesis is grounded in the notion that agile organizations can respond promptly and effectively to customer needs and market dynamics, leading to enhanced service delivery and customer satisfaction within the culinary industry.

H2: Robustness, characterized by the resilience and stability of culinary SMEs in the face of disruptions, challenges, and uncertainties, is anticipated to have a positive impact on service quality. This hypothesis posits that robust SMEs are better equipped to maintain consistent service standards, manage operational risks, and mitigate adverse effects on service delivery, thereby fostering customer trust and loyalty.

H3: Flexibility, defined as the ability of culinary SMEs to adapt and adjust their operations, processes, and strategies in response to changing market conditions, customer preferences, and internal dynamics, is hypothesized to positively affect service quality. This hypothesis suggests that flexible SMEs can tailor their offerings, processes, and service delivery mechanisms to meet diverse customer needs and preferences, leading to enhanced service quality and customer satisfaction.

H4: Flexibility within the SCM processes of culinary SMEs, encompassing responsiveness, adaptability, and agility in sourcing, production, distribution, and logistics activities, is expected to positively impact SCM resilience. This hypothesis posits that flexible SCM practices enable SMEs to effectively navigate supply chain disruptions, optimize resource utilization, and maintain operational continuity, thereby enhancing overall SCM resilience within the culinary industry.

Table 1. List of respondents

Sample Creteria	Respondent	%
Kind of SMEs culinary		
Fried Rice	3	10
Satay	4	13
Food Stall	4	13
Fried Noodle	5	16
Soto Medan	3	10
Martabak	1	3
Fried Tofu	1	3
Meatball Noodles	5	16
Chicken Noodles	2	6
Vegetable Rice Cake	2	7
Burger	1	3
Age		
10 – 25 Years	13	42
26 – 45 Years	14	45
Above 46 Years	4	13

H5: Service quality, reflecting the degree to which culinary SMEs meet or exceed customer expectations in terms of product quality, responsiveness, reliability, and overall satisfaction, is hypothesized to positively influence SCM resilience. This hypothesis suggests that high service quality enhances customer loyalty, fosters positive relationships with suppliers and partners, and strengthens the overall resilience of the supply chain, as satisfied customers are more likely to support SMEs during challenging times and disruptions.

These hypotheses provide a comprehensive framework for understanding the relationships between agility, robustness, flexibility, service quality, and supply chain management resilience within the context of culinary SMEs. They articulate the theoretical underpinnings and empirical expectations, laying the groundwork for rigorous analysis and investigation in academic research.

To assess these research variables accurately and enhance the credibility of measurements, multi-scale models were employed. A 5-point Likert scale was utilized, ranging from "never" to "always." Subsequently, the questionnaire was tailored to align with the research objectives and variables. Data collected were then analyzed and hypotheses tested using Structural Equation Modeling (SEM) analysis techniques. SEM is a statistical method that combines factor analysis with regression analysis to assess the relationships among the four variables in this research model (Fan, et al. 2016). In this research, Partial Least Squares Path Modeling (PLS-PM) was used for modeling purposes. Contemporary literature recommends the use of PLS-PM for theoretical concepts, especially those originating from behavioral sciences and design science (Henseler, 2017). PLS-PM is a widely applied estimator in causal research and has undergone several enhancements, such as Consistent PLS (PLSc) for latent variable models, bootstrap-based tests for overall model fit, and the heterotrait-ratio test of correlation to monotrait for assessing discriminant validity (Benitez, J, et al. 2020; Benitez et al. 2020). These methodological choices were made to ensure the robustness and accuracy of the research analysis.

RESULTS

As presented in Table 2, almost all indicators in this study exhibit a loading factor exceeding 0.7. It is worth noting that while a loading factor greater than 0.7 is the ideal benchmark, indicators with a loading factor above 0.6 can still be considered valid. This implies that all the indicators used in this study are valid for measuring the study construct.

Table 3 reveals the Average Variance Extracted (AVE) for each variable, including supply chain agility, supply chain robustness, supply chain flexibility, supply chain service quality, and Culinary SME SCM resilience. The AVE for each variable has a construct of >0.50, signifying that all constructs are highly reliable. Consequently, it can be affirmed that each variable exhibits a substantial level of discriminant validity.

Furthermore, the composite reliability values for each variable consistently exceed >0.60. These results indicate that each variable meets the necessary requirements, thereby affirming that all variables are highly reliable. It can also be deduced that the indicators performed in this study possess a strong degree of discriminant validity within their respective variables. The Cronbach's alpha values for each variable consistently construct value of >0.60, signifying that each research variable fulfills the Cronbach's alpha value requirements. This can be concluded that all variables are highly reliable, and it can be confidently stated that the indicators performed in this study exhibit substantial discriminant validity within their respective variables.

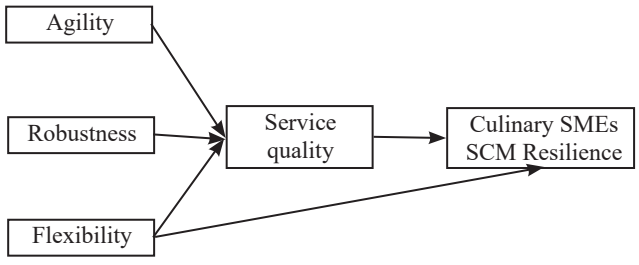

Figure 1. Research model

Table 2. Convergent validity checking: outer loading value

Latent Variable	Agility (X1)	Robustness (X2)	Flexibility (X3)	Service Quality (X4)	Culinary SMEs SCM Resilience (Y)
X1.1	1.138				
X1.2	1.029				
X1.3	0.830				
X2.1		1.205			
X2.2		0.764			
X2.3		1.162			
X2.4		0.629			
X3.1			0.771		
X3.2			0.906		
X3.3			1.131		
X3.4			0.883		
X3.5			1.143		
X4.1				1. 027	
X4.2				1. 027	
X4.3				0.938	
Y.1					0.823
Y.2					0.905
Y.3					1.095
Y.4					1.191

Table 3. Construct reliability and validity

Variabel	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Agility - X1	0.887	0.922	0.815
Robustness - X2	0.789	0. 901	0.642
Flexibility - X3	0.839	0.900	0.620
Service Quality - X4	0.887	0.960	0.911
SCM Resilience – Y	0.898	0.908	0.766

Discriminant validity testing, based on the Fornell-Lacker Criterion, suggests strong discriminant validity when the Average Variance Extracted (AVE) value for a particular construct is higher than the construct's correlation with other variables (Sekaran & Bougie, 2016). As outlined in Table 4, the discriminant validity values for each variable consistently exceed the values for other variables. This underscores the absence of collinearity, which signifies a strong relationship between two independent variables in the regression equation, among the variables under examination.

Structural Model Evaluation (*Inner Model*)

Evaluation of the structural model (inner model) is carried out to ensure that the structural model built is robust and accurate. The analysis stages carried out in the structural model evaluation are seen from the Determination Coefficient (R^2) and Goodness of Fit (GoF) indicators.

The evaluation of the structural model (inner model) is vital to ensure the robustness and accuracy of the constructed model. The evaluation encompasses key indicators, including the Determination Coefficient (R^2) and the Goodness of Fit (GoF) indicators. The favorable discriminant validity results corroborate the robustness and reliability of the model by demonstrating that there is no collinearity among the variables included.

Based on the data analysis, the R-Square value for sustain SMEs through a decade is calculated as 0.937. These findings indicate that approximately 93.7% of the variance in the ability of SMEs to endure for more than 10 years is attributed to the influence of the supply chain resilience variables and supply chain

service quality. The remaining 6.3% is influenced by other unaccounted-for variables. Furthermore, the variables supply chain agility, supply chain robustness, and supply chain flexibility collectively contribute to explaining 92.4% of the variance in service quality, with the remaining 7.6% influenced by other unidentified factors.

Hypothesis Testing Result

After evaluating the inner model, the next step involves assessing the relationships between latent constructs as hypothesized in this research. Hypothesis testing in this study is conducted by examining T-Statistics and P-Values. A hypothesis is considered accepted when the T-Statistics value exceeds >1.96, and the P-Values are <0.05. The following are the results of the direct influence Path Coefficients (Table 5)(Figure 2).

H1 Agility has an impact on service quality

Traditionally, agility has been defined as the capacity to alter direction swiftly and accurately. However, in contemporary literature, SCM agility, as discussed is characterized by three dimensions: the ability to quickly change direction, the ability to empower the customer and facilitate customization, and the ability to integrate processes both within and across firms (Gligor et al. 2013). This portrayal underscores the close connection between agility and the effectiveness of strategic SCM, particularly concerning customer satisfaction. From an efficiency perspective, Agile SCM can have a positive impact on business profitability (Gligor et al. 2015). SCM must adopt a different approach and more innovative strategies that support business sustainability, being able to respond to customer needs in an uncertain environment. In light of the increasing environmental uncertainty, SMEs face heightened organizational vulnerability (Naughton et al. 2020). Agility thus includes the speed at which the SC can resist interference. A suitable SC must be more agile and able to deal with disruptions.

In the current business landscape, the role of SCM Agility is paramount for SMEs to meet customer demands effectively. The SCM Agility approach is aimed at enhancing supply chain performance and competitiveness through improved service quality (Carvalho et al. 2012). Even though supply chain agility has been considered an essential concept in SCM research, its specific experiences, and manifestations, particularly among SMEs, have received relatively limited attention (Naughton et al. 2020). This emphasizes the need for further exploration of SCM Agility in the context of SMEs to enhance their competitiveness and adaptability in today's dynamic business environment.

Tabel 4. Dicriminant Validity – Fornell-Larker Criterion

	Agility	Robustness	Flexibility	Service quality	SCM Resilience
Agility	0.903				
Robustness	0.824	0.802	0.909		0.944
Flexibility	0.870		0.787		0.942
Service Quality	0.888	0.943	0.898	0.954	0.955
SCM Resilience	0.966				0.875

Table 5. Hypothesis testing result

H	Direct Effect	Path Coeffient	T-Statistics	P Values	Result
H1	Agility impacts service quality	0.410	2.064	0. 012	Accepted
H2	Robustness impacts service quality	0.768	2.787	0. 001	Accepted
H3	Flexibility impacts service quality	-0.009	0.234	0.972	Rejected
H4	Flexibility impacts culinary SMEs SCM resilience.	0. 428	2.766	0. 005	Accepted
H5	Service quality impacts culinary SMEs SCM resilience	0. 462	3. 735	0. 000	Accepted

The findings of this section study underscore the adaptability and flexibility demonstrated by Culinary SMEs in navigating the challenges of the market environment, particularly in the realm of SCM agility. It highlights their adeptness in responding to dynamic market conditions and leveraging their understanding of raw material markets to enhance operational performance. Moreover, the study reveals that Culinary SMEs excel in swiftly assessing the capabilities of their business partners, enabling them to deliver high-quality culinary experiences to their customers.

Service quality in Culinary SMEs is intricately intertwined with SCM processes aimed at maintaining and enhancing service levels, thereby directly influencing customer satisfaction. Culinary SMEs in this study demonstrate a commitment to assessing the quality of services rendered, deeply rooted in their dedication to customer satisfaction. Recognizing the paramount importance of meeting customer expectations, they consistently receive minimal complaints regarding the quality of their culinary offerings. Thus, it is inferred that SCM agility positively impacts the operational service quality of Culinary SMEs.

H2 Robustness has an impact on service quality

The primary factors contributing to supply chain vulnerability include customer dependency, supplier dependency, the concentration of a limited number of suppliers, and in extreme cases, sole sourcing. Robustness in SCM is an essential requirement across all levels of production, systems, and company hierarchy, extending to the supply chain and network levels, as emphasized (Monostori, 2018). Factors such as visibility, a risk management orientation, and network complexity are believed to have a substantial influence on SCM robustness (Durach et al. 2015).

Although Culinary SMEs may appear simpler in structure, the establishment of strategic partnerships is not only a focus in strategic SCM but also the cornerstone of effective SCM. The key to successful SCM lies in the seamless connection and collaboration among the various enterprises within the SC, facilitating effective coordination in areas such as design, production, and competitive strategy (Lin, et al. 2022). This emphasizes the importance of a coordinated and cooperative approach in optimizing SC operations, even in the context of Culinary SMEs.

Strategic purchasing and supplier selection in Culinary SMEs are pivotal for these businesses as they provide a competitive edge when acquiring food and services. Strategic purchasing in Culinary SMEs involves a risk assessment to safeguard profitability. Currently, SMEs deliberate on key factors for supplier selection, focusing on strategies such as cost reduction and supplier management. A standard supplier category offers interchangeable products and provides a competitive advantage through aspects such as delivery service, competitive pricing, and a diverse range of products, among others (Scuotto et al. 2017). According to (Ferreira & Silva, 2022), the highest-ranked supplier criteria include (1) the quality of goods, (2) adherence to delivery schedules, (3) price/cost, (4) supplier reputation, (5) location, and (6) supplier performance history. These criteria demonstrate that the fundamentals of strategic purchasing strategies can significantly enhance the SME supply process through the application of straightforward and cost-effective approaches.

In the terms of robustness, Culinary SMEs demonstrate proactive anticipation of impending changes. This is achieved through strategic measures such as diversifying both primary and auxiliary raw material suppliers, thereby ensuring redundancy in the supply chain. Furthermore, maintaining open lines of communication with suppliers and adhering to standardized raw material requirements are integral aspects of their approach. Culinary SMEs typically procure ingredients daily and in quantities that align with predetermined standards, facilitating the implementation of a Just-In-Time (JIT) system. By maintaining a policy of not storing inventory, these SMEs ensure the freshness and consistent quality of their food products.

Based on the aforementioned aspects, the analysis of the processed data leads to the conclusion that robustness positively influences the quality of services offered by Culinary SMEs' supply chain management (SCM). This finding underscores the critical role of robustness in upholding service quality and consistency across Culinary SME operations.

H3 Flexibility has no impact on service quality

In today's dynamic and uncertain business environments, change is an inevitable factor that businesses must contend with. The role of flexibility in SCM is paramount as it provides several advantages,

including the ability to respond to and meet demand fluctuations caused by factors such as seasonality or periods of high and low production. Flexibility enables companies to adapt to environmental changes and contributes to the enhancement of product and service quality (Liao, 2020).

Flexibility in SCM is a reactive response that companies employ to align their supply and demand effectively. This research assesses flexibility in the context of culinary SMEs, focusing on their ability to change material suppliers swiftly, adjust purchase quantities on short notice to minimize raw material wastage, maintain sufficient production capacity to accommodate sudden increases in demand, readily acquire additional labor during sales spikes, and ensure transportation resources are available when needed for the timely supply of raw materials.

Upon analyzing the data collected from culinary SME respondents, it was observed that flexibility exhibited no discernible impact on the quality of services provided by culinary SMEs. This finding can be attributed to the consistent availability of raw materials in the market and the relatively stable production volumes surrounding culinary SMEs. As a result, culinary SMEs are able to effectively manage their supply chain operations, minimizing the need for rapid changes in ingredient suppliers and maintaining a consistent daily procurement of raw materials. Instances of significant fluctuations in sales that necessitate additional raw material purchases are infrequent occurrences.

H4 Flexibility has an impact on culinary SMEs SCM resilience

Traditional management practices reliant on 'steady-state' conditions face significant challenges from external chaos and turbulent changes (Pettit et al. 2013). The Supply Chain Resilience Framework (Pettit et al. 2010) identifies seven categories of vulnerabilities that underlie sources of change: turbulence, deliberate threats, external pressures, resource constraints, sensitivity, connectivity, and disruptions from suppliers or customers. These vulnerabilities necessitate a counterbalancing effort on the part of SME owners who must cultivate supply chain capabilities, particularly in Flexibility in Sourcing and Flexibility in Order Fulfillment.

The pinnacle of the supply chain journey occurs when the product reaches the customer, underscoring the critical role of customer service in driving sales performance and fostering customer loyalty for culinary SMEs. Evaluating the supply chain's performance necessitates assessing Culinary SMEs' ability to maintain their competitive edge and enhance their capacity. In this study, researchers evaluated SCM flexibility in culinary SMEs using resilience-related criteria, including year-over-year sales growth, customer repeat purchases, and willingness of customers to queue for Culinary SMEs' products. Data processing revealed that respondents generally experienced modest sales growth annually, driven by a significant portion of repeat purchases and customer willingness to wait in line for Culinary SME products. Based on these findings, it is concluded that flexibility indeed influences the resilience of Culinary SMEs' SCM.

H5 Service quality impacts culinary SMEs SCM resilience

The Culinary SMEs supply chain system encompasses the intricate processes that delineate the production and delivery of SMEs' food products to consumers through their food service outlets. Consumer patronage of food services is multifaceted, driven by factors including convenience, taste, and flavor. A robust and high-quality food supply chain is of paramount importance in meeting the discerning demands of customers for top-tier culinary experiences.

Culinary SMEs' SCM entails the strategic development and adept management of relationships with food suppliers to yield food products that precisely align with customer preferences and expectations. The culinary business owners shoulder the responsibility of ensuring that their personnel are aligned with the established processes and objectives. Culinary SMEs' supply chain management represents the linchpin in the orchestration of every component within the supply chain, ensuring that each facet operates seamlessly and harmoniously to maintain the overarching standard of product quality.

The literature presents a substantial body of research on resilience within SCM. However, there remains a lack of consensus regarding how to define and establish a resilient system, particularly one that accounts for vulnerabilities and disruptions specific to the food industry. Nonetheless, firms require resilience

to effectively respond to disruptions. The ability to respond and endure disruptions is itself a form of resilience. This capacity to engage suppliers and customers in managing disruptions is known as supply chain resilience (Shin & Park, 2019). SCM resilience embodies three key attributes: the ability to withstand and survive disruptions, the capability to avoid shocks altogether, and the capacity to recover and return to the original state following disruptions (Gligor et al. 2019).

As the sustainable SCM literature suggests a positive correlation between sustainability practices and firm performance (Cantele et al. 2023), SCM practices aim to reduce operating costs across the supply chain, maintain product quality, and ensure product availability and service speed to deliver value to consumers (Sinaga et al. 2021). In an increasingly competitive landscape, firms are motivated to continue delivering optimal customer service while managing incurred costs. To do so, firms implement efficient and responsive supply chain strategies.

The viability of Culinary SMEs relies heavily on their capacity to strategically integrate SCM practices, thereby ensuring the delivery of high-quality products and services, as well as a diverse range of offerings that cater to the dynamic needs of contemporary consumers (Kim et al. 2013). To achieve customer satisfaction, the emphasis is placed on product quality, which also extends to the quality of service provided.

Culinary SMEs respondent are predominantly family-owned and operated enterprises. The presence of family-owned SMEs exerts a significant influence on the overall functioning of the economy (Tobak & Nábrádi, 2020). Due to their smaller size, limited operational scope, and constrained resources, these businesses tend to possess less developed SCM capabilities when compared to larger organizations. The Culinary SMEs respondent owners are responsible for making strategic decisions and directly managing operations. Consequently, their stance on growth, tolerance for risk, and level of professionalism have a substantial impact on the business's trajectory (Jayaram et al. 2014). As a result, the culinary identity of these SMEs is intricately tied to the ownership and direct involvement of the owners, often extending to their hands-on role in production, such as cooking.

Taste is the most subjective and personal aspect of culinary SMEs' quality, crucial for meeting customer preferences and expectations. The owners evaluate the quality and consistency of ingredients and recipes to maintain recipe standardization and food quality, as well as service quality, in order to ensure customer satisfaction and loyalty. This consideration was addressed in the research results, which indicated an influence of Supply Chain Service Quality on Culinary SMEs SCM Resilience.

Managerial Implications

In the contemporary business landscape, competition among companies is increasingly centered on the efficiency and effectiveness of their supply chains. This represents a shift from previous paradigms where firms primarily focused on optimizing individual business functions such as procurement, production, marketing, finance, and logistics in isolation. The lack of connectivity and integration among these functions can result in suboptimal organizational outcomes, leading to the duplication of efforts and the inefficient allocation of resources. This shift in focus is also evident in the traditional culinary industry, where the imperative to provide customers with the freshest and highest-quality food products places SCM at the forefront of their operational strategies. As such, the role of SCM has become a pivotal benchmark for their success.

Culinary business managers must recognize that SCM plays a pivotal role in their operational success. Understanding the managerial implications of SCM is of paramount importance for the effective functioning of any organization in the culinary industry. This research underscores the critical role played by the SCM resilience in traditional culinary businesses, which has significantly contributed to their longevity, enduring for over a decade without compromising the original taste that they established at their inception. Some of these culinary establishments have even transcended multiple generations, attesting to the enduring impact of SCM resilience practices.

The findings of this research offer several SCM implications for managers in the culinary industry. First and foremost, managers are advised to excel in demand forecasting and inventory management to optimize inventory levels. Additionally, recognizing the pivotal role of supplier relationship management

in sourcing high-quality food ingredients that meet stringent standards is imperative. Understanding when to adopt agile supply chain strategies is of paramount importance; managers should carefully evaluate the trade-offs between cost efficiency and flexibility, aligning their strategies with the specific requirements of their products and target markets. Furthermore, establishing resilient supply chains that can effectively adapt to disruptions emerges as a pressing concern. Managers are encouraged to thoroughly assess their supply chains' capabilities to withstand and recover from unforeseen events. These recommendations are substantiated by the responses obtained from the research, illustrating their effectiveness in maintaining the exceptional food quality and ensuring that customers hold cherished memories of their dining experiences, even when they return to the city of Medan after some time. These establishments become preferred destinations for patrons seeking to relish and savor their culinary delights

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The culinary industry is currently the most favored choice for startups, offering accessibility to a wide range of entrepreneurs. However, it is noteworthy that the exit rate in this sector is notably high. Typically, culinary ventures are family-run. A key determinant of success in this industry lies in the ability of the owner to effectively manage SCM to create a menu that not only pleases customers but also significantly reduces costs. The data processing results affirm the impact of agility on service quality, emphasizing the pivotal role of agile supply chain management practices in enhancing service delivery and elevating customer satisfaction levels. Furthermore, the analysis underscores the significance of robustness in shaping service quality within culinary SMEs, highlighting the importance of resilient supply chain processes in ensuring consistent and high-quality service provision. Additionally, the findings highlight the positive influence of flexibility on culinary SMEs' supply chain management resilience, emphasizing its role in facilitating adaptive responses to dynamic market conditions and bolstering overall supply chain resilience. Moreover, the study reveals a reciprocal relationship between service quality and supply chain resilience, with higher service quality contributing to greater resilience in managing supply chain disruptions and uncertainties. However, contrary to the initial hypothesis, the analysis suggests that flexibility may not significantly impact service quality in culinary SMEs. This implies that while flexibility remains important for other facets of supply chain management, its direct impact on service quality within this context may be more nuanced than anticipated.

These conclusions provide insights into the relationships between agility, robustness, flexibility, service quality, and supply chain resilience in the context of culinary SMEs, contributing to a better understanding of effective supply chain management strategies in the industry to develop and sustain their operations through more than a decade.

Recommendations

This study unveils the remarkable success achieved by Culinary SMEs in Medan City, demonstrating their capacity to endure and thrive for a decade or more. This sector stands as a potent force in addressing unemployment, as it welcomes a diverse array of entrants. Nonetheless, many startups often underestimate the significance of SCM in their operations when it comes to producing products that truly satisfy their customers. The lack of resources and guidance for effective SCM implementation often leaves startups ill-equipped to survive in this competitive landscape. SCM resilience emerges as the linchpin, enabling Culinary SMEs to persist and flourish. A key element of supply chain resilience is its adaptability and capacity to confront disruptions, facilitating a swift return to desired operational states and fostering business growth. This research posits four critical factors within SCM resilience—agility, robustness, flexibility, and service quality—that Culinary SMEs must cultivate to ensure their through decade sustainability. It is our hope that future research endeavors will encompass a more extensive sample of Culinary SMEs, thereby enhancing the representativeness of research findings.

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