

Supply Chain Development Strategy to Improve Street Vendor Competitiveness

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ABSTRACT

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Micro, small, and medium enterprises (MSMEs) have a very important role in economic growth, especially in Indonesia. Street Vendors (PKL) are a significant form of MSMEs because they help create jobs and meet the daily needs of the community. This research aims to investigate and analyze supply chain development strategies that can be used by street vendors to improve their performance and competitiveness in an increasingly competitive market. This study collected data from several street vendors in Sukabumi City using a qualitative method case study approach. This research focuses on managing relationships with suppliers, innovations in procurement and distribution, and the use of technology to improve operational efficiency. The results of this study are expected to provide in-depth insights into the problems faced by street vendors and suggestions for effective supply chain management strategies. By implementing the right strategy, street vendors are expected to improve business performance and encourage local economic growth as well as the need to improve supply chain management practices to be more sustainable and responsive to existing risks. In addition, this research can be used by policymakers to create programs that support the growth of small and medium enterprises (MSMEs), especially in the informal sector.

INTRODUCTION

Micro, small, and medium enterprises (MSMEs) play a very important role in a country's economic growth in the midst of changing economic dynamics (Kim & Lee, 2015). Street vendors (PKL) are one of the most well-known types of MSMEs in Indonesia. Street vendors greatly help local economic growth by creating jobs and meeting people's daily needs. According to data from the Ministry of Cooperatives and SMEs, street vendors play an important role in the informal sector, which accounts for about 60% of Indonesia's workforce (Contreras et al., 2022). However, despite having an important role, many street vendors face various challenges, especially in terms of supply chain management. An efficient and effective supply chain is key to ensuring that products are available with good quality and competitive prices. As stated by Porter (1985), "Competitive advantage is achieved through good management of the value chain". This shows that good supply chain management can provide a competitive advantage for street vendors (Anwer & Ahmed Siddiqui, 2019). One of the main challenges faced by street vendors is limitations in resource management and access to reliable suppliers (Ning & Yao, 2023). Many street vendors still rely on traditional methods in the procurement of raw materials, which often results in inefficiencies and higher costs. Supply uncertainty, price fluctuations, and inconsistent quality of raw materials can disrupt day-to-day operations (Alhidayatullah et al., 2024). Therefore, street vendors need to develop better supply chain management strategies to increase their competitiveness (Masruroh et al., 2024).

This research aims to explore and analyze various supply chain development strategies that can be implemented by street vendors. This research's main focus is managing relationships with suppliers, innovations in procurement and distribution, and using technology to improve operational efficiency (Handoyo et al., 2023). By implementing these strategies, it is hoped that street vendors can not only improve their business performance but also be able to adapt to market changes and customer expectations. Through a systematic and data-driven approach, this study will provide useful insights for street vendors in formulating more efficient supply chain development strategies. Thus, it is hoped that street vendors can increase their competitiveness in an increasingly competitive market and contribute more to local economic growth. This research is also expected to be a reference for policymakers in formulating programs that support the development of MSMEs, especially in the informal sector.

RESEARCH METHOD

This study aims to analyze the measurement of supply chain performance in street vendors (PKL) using a qualitative approach. The research was conducted in several areas of Sukabumi City, employing purposive sampling from five street vendors based on their type of business and the length of time they have been selling. This study utilizes primary data collected directly from informants through interviews (De Sordi, 2024). The primary data consists of information provided by informants regarding supply chain management, challenges faced, and strategies implemented (Matsatsinis et al., 2020). Triangulation techniques are used to assess the validity of the study data to guarantee reliable and correct conclusions or interpretations (Tracy, 2013). This study employs qualitative data analysis methodologies, in which data analysis takes place either concurrently with data collection or during interviews and observation (Court & Khair Abbas, 2022; Creswell & Creswell, 2018). During data analysis, the following practical actions are taken: (1) Data collection: Since the more time a researcher spends in the field, the more complicated the data becomes, the data collected there may go beyond their expectations and require thorough documentation. (2) Data presentation is the process of gathering information and displaying qualitative data in tables, graphs, or pictures. (3) Data reduction comprises organizing, categorizing, focusing, eliminating superfluous information, and sharpening data, in addition to taking action. (4) Re-verifying the facts and making inferences from them leads to the conclusion. When the data is saturated, the conclusion is made (Miles & Huberman, 2018).

RESULTS AND DISCUSSION

In terms of supply chain development, street vendors (PKL) in Indonesia face various challenges that impact their competitiveness (Hariyono & Narsa, 2024). Considering the role of street vendors in the local economy, it is important to understand the factors that influence their business. Effective management practices can be the key to enhancing efficiency, product quality, and customer satisfaction.

In this study, the key indicators that affect the success of street vendors are supply chain costs, operational efficiency, product quality, customer satisfaction, inventory management, collaboration and communication, supply chain risk and resilience, innovation and continuous improvement, cost analysis, sustainability and social responsibility. The following is a summary of the analysis of the qualitative data:

Table 1: Question and Answer from Informan

Question Indicator	Informant 1	Informant 2	Informant 3	Informant 4	Informant 5
Supply chain costs	Tall	Keep	Keep	Low	Keep
Operational Efficiency	1 hour 35 minutes	2 Hours	3 Hours	1 Hour	1 Hour
Product Quality	Lalapan is not fresh and if the product is leftover, it will be sorted again	Sometimes the dough crumbles so it can't be sold	Bad smelling eggs	Materials that are not suitable for sale are not sold	Materials are always good
Customer Satisfaction	Satisfied	Satisfied	Satisfied	Satisfied but once complained because it was not according to order	Satisfied
Inventory Management	Not replaced	Once a year	Production goods are replaced daily and are always replaced if there is damage	Production items are rarely replaced because they are durable	Adding a new box
Collaboration and Communication	Infrequently	Communication with subscription partners	Infrequently	Sharing insights	Infrequently
Supply chain risks and resilience	Chicken is not good and late in delivering ingredients	Bad weather	Bad weather	Rainy weather	Rainy weather
Innovation and continuous improvement	Promotion via WhatsApp, Facebook and Instagram	Create new menus and varied spices	Promotion via WhatsApp, Facebook, and Shopee Platform	Promotion on TikTok, Instagram, Facebook.	None
Cost analysis	Sometimes income does not match the capital	Perform cost control calculation per kilogram with the selling price in comparison	Income becomes less if the weather is bad	Income becomes less if the weather is bad.	Sometimes income does not match the capital

Sustainability and social responsibility	Always cover the ingredients served	Always kept from equipment, used items are washed when they are to be used again	Diligently cleaning every time we serve customers	Trading places are always cleaned.	Trades are always closed
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1. Supply Chain Costs

Supply chain costs play a crucial role in the management of a company's operations, covering the entire process from raw material procurement, production, storage, to product distribution to the end consumer (Bhatti et al., 2023). Each stage in the supply chain has a different cost component, such as procurement costs that include material purchases and transportation, as well as production costs involving labor and utilities. Distribution costs associated with shipping and storage costs in the warehouse should also be considered. By managing these costs correctly, it will increase efficiency and reduce unnecessary expenses. To effectively manage supply chain costs, traders need to conduct a thorough cost analysis. An important strategy to reduce storage costs while ensuring product availability is inventory optimization. When you have a good deal with the supplier, you can get a more competitive price (Rusnila, 2023). In addition, the application of the latest technologies in supply chain management will simplify decision-making and improve operational efficiency. In an increasingly competitive market, businesses can achieve better cost control and increase their profitability by using the right strategies. This study shows that the time of serving products varies, with some street vendors, such as informant 1, taking two to three hours, which increases operational costs. The use of high-quality ingredients, such as Informant 2, while expensive, results in better products, while Informant 3 faces problems with ingredients that are not fresh, which can make them more expensive. Poor inventory control, such as informant 3 not changing items frequently, can lead to losses, while effective communication with suppliers, such as informant 1, helps optimize procurement costs. Therefore, to increase the competitiveness and sustainability of street vendor businesses, effective supply chain cost management is essential (Imjai et al., 2025).

2. Operational Efficiency

Operational efficiency is one of the main keys in achieving the success of a company. This concept refers to a company's ability to maximize results by minimizing the resources used, be it labor, time, or cost. In practice, operational efficiency encompasses various aspects, from the production process to supply chain management (Handoyo et al., 2023). Business actors who can find and eliminate waste in their operations can increase productivity and reduce costs, which in turn will generate more value for shareholders (Surya et al., 2021). As mentioned above, many business actors such as in the trade of informant 1 and informant 4, they prepare their goods takes a long time about 2-3 hours. And when it is served, it takes a long time. Therefore, business actors must implement good management practices and improve workflow (Tung, 2020). By using this approach, businesses can not only improve efficiency but can also provide customers with better goods and services (Fagnoli et al., 2018). In a dynamic market, efficient businesses can respond quickly to customer demands and changing trends without incurring high costs. In addition, operational efficiency lowers resource usage and helps companies maintain sustainability.

3. Product Quality

Product quality is an important component that greatly affects consumer satisfaction and company reputation. In a business context, product quality includes not only durability and performance, but also aspects of design, function, and conformity of the product to customer expectations (Wibowo et al., 2023). High-quality products tend to be preferred by consumers, which can increase

customer loyalty and generate repeat sales (Yousaf et al., 2021). Therefore, business actors must ensure that their products meet quality standards. Bad products often require repair or replacement, which increases operational costs and harms the reputation of the business (Sarkum et al., 2020). On the other hand, high-quality products can reduce customer complaints and returns, thereby reducing the cost of after-sales service (Kwok et al., 2020). This shows how important product quality is in the long run. Businesses must implement various methods, such as rigorous testing and inspection, and provide training to sellers to comply with quality standards (Syapsan, 2019). In this study, Informant 1, Informant 2, Informant 4, and Informant 5 experienced poor material quality problems. This problem can hurt the business's reputation and cause customers to lose trust. This problem of poor material quality can increase the number of returns or customer complaints. Therefore, it is important for every effort to conduct strict inspection and selection of raw materials. Training on the importance of quality and how to handle materials properly is essential, and the implementation of higher quality standards can be the first step in addressing this issue. Thus, businesses can maintain a good reputation and customer trust.

4. Customer Satisfaction

One of the main indicators of business success is customer satisfaction, including street vendors (PKL). In increasingly fierce competition, understanding customer needs and expectations is essential to build a loyal customer base (Dominguez & Mayrhofer, 2017). This research table shows various aspects of street vendor performance, including various levels of customer satisfaction. Even though most street vendors received a positive response, some street vendors also filed complaints, which shows that there is still room for improvement. Several parties have also received complaints, which shows that there is still an opportunity to make improvements. Regular audits of the product presentation and packaging process are the first steps that can be taken. Thus, street vendors can reduce errors that can lead to orders not being compliant. Improving the ability to communicate with each other within the team is also very important (Siti Masrurroh et al., 2024). Sellers who are trained in communicating well can ensure that all order details are understood and executed appropriately (Tweedie, 2024). Street vendors also need to purchase an effective order management system to track each order in real-time. Errors can be prevented before they reach customers with a good system. In addition, collecting feedback from customers on a regular basis will help street vendors understand their perspectives and identify areas that need improvement (Mulyana & Wasitowati, 2021). Street vendors can become more competitive in the market by increasing customer satisfaction and reducing complaints.

5. Inventory Management

Good inventory management is essential to ensure products remain available and prevent losses due to unused materials. The table shows the differences in street vendor inventory management practices. For example, informant 2 rarely replaces production goods, which can interfere with quality, while informant 4 and informant 5 are more proactive in replacing damaged goods. Street vendors must implement a structured system to avoid material shortages that disrupt operations, such as the use of technology to track inventory in real-time (Choi et al., 2023; Utaminingsih et al., 2020). Inventory turnover rate analysis is also important to know what items are in demand to optimize inventory. To maintain the freshness of raw materials, the FIFO (First In, First Out) technique must also be considered. Sellers will be more effective if they are trained on the use of technology and inventory management (Subhani et al., 2023). Street vendors can help businesses succeed in a competitive market by improving operational efficiency, product quality, and customer satisfaction through good inventory management.

6. Collaboration and Communication

Improving street vendor performance to meet customer needs, it is important to work together and communicate well. The table shows that informan 2 and informant 4 rarely work together with subscription partners, which can hinder business growth. On the contrary, informan 1 shows better communication practices with partners, which can improve relationships and increase business opportunities. To ensure the supply of quality and timely raw materials, street vendors must develop more active collaboration strategies, such as establishing partnerships with suppliers or distributors (Liu et al., 2023). Open and regular communication is also important to ensure that all parties are informed about each other's needs and expectations. In addition, the use of digital platforms to communicate, such as social media apps or instant messaging, allows street vendors to get closer to customers and collect feedback, answer questions, and promote new products more effectively. Street vendors can improve business relationships and customer satisfaction by collaborating and communicating better. This is important for building customer loyalty and competitiveness in an increasingly (Im & Youn, 2023) .

7. Supply Chain Risk and Resilience

In the competitive business world, especially for street vendors (PKL), effective management of various operational aspects is very important. One of the key factors that can determine the success of a business is the ability to manage risk and supply chain resilience (Kähkönen et al., 2023). The table shows that the weather is bad, which can affect the delivery of raw materials that almost all street vendors experience, including informan 2 and informant 1. Unpredictable weather can shorten supply, impacting product availability and sales rates. Street vendors must make plans to increase the resilience of their supply chains, one of which is the diversification of raw material sources (Wan et al., 2024). Having multiple suppliers means street vendors are not dependent on a single source and minimize the risk of delays. In addition, building a good relationship with suppliers will help in negotiations and ensure a more stable supply. Therefore, to guarantee the success and continuity of the business, a deep understanding of the risks faced as well as methods for managing supply chain resilience is essential.

8. Innovation and Continuous Improvement

Continuous innovation and improvement are very important for street vendors (PKL) in facing competition and meeting customer expectations. In the face of constantly changing market dynamics, the ability to innovate is a key factor that determines the success of a business (Zuñiga-Collazos et al., 2025). The table shows that some street vendors, such as informant 3 and informant 4, have incorporated the development and promotion of new menus into their innovation strategies. Instead, it seems that informant 5 is less active when it comes to innovation, which can lead to stagnation within the company. Street vendors must continue to follow market trends and customer desires, such as using higher-quality raw materials or adding variety to the menu. Utilizing digital platforms to promote products can also be an effective innovation, such as utilizing e-commerce applications and social media (Hermundsdottir & Aspelund, 2022). In improving continuous improvement, customer feedback is critical. Street vendors can change their products and services according to customer feedback. This improves product quality and shows that sellers value customer opinions, thus increasing loyalty. PKL will be better prepared to compete in the market and meet the changing needs of customers by prioritizing innovation and continuous improvement. So that it will ensure business sustainability in the long term.

9. Cost Analysis

Cost analysis is one of the important components that should not be ignored in terms of street vendor business sustainability (Nuryanto et al., 2024). Every expense must be carefully managed

to ensure the business operates efficiently and profitably. Street vendors can find ways to reduce expenses, increase their profit margins, and ultimately strengthen their position in the market (Légeret et al., 2025). The table shows that some street vendors, such as informant 2, face high operational costs, especially to buy raw materials. This can have an impact on business continuity and profitability. Street vendors need to carry out a thorough evaluation of all existing costs. For example, they can reduce costs without sacrificing product quality by finding cheaper but still quality raw materials. Additionally, optimizing operational processes, such as better inventory management, can also help reduce costs. Street vendors can plan their budgets better and see better spending by using technology such as financial management software or point of sale (POS). Managing costs well will allow street vendors to improve operational efficiency and strengthen their competitiveness in an increasingly tight market (Zhang, 2018).

10. Sustainability and Social Responsibility

Sustainability and social responsibility are increasingly important for every business, including street vendors, in this day and age (Tseng et al., 2020). Street vendors must consider the social and environmental impact of business activities. They not only have to think about financial benefits, but also how they help the community and the surrounding environment (Cunha et al., 2014). Businesses that are profitable and beneficial to the community and the environment require social responsibility and sustainability. The table shows that some street vendors, such as informant 4, have adopted local and environmentally friendly raw materials. This is a testament to their commitment to sustainability (Nordin & Raval, 2023). Street vendors can adopt sustainable practices by reducing waste, using recyclable packaging, and encouraging more environmentally friendly products. For example, reducing the use of single-use plastics is a good first step to reducing the negative impact that street vendors have on the environment. In addition, street vendors can also help local communities through social responsibility programs, such as providing support for community events or making donations to social institutions or orphanages. Activities like this improve relationships with the community and increase customers' perception of the business (Varriale et al., 2024). By combining the principles of sustainable development with social responsibility, street vendors can not only attract customers who care about the environment but also contribute to creating a better society. So that it will strengthen the position in the market and long-term business stability.

Discussion

The results of this study reveal that street vendors (PKL) in Sukabumi City face various challenges in managing the supply chain that have a direct impact on their competitiveness and business continuity. In terms of supply chain costs, most street vendors are still burdened by high operational costs caused by the absence of strategic partnerships with suppliers and the lack of efficient procurement strategies. Some street vendors, such as informant 1, experience problems with unfresh raw materials, which have an impact on increasing costs and decreasing product quality (Good & Calantone, 2019). This shows the need for better management in supplier selection and evaluation, as well as the need for a more structured procurement system. In terms of operational efficiency, it was found that the time it takes to prepare the product varies quite a bit, from 1 hour to 3 hours. Long periods have the potential to increase workload and reduce daily productivity. This indicates the need for the implementation of more efficient work processes, including more systematic production and distribution planning (Gierl et al., 2008). Efficiency is also closely related to product quality. Some street vendors, such as informant 2 and informant 3, maintain product quality with strict material selection, while other street vendors experience obstacles such as the smell of raw materials and product damage, which indicates a lack of quality control.

Customer satisfaction is generally at a fairly good level, although there are complaints due to order errors (Prasetyo et al., 2023). This reflects the importance of good customer service management, including staff training and an accurate order-keeping system (Noor et al., 2023). Meanwhile, inventory management is still not optimal in some street vendors who rarely change stock, increasing the risk of quality decline. The use of approaches such as the FIFO (First In First Out) method and the use of stock applications can be solutions to improve storage efficiency and maintain quality. In terms of communication and collaboration, only a small percentage of street vendors actively communicate with partners or suppliers (Bodas Freitas & Fontana, 2018). This leads to a lack of synergy in the supply chain flow. Good collaboration can result in more stable and efficient procurement. Supply chain risk and resilience are also important issues, especially the risk of severe weather affecting raw material shipments (Aljabhan, 2023). The lack of supplier diversification makes most street vendors vulnerable to supply disruptions.

The aspect of innovation and continuous improvement shows that street vendors who actively use social media and digital platforms for promotion and menu innovation have greater potential to attract new customers. However, not all street vendors do, which shows a gap in technology adoption and creativity. Cost analysis has not been carried out thoroughly by all street vendors; Most still experience mismatches between income and expenditure, which signals weak financial planning. Finally, sustainability and social responsibility aspects have begun to be implemented by most street vendors in the form of maintaining cleanliness, using hygienic materials, and protecting food from contamination. However, the comprehensive application of sustainability principles, such as the use of environmentally friendly packaging and waste reduction, is still not optimal. Overall, this discussion shows that while some street vendors have implemented some good supply chain management principles, there is still a lot of room for improvement. With more strategic management and external support, street vendors can increase their competitiveness and make a greater contribution to the local economy.

CONCLUSION

This study concludes that increasing the competitiveness of street vendors (PKL) in Sukabumi City is highly dependent on effective and sustainable supply chain management. Important aspects such as supply chain costs, operational efficiency, product quality, customer satisfaction, inventory management, collaboration with partners, risk mitigation, innovation, cost analysis, and social and environmental responsibility are the determining factors for business success. Street vendors who can implement these strategies in an integrated manner, including the use of technology and diversification of raw material sources, have a greater opportunity to improve business performance, build customer loyalty, and create a competitive and sustainable business. The managerial implications of these findings suggest that business actors, especially street vendors, need to adopt a more strategic approach to supply chain management by utilizing simple technology, establishing mutually beneficial partnerships, and conducting periodic evaluations of operational processes. For local governments and policymakers, interventions are needed in the form of business management training, access to capital, and strengthening the informal MSME ecosystem so that street vendors can grow more optimally. The suggestion for further research is to expand the scope of the study area and involve more informants to get a more comprehensive picture, as well as consider a quantitative or mixed methods approach to measure the effectiveness of supply chain management strategies towards increasing competitiveness more objectively.

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