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THE ROLE OF SUPPLY CHAIN MANAGEMENT AND DIGITAL TECHNOLOGY IN THE OPERATIONAL PERFORMANCE OF MAHER COLLECTION TASIKMALAYA

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Abstract. This study aims to analyze the role of supply chain management and digital technology in enhancing operational performance in the Maher Collection embroidery business in Tasikmalaya. The research employs a descriptive qualitative method using a single-case study approach. Data were collected from one key informant (the business owner) through semi-structured interviews, supported by two weeks of direct observation, and analyzed using thematic analysis consisting of transcription, open coding, category development, and theme consolidation. The findings show that Maher Collection applies simple yet effective supply chain management practices, including local supplier-based procurement, weekly inventory monitoring, and dual-channel product distribution through online marketplaces and partner stores. Digital technology contributes to operational efficiency by supporting marketing activities, transaction recording, and communication with suppliers and customers through social media and digital platforms. However, digital system integration remains limited due to low digital literacy and resistance to change among senior employees. The novelty of this study lies in its focus on a traditional embroidery SME in a regional creative industry context an area that remains underexplored in Supply Chain Management and digitalization research. The study contributes scientifically by demonstrating how basic-level digital adoption and informal Supply Chain Management practices can interact to improve efficiency and customer satisfaction in early-stage digital SMEs. The results highlight the importance of strengthening supply chain collaboration and expanding digital capabilities to enhance competitiveness and operational sustainability in small and medium enterprises (SMEs).

Keywords: supply chain management; digital technology; operational performance.

1. Introduction

In the era of globalization and rapid technological advancement, companies are required to maintain their operational performance in order to remain competitive. However, in reality, many businesses particularly small and medium sized enterprises (SMEs) continue to face challenges in sustaining operational effectiveness and efficiency. Low operational performance is often reflected in issues such as production delays, unstable product quality, distribution inefficiencies, and high operational costs that ultimately weaken the company's competitiveness in the market. Several media reports published in June 2024, including *Liputan6.com* and *Marketeers.com*, revealed that over 60% of Micro, Small, and Medium Enterprises (MSMEs) in Indonesia face major challenges in managing their supply chains effectively, leading to significant operational inefficiencies.

One of the main causes of poor operational performance is suboptimal supply chain management. Irregularities in raw material procurement, lack of coordination with suppliers, and limited distribution planning frequently create disruptions in production continuity. Consequently, companies struggle to meet customer demand in a timely and

consistent manner. Previous studies have extensively examined the impact of supply chain management on operational performance in large-scale manufacturing firms, however, limited research has focused on small and medium-sized creative industries, particularly embroidery businesses in regional areas such as Tasikmalaya.

Moreover, the low utilization of digital technology further exacerbates these conditions. Many companies still rely on manual methods in record-keeping, production, and marketing processes. This reliance leads to information delays, lack of transparency in business operations, and insufficient data to support decision-making. In fact, the integration of digital technologies such as management information systems, inventory control applications, and digital marketing platforms can significantly improve the speed, accuracy, and efficiency of a company's operations.

Maher Collection Embroidery Company, located in Tasikmalaya, represents a typical creative industry SME that experiences operational challenges commonly faced in this sector. Although the business has considerable growth potential, it still encounters issues such as production delays due to fluctuating raw material availability, uneven distribution efficiency, and the limited application of digital tools in managing key processes. While previous studies have largely examined supply chain management and digital technology adoption in larger manufacturing contexts, empirical evidence from small-scale creative industries particularly embroidery SMEs in regional areas remains scarce. This gap highlights the need to understand how basic supply chain management practices and early-stage digital adoption influence operational performance in such settings. Therefore, this study focuses on exploring the role of these two aspects in shaping the operational effectiveness of Maher Collection as a representative case.

2. Research Method

This study employed a descriptive qualitative method with a case study approach. This method was selected as it is suitable for exploring in-depth information regarding the phenomena occurring within the research object, namely Maher Collection Embroidery Company in Tasikmalaya. The descriptive qualitative approach does not focus on hypothesis testing but rather aims to understand, describe, and analyze the role of supply chain management and digital technology in enhancing the company's operational performance.

The population of this study comprises all parties involved in the operational and managerial activities of Maher Collection, including the owner, employees, and other related stakeholders. The sample was determined using a purposive sampling technique, in which informants were intentionally selected based on specific criteria and relevance to the research focus. The primary informant in this study was the owner of Maher Collection, who was considered to have a comprehensive understanding of the company's operational conditions.

Data collection techniques were carried out through open and flexible interviews, allowing informants to express their views in detail. In addition, data were obtained through direct observation of the company's operational processes, covering raw material procurement, production flow, and product distribution to consumers. This approach enabled the researcher to gain an authentic understanding of the real conditions in the field. The collected data were then analyzed using thematic analysis. This process involved the transcription of interview results, data reduction, coding,

theme categorization, and conclusion drawing. The analysis was conducted inductively to identify emerging patterns, relationships, and meanings from the obtained data.

The research model applied in this study is a descriptive-narrative case study model designed to explain how supply chain management and digital technology contribute to the operational performance of Maher Collection. The research does not aim to test hypotheses, but instead explores the relationships among the observed components based on empirical findings and theoretical support. Data were collected from one key informant the owner of Maher Collection who was selected purposively due to his comprehensive knowledge of the company's operational processes. The interview lasted approximately 45–60 minutes and was complemented by two weeks of direct observation covering procurement activities, production flow, and product distribution. To ensure data credibility, the study applied methodological triangulation by comparing interview results, field observations, and documentation such as production records and digital sales reports. The thematic analysis process was conducted systematically through verbatim transcription, open coding of meaning units, categorization into sub-themes, and consolidation into major themes that reflected the roles of supply chain management and digital technology. This structured analysis allowed the researcher to identify recurring patterns and derive conceptual linkages among variables, forming the basis for the descriptive research model presented in this study.

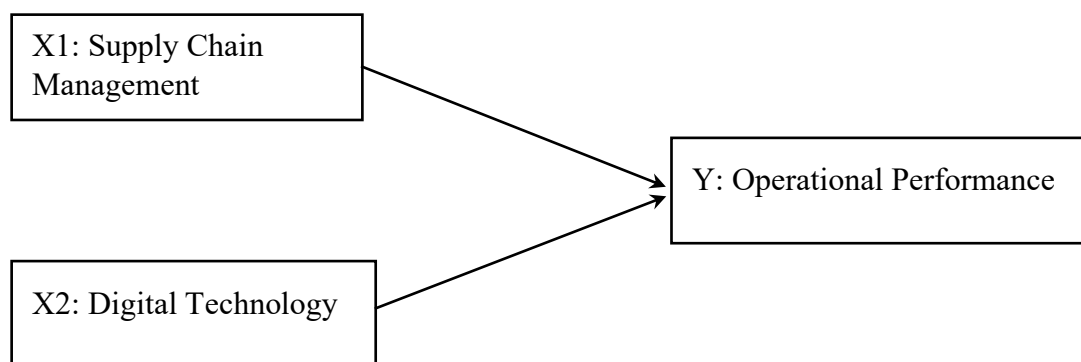


Figure 1. Research Model

Explanation:

X1 : Supply Chain Management

X2 : Digital Technology

Y : Operational Performance

In this research model, the independent variables consist of Supply Chain Management (X1) and Digital Technology (X2), while the dependent variable is Operational Performance (Y).

3. Results and Discussion

3.1 Results

Based on in-depth interviews and field observations, it was found that Maher Collection has implemented a relatively simple yet effective form of supply chain management in accordance with its capacity as a small and medium-sized enterprise (SME). The research results are categorized into three main aspects: supply chain management, digital technology utilization, and operational performance.

3.1.1 Supply Chain Management

Maher Collection relies on local suppliers for fabric, thread, and supporting materials, with procurement conducted based on short-term needs and weekly inventory checks. The company distributes products through a dual-channel system partner stores (offline) and online platforms which helps expand market reach. As the owner stated, “We source materials from local suppliers because it is faster and more cost-efficient. However, sometimes the stock runs out, which causes production delays” (Owner, Interview, 2025). These operational practices show that Maher Collection’s supply chain is flexible and adaptive to the dynamic nature of the creative fashion industry, yet remains vulnerable to disruptions caused by fluctuating material availability. The semi-manual coordination and monitoring processes further limit real-time responsiveness.

These findings suggest that Maher Collection applies a flexible and adaptive supply chain strategy suited to the dynamic nature of the creative fashion industry. The combination of local sourcing and dual-channel distribution helps maintain supply continuity and market reach, although the company remains vulnerable to external factors such as supply volatility and logistical disruptions. This result aligns with the findings of Suryani and Rahman (2021), who reported that SMEs in the textile industry often rely on local supplier networks to maintain cost efficiency and product quality. However, unlike large-scale manufacturers that utilize integrated supply chain management systems, Maher Collection’s supply chain operations remain semi-manual, which limits responsiveness and coordination across processes.

3.1.2 Digital Technology

The limited adoption of digital technology indicates that Maher Collection is still in the early stage of digital transformation. While marketing and sales have benefited from online platforms, the lack of digital integration in production and inventory management hinders overall operational synchronization and real-time decision-making. This condition is also reflected in the company’s supply chain activities, where Maher Collection relies on local suppliers for fabric, thread, and supporting materials. Procurement is conducted based on short-term needs, and inventory is checked weekly, yet the process remains manual and not supported by digital monitoring tools. A direct statement from the owner further illustrates this limitation:

“We source materials from local suppliers because it is faster and more cost-efficient. However, sometimes the stock runs out, which causes production delays” (Owner, Interview, 2025).

This quote highlights that although the supply chain system is simple and flexible, the absence of digital inventory tracking contributes to delayed responses when material shortages occur. These findings are consistent with Wibowo et al. (2022), who found that partial digital adoption in SMEs enhances customer engagement but does not significantly improve operational efficiency. However, this study further identifies employee digital literacy as a key internal barrier an aspect less emphasized in prior research, which often attributes low digital adoption primarily to financial constraints.

3.1.3 Operational Performance

The operational performance of Maher Collection reflects gradual improvement supported by structured work routines and adaptive production planning. Production output fluctuates based on seasonal demand, where peak order periods create short-term productivity spikes, while consistent quality control conducted through manual

inspections helps maintain customer trust and repeat orders. Delivery lead time, however, tends to increase when raw materials are scarce. As stated by the owner:

“If the materials arrive late, then the embroidery process automatically gets delayed” (Owner, Interview, 2025). Indicating that production is still highly dependent on timely material availability.

These patterns demonstrate improvement in efficiency and customer satisfaction, although operational discipline still relies on routine manual processes. This finding supports the argument of Nurhayati and Putra (2020) that operational discipline and quality consistency are critical success factors for SMEs in creative industries. However, the absence of advanced digital systems distinguishes Maher Collection from more technologically advanced competitors, confirming the assertion of Indrawati (2023) that digital integration has become a key differentiator of SME competitiveness in the post pandemic era.

Table 1. Summary of Thematic Analysis Findings

Theme	Key Findings	Supporting Evidence	Implications
Supply Chain Management	Local sourcing, weekly inventory, semi-manual coordination	Quotation: supplier dependency causing delays	Efficient but vulnerable supply chain; requires diversification
Digital Technology	Digital tools used mainly for marketing and communication	Quotation: employees not familiar with apps	Early-stage digitalization limits internal efficiency
Operational Performance	Improved quality consistency, fluctuating productivity	Observation: delays when materials unavailable	Performance improves but constrained by material flow
Integration of Supply Chain Management & Digital Technology	Effective communication and distribution, weak in inventory integration	Field notes & interview	Digital integration needed for long-term competitiveness

3.2 Discussion

3.2.1 The Role of Supply Chain Management in Operational Performance

The implementation of supply chain management at Maher Collection plays a significant role in improving production efficiency and ensuring smooth distribution. Planned procurement patterns and intensive communication with suppliers help maintain the continuity of raw materials and product quality. These findings align with the theory proposed by Heizer and Render (2017), which emphasizes that effective supply chain management reduces production costs and enhances delivery accuracy.

However, the company’s strong dependence on local suppliers and limited warehouse capacity remain critical risks. Such dependency can create vulnerabilities in

times of supply shortages or logistical disruptions. Therefore, supplier diversification and the establishment of long-term supply agreements are essential strategies to stabilize the supply chain and strengthen operational resilience.

This case demonstrates that supply chain management is not merely a logistical function but a strategic element that directly affects cost control, production flow, and customer satisfaction. By adopting a more collaborative and data-driven supply chain model, Maher Collection could achieve more sustainable operational performance.

3.2.2 The Role of Digital Technology in Operational Performance

Digital technology has proven instrumental in accelerating sales processes and enhancing market visibility for Maher Collection. The utilization of online marketplaces and social media platforms has directly contributed to increased sales volume and more efficient communication with customers. These findings reinforce the argument of Fauzi et al. (2023), who assert that digitalization accelerates information flow and facilitates faster operational decision-making.

Nonetheless, the company's limited digital integration and low employee digital literacy impede the realization of full efficiency. Resistance to adopting new systems reflects a broader challenge faced by many SMEs during digital transformation. To address this, regular digital training programs and the implementation of user-friendly inventory management applications could serve as short-term solutions to bridge the technological gap.

This finding also resonates with the study by Wibowo and Rahman (2022), which highlights that digitalization improves market access but requires consistent managerial support to translate into measurable efficiency gains.

3.2.3 Integration of Supply Chain Management and Digital Technology

The integration of supply chain management practices with digital technology generates a synergistic effect on operational efficiency. The use of WhatsApp Business for supplier coordination and online marketplaces for distribution has enabled a faster and more responsive information flow aligned with market demands. However, internal processes such as stock recording and production scheduling remain manually executed, limiting the full potential of digital integration.

This finding supports the concept proposed by Suriyanti et al. (2025), who emphasize that supply chain management digitalization enhances efficiency and delivery accuracy but requires organizational readiness and adaptability to technological change. Maher Collection's experience illustrates that partial digital adoption can yield short-term efficiency improvements, yet comprehensive integration is necessary to achieve long-term competitiveness.

In summary, the combination of adaptive supply chain management and appropriate digital technology has demonstrably improved Maher Collection's operational performance, particularly in terms of time efficiency, productivity, and customer satisfaction. Moving forward, the company could advance toward sustainable operational excellence by implementing a simple digital inventory system and expanding data-driven supply chain collaborations.

4. Conclusion and Recommendations

4.1 Conclusion

Based on the research findings presented, it can be concluded that the implementation of Supply Chain Management and digital technology plays a crucial role in enhancing the operational performance of Maher Collection, an SME in the embroidery sector. The study reveals that supply chain management practices have been relatively effective in terms of raw material procurement, stock management, and product distribution. However, the company still relies heavily on local suppliers and lacks a fully integrated digital coordination system, which limits supply chain resilience.

The adoption of digital technology has supported more efficient record-keeping and expanded market reach through the use of social media and online marketplaces. However, the level of digitalization remains basic, with challenges such as limited digital literacy and resistance to change among senior employees. These results provide practical implications for managerial decision-making, as they highlight the need for structured yet simple improvements that are feasible for SMEs. Small business owners can begin by implementing step-by-step actions, such as (1) introducing a basic digital inventory tool using accessible applications like Excel or mobile stock-tracking apps, (2) assigning one digitally literate staff member to manage online sales and routinely update product availability, and (3) gradually training employees through short, task-focused tutorials to reduce resistance and build confidence. By following these incremental steps, managers can more effectively leverage supply chain management practices and digital technology to enhance time efficiency, productivity, and customer satisfaction.

4.2 Limitations

This study employs a qualitative single-case design, which inherently limits the generalizability of its findings to SMEs with different operational structures or technological conditions. Since the analysis is based on one embroidery business in Tasikmalaya, the insights may not fully represent the broader diversity of SMEs in other regions or industries. In addition, the reliance on a single key informant introduces the possibility of selection bias, as the perspectives captured may reflect the owner's subjective interpretation rather than a balanced view from multiple organizational roles. The absence of quantitative data further restricts the depth of causal inference between variables such as supply chain management practices, digital technology adoption, and operational performance. These methodological constraints underscore the importance of conducting future research that involves multiple cases, broader participant groups, and mixed-method approaches to strengthen the validity and transferability of the findings.

4.3 Recommendations

It is recommended that the company strengthen its supply chain management by diversifying suppliers and implementing a simple digital inventory system to enhance operational accuracy and efficiency. Developing formal long-term supplier agreements and gradually introducing integrated digital tools could also help mitigate supply risks and improve coordination across the supply chain network.

Subsequent studies are encouraged to adopt a quantitative or mixed-method approach with a broader sample scope to strengthen the validity and generalizability of

findings. Future researchers may also explore additional variables such as Customer Relationship Management (CRM), organizational agility, and innovation capability to better understand their interaction with supply chain management and digital technology. Moreover, longitudinal studies examining the adoption of advanced digital technologies such as the Internet of Things (IoT) or blockchain would provide more practical insights for supporting SME competitiveness in the digital era.

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