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Research Article

Relationship between Organizational Learning and Supply Chain Agility on Organizational Performance: A Quantitative Study in Fashion SMEs

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ABSTRACT

Supply Chain Agility (SCA) is recognized as a crucial component in fostering organizational agility, offering a competitive and expansionary strategy for businesses. However, the impact of SCA on organizational performance, particularly in the fashion industry, remains underexplored. This study aims to investigate how learning and agility within the supply chain affect the performance of fashion SMEs, providing a comprehensive understanding of these dynamics. Employing a quantitative approach, data were collected through a questionnaire from 180 fashion SMEs in the Special Region of Yogyakarta, with responses obtained from managers in the fashion industry sector. This methodological choice ensures that the insights gathered are both relevant and specific to the targeted industry. A Structural Equation Modeling using Partial Least Squares (SEM-PLS) was utilized to test the hypotheses, focusing on both the direct and indirect effects of internal and external learning dimensions on organizational performance. The findings reveal that both learning and supply chain agility significantly enhance the performance of fashion SMEs, underscoring their importance in boosting organizational effectiveness. Specifically, the study highlights that internal learning processes and external knowledge acquisition are both critical in fostering a more agile and responsive supply chain. These results contribute to the understanding of how SMEs in the fashion sector can leverage learning and agility to improve performance, supporting the development of more effective supply chain strategies. Consequently, the study's hypotheses are validated, providing valuable insights for practitioners and researchers in the field. This research underscores the potential for fashion SMEs to enhance their competitive edge and operational efficiency through strategic learning and agile supply chain management.

Keywords: organizational learning, supply chain agility, organizational performance, fashion SMEs, SEM-PLS

INTRODUCTION

In today's fast-paced business environment, organizations heavily rely on their supply chains to achieve cost effectiveness and operational efficiency. Allenbacher et al. [1] highlighted that the structure of an organization's costs is largely shaped by its supply chain, necessitating strong coordination with external parties to maintain seamless operations. Modern supply chains prioritize objectives such as reducing inventory, cutting costs, and delivering excellent customer service, which demand continual technological innovation and the adoption of new strategies to enhance flexibility. The efficiency and effectiveness of these supply chains are also profoundly influenced by organizational culture. To stay competitive amidst evolving market dynamics, organizations must emphasize qualities like supply chain agility, problem-solving capabilities, and the integration of advanced technologies. Ojha et al. [2] stressed the importance of fostering organizational learning within the supply chain framework to achieve operational excellence, thereby optimizing cost management and enhancing customer satisfaction. The pressure on supply chains continues to intensify due to rapid technological advancements and the increasingly volatile, uncertain, and complex global business environments. Srinivasan et al. [3] demonstrated how lean organizations strategically eliminate non-value-added operations throughout their supply chains to improve overall performance.

Furthermore, the advent of Industrial Technology 4.0 (I4.0) has notably enhanced the competitiveness of supply chains [4]. In essence, the ability of organizations to adapt to these evolving challenges and opportunities within their supply chains is crucial for sustaining operational success and achieving long-term growth in today's interconnected markets.

As businesses navigate increasingly turbulent environments, the concept of Supply Chain Agility (SCA) has emerged as a critical strategic imperative. According to Pourbabagol et al. [5], SCA refers to an organization's ability to swiftly adjust its network and performance in response to unpredictable customer demands and market conditions. This agility not only enhances competitiveness but also ensures sustainability by enabling organizations to seize opportunities and effectively address challenges arising from environmental instability. SCA involves a range of strategic initiatives, including collaborative decision-making, procedural development, infrastructure establishment, and system implementation within supply chain operations. These efforts are essential for organizations seeking to align their supply chain strategies with market dynamics and effectively manage technological advancements, market shifts, and evolving customer expectations. Promoting agility throughout supply chains enhances performance, enabling organizations to bolster operational resilience and maintain a competitive edge. This approach supports immediate responsiveness and fosters long-term sustainability and growth in a rapidly evolving market environment. As a result, researchers and business professionals increasingly focus on supply chain performance, particularly its impact on overall organizational performance [6].

The main emphasis of this research is on the central role of learning and SCA in determining organizational performance. Understanding this relationship is vital because organizations need to continuously learn and be agile to ensure their technological advancements can meet ever-changing demands effectively. According to Khan & Wisner [7], organizational learning plays a critical role in determining the success of SCA initiatives. Chan et al. [8] also emphasized that agility and overall organizational performance are closely intertwined, underscoring the importance of flexibility in responding to market dynamics. Despite its strategic importance, however, some small and medium-sized enterprises (SMEs), especially in developing countries, struggle with a lack of motivation towards learning, which slows down the development of agile relationships within their operations. Overcoming these barriers is essential to accelerating the adoption of agile practices. Looking ahead, it's important to explore how SCA has broader impacts on SMEs' overall performance. These insights will help SMEs better understand how to leverage agility effectively to foster long-term growth and competitiveness in dynamic business environments.

Comprehensive studies examining the connection between SCA (as one of SC strategies), organizational learning, and SME performance are lacking in the literature. While Pourbabagol et al. [5] and Khan & Wisner [7] have recently examined aspects of SCA and organizational learning in SMEs, there is a notable gap in research specifically focusing on fashion SMEs. Studies exploring the intersection of SCA, organizational learning, and SME performance within this sector are particularly scarce. Fashion products are distinct due to their short life cycles, high demand volatility, unpredictable sales patterns, and impulse-driven consumer behavior [8]. These unique challenges, coupled with the resource constraints typical of the fashion industry, necessitate the development of agile supply chain strategies that can swiftly adapt to market dynamics. Given these complexities, this research seeks to explore how organizational learning, SCA, and SME performance intersect within the specific context of fashion SMEs.

This study focuses on SMEs in the fashion industry located in Yogyakarta, Indonesia. SMEs play a crucial role in promoting income equality, fostering economic growth, and contributing to national stability. Specifically, the fashion sector contributes 15.01% to Indonesia's total domestic revenue, with SMEs accounting for a significant 61.14% of this figure [9]. Building on this foundation, our research aims to investigate how organizational learning contributes to the development of Supply Chain Agility (SCA) among fashion SMEs. Our objectives are threefold: first, to examine the relationship between organizational learning, SCA, and SME performance within the fashion SMEs; second, to analyze how SCA influences SME performance; and third, to explore the factors contributing to the development of SCA in fashion SMEs. By achieving these objectives, we aim to provide valuable insights and practical recommendations that can enhance the agility and overall performance of fashion SMEs. This study is particularly significant as it aims to contribute to the understanding of how SMEs in the fashion industry can leverage organizational learning to develop and sustain agile supply chains, thereby improving their resilience and competitiveness in an ever-changing market environment.

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METHODS

To uncover crucial insights into the dynamics of Organizational Learning and Supply Chain Agility, and to understand how these variables individually and collectively influence the organizational performance of fashion SMEs in Indonesia, this research adopts a comprehensive and systematic approach. Initially, the study delves into the hypothesis development, drawing from the findings of previous research that have examined the potential interactions between these variables. This provides a solid theoretical foundation for the investigation. Subsequently, a structured methodological approach is presented, detailing the research design, data collection methods, and analytical techniques employed. This approach ensures a robust and thorough examination of the intricate relationships between Organizational Learning, Supply Chain Agility, and organizational performance within the context of Indonesia's fashion SME sector.

Hypothesis Development

Supply Chain Agility

Supply chain agility (SCA) is a multifaceted concept that encompasses managing customer agility, operational agility, partner agility, and organizational agility. Achieving SCA involves integrating various forms of flexibility from supply chain participants and empowering each company member to respond more effectively to highly volatile markets. Chan et al. [8] describe supply chain agility as the capacity of businesses, both internal and external, that interact with suppliers and customers to swiftly react to market shifts and ongoing issues. This agility also pertains to how effectively a company manages its relationships with suppliers to tackle market challenges and respond promptly to customer requests. According to Khan and Wisner [7], several indicators can measure supply chain agility, including utilizing the capability of suppliers to respond to market demand, projecting market demand, and responding to market demand. Additionally, applying standards to products, increasing product orders in response to customer requests, collaborating with suppliers in purchasing, and coordinating with suppliers in production and logistics are essential components. These indicators collectively provide a framework for assessing how well a company can adapt to changes and maintain agility within its supply chain.

Organizational Performance

The Organizational performance reflects how effectively an organization conducts its business and is a key measure used to evaluate its success or likelihood of survival. This study analyzes performance as the outcome, or main consequence, of supply chain agility (SCA). Feng et al. [6] measure organizational performance in terms of revenue growth and customer satisfaction, while Chan et al. [8] describe it as the organization's overall performance across dimensions such as operational excellence, customer relations, revenue growth, and financial performance. Performance encompasses a reflection of the activity processes within the organization, highlighting the extent to which it has developed in implementing its vision, mission, and goals [10]. Organizational performance, therefore, serves as a critical indicator of how well an organization is run, assessing both its success and its potential for continued existence [8]. Kazancoglu et al. [11] note that company performance is one of the most relevant constructs in business studies, and Gligor et al. [12] emphasized its role as an indicator of financial feasibility. According to Chan et al. [8], company performance can be measured using various indicators, including product delivery cycle time, timely after-sales service, good relationships with customers, increasing sales of existing products, return on investment after tax, and growing return on sales.

Organizational Learning

In According to March [13], organizational learning, based on the theory of the learning organization, involves applying practical information gained from human experience to continually improve behavior. This behavior, in turn, influences decision-making in specific settings [6]. From the standpoint of organizational development, this study examines organizational learning as the process through which a company modifies its procedures, policies, and organizational knowledge [14]. Prior studies have highlighted the importance of learning in transmitting

knowledge from partners, demonstrating its significant impact on achievement. In supply chain connections, interorganizational learning fosters mechanisms for information exchange and co-learning, which enhance channel collaboration and improve company performance [6], [15].

The study of organizational learning theory explores how businesses acquire and integrate new knowledge and concepts. According to Inthavong et al. [16], organizational learning is influenced by both internal and external components of the company. Through this process, companies draw conclusions from the external environment and analyze data to modify their operations in response to external demands, indicating that organizational learning positively impacts organizational performance. This demonstrates its critical role in enabling companies to adapt to changing environments and enhance their overall effectiveness. Berta et al. [17] describe organizational learning as the process of acquiring information both individually and in groups, which is then implemented into the organization's activities. Businesses that are open to experimentation and learning from past experiences are more successful in managing their operations. This openness is reflected in an organization's willingness to learn through the processes of creating, adopting, transferring, and modifying behavior.

Ojha, et al. [2] assert that organizational learning requires an interactive process to adapt to both internal and external changes. Khan and Wisner [7] further explain that internal and external learning combine to produce strategic changes, enhancing dynamic capabilities within organizational learning. Additionally, Graham [18] highlights that organizational learning allows businesses to adapt to new external challenges and opportunities. Integration and learning are complementary qualities that facilitate advanced practice and strategy development, an idea thoroughly examined in the literature on general supply chain management [19]. Internal learning involves the knowledge gained from interaction, coordination, and collaboration among different organizational functions. In contrast, external learning pertains to the supply chain's interaction, coordination, and collaboration with suppliers and customers [20]. Together, these processes of learning and integration are crucial for developing effective strategies and improving organizational practices.

Internal Learning and Supply Chain Agility

Employee training, knowledge integration, and the generation of new ideas and insights are fundamental components of internal learning [21], [22]. This foundational concept is supported by Lee & Tsai [23], who emphasize internal learning's role in driving market share expansion, and Braunscheidel & Suresh [24], who highlight its importance in fostering agility within supply chain environments. Despite the recognized significance of internal learning, empirical research reveals a nuanced relationship between internal learning and supply chain agility. While Budiarti et al. [10] found no significant effect, Khan and Wisner [7] and Braunscheidel and Suresh [24] acknowledge its contextual importance in agile supply chain contexts, suggesting that internal learning's impact on supply chain agility varies based on organizational contexts and operational strategies. Furthermore, Yu et al. [14] underscore the transformative impact of interactive relationships among supply chain participants, highlighting their integral connection to organizational learning and improved financial performance. Building on various perspectives found in the literature, this study proposes that internal learning plays a pivotal role in shaping supply chain agility. It acts as a conduit for disseminating knowledge, fostering collaborative innovation, and enabling adaptive responsiveness within organizational ecosystems.

Hypothesis 1: Internal learning has a positive and significant influence on supply chain agility.

Internal Learning and Organizational Performance

Internal learning, encompassing staff training and integration, plays a pivotal role in advancing product development and streamlining processing time [25]. This process ensures that employees are well-equipped with essential skills and knowledge, fostering a more efficient and innovative working environment. Lee and Tsai [23] further emphasize that internal learning can lead to a substantial increase in market share, underscoring its critical importance for maintaining a competitive edge. Moreover, the dynamics within the supply chain are crucial for enhancing organizational learning. Irfan et al. [26] noted that an interactive relationship between supply chain partners not only enhances organizational learning but also boosts a company’s financial success. This synergy

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among partners facilitates the exchange of valuable insights and best practices, leading to improved overall performance. Consequently, internal learning significantly enhances organizational responsiveness, which is directly linked to improved financial outcomes.

The substantial correlation between internal learning and company performance is well-documented. Budiarti et al. [10] identified a strong positive relationship between these variables, a finding further supported by Khan and Wisner [7], who also reported significant positive effects of internal learning on company performance. These correlations suggest that companies investing in internal learning are likely to see tangible improvements in their operational outcomes. Additionally, the development of new knowledge within an organization is closely tied to its learning capabilities. Research indicates that as companies enhance their learning processes, their innovation capabilities and overall performance improve correspondingly. Leal-Millan et al. [27] demonstrated that effective learning outcomes significantly impact company performance, highlighting the crucial role of continuous learning and knowledge development.

Hypothesis 2: Internal learning has a positive and significant influence on organizational performance.

External learning and Supply Chain Agility

A Knowledge created by cooperatively solving problems with suppliers and customers is known as external learning [21]. According to Kessler et al. [22], identifying new ideas outside the organization is the first step in the external learning process. Among the various sources of these new ideas, customer feedback is the most prevalent and crucial. To become more responsive and ultimately gain a competitive advantage, companies must engage in learning beyond their organizational boundaries [7]. They also noted that external learning can be gauged using the following metrics: (1) learning from other businesses, (2) communication with suppliers, (3) receiving feedback from customers, and (4) customer involvement in the design process.

Budiarti et al. [10] indicates that supply chain agility does not significantly benefit from external learning. Similarly, Tse et al. [28] and Khan and Wisner [7] found that supply chain agility remains unaffected by external learning. Despite these findings, organizations still need to acquire knowledge from external sources to improve responsiveness and establish a competitive edge. Gligor et al., [12] stated that an agile capability can be achieved by businesses that consistently learn from their supply chain participants, compiling their knowledge and market information. By utilizing external learning, companies can adapt to competitive and uncertain environments. This adaptability enhances company responsiveness, impacting elements such as customer response, demand response, and supply chain agility.

Hypothesis 3: External learning has a positive and significant influence on supply chain agility

External Learning and Organizational Performance

External learning involves the acquisition and construction of knowledge through resolving issues with suppliers and customers [15]. Companies that embrace internal learning while also processing external information tend to become more flexible and improve their overall performance [29]. Research by Budiarti et al. [10] indicates a substantial correlation between external learning and enhanced company performance. This suggests that integrating external insights can significantly contribute to organizational success. Despite the recognition of the importance of external learning for overall performance, some studies offer contrasting views. For instance, Khan and Wisner [7] concluded that external learning does not significantly impact company performance. This discrepancy highlights the need for organizations to not just collect knowledge from external sources but to actively process and apply it. Liao and Wu [30] emphasized that organizations engaging in robust external learning should function as processors of knowledge rather than mere collectors or repositories.

Interestingly, another study by Budiarti et al. [10] found no discernible relationship between external learning outcomes and company performance. This finding contrasts with their earlier research, suggesting that the impact of external learning on performance may vary depending on specific contexts or implementation strategies. Therefore, while external learning has the potential to enhance flexibility and performance, its effectiveness might be influenced by how the acquired knowledge is processed and utilized within the organization.

Hypothesis 4: External learning has a positive and significant influence on organizational performance

Supply Chain Agility and Organizational Performance

According to Abeysekara et al. [31], supply chain agility significantly enhances both company performance and competitive advantage. This is supported by Tse et al. [28], who noted a direct relationship between agility and company performance. Degroote and Marx [32] further emphasized that supply chain agility boosts a company's financial and operational performance, highlighting its importance in achieving profitability. Profitability is often determined by factors such as sales and market share, while operational performance is measured through product launches and customer satisfaction. Eckstein et al. [33] asserted that supply chain agility and flexibility have a profound impact on cost performance and operational performance, underscoring the multifaceted benefits of an agile supply chain. Moreover, Chan et al. [8] pointed out that supply chain agility is crucial for enhancing company performance, especially in helping companies adapt to rapidly changing environments. The ability to swiftly respond to market changes and customer demands through an agile supply chain framework not only improves operational efficiency but also strengthens a company's competitive position in the marketplace.

Hypothesis 5: Supply Chain Agility has a positive and significant influence on organizational performance

Based on the above explanation, the hypothetical framework showing relationships between organizational learning, supply chain agility, and organizational performance within the context of Indonesia's fashion SMEs is depicted in Figure 1.

The Methodological Approach

This study employs a quantitative research approach to achieve its objectives, utilizing primary data acquired through self-administered questionnaires. Internal Learning (IL) is examined through four variables: analysis of knowledge from external partners (X1), integration of existing knowledge with new knowledge (X2), and training of employees (X3). External Learning (EL) is measured by four variables: learning from other companies (X1), communication with suppliers (X2), feedback from customers (X3), and customer engagement in product design (X4). Supply Chain Agility (SCA) is assessed using five variables: the ability of suppliers to respond to market demands (Z1), proficiency in predicting market demands (Z2), improvement in product ordering according to customer wishes (Z3), joint logistical planning with suppliers (Z4), and the ability to adapt to changes (Z5). Lastly, SMEs Performance (SMEsP) is identified through five variables: the accuracy of the delivery cycle of the product (Y1), the precise timing of after-sales service (Y2), maintaining good relationships with customers (Y3), increased sales of existing products (Y4), and the growth of profit over sales (Y5).

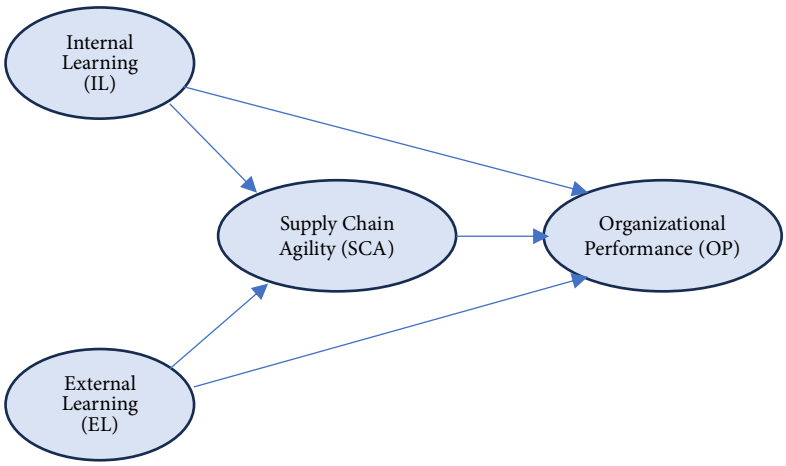

Figure 1. Hypothetical Framework of The Proposed Research

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The research instrument, derived from established literature where the questions had already been tested, ensures a high level of reliability for the questionnaire [7]. Each item on the questionnaire was scored using a five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). The model testing was conducted using Structural Equation Modeling - Partial Least Squares (SEM-PLS). The first step in the model assessment approach is to achieve acceptable levels of reliability and validity. To assess the reliability of the variables in the path modeling, Cronbach's alpha and composite reliability (CR) were used. The measurement model determines the validity and internal consistency of the scale items. Cronbach's alpha and CR both evaluate the internal consistency of constructs, though they emphasize different aspects. Cronbach's alpha indicates the composite reliability of the construct, while CR, based on individual indicator reliability, assumes distinct factor loadings for each item, thereby providing a more detailed reliability assessment of the construct.

RESULT AND DISCUSSION

The Demographic Profile of The Respondents

Research data were obtained by distributing questionnaires to SME owners in the fashion industry sector in the Special Region of Yogyakarta of which the business characteristics are shown in Table 1. The direct questionnaire distributions were completed by 180 SME managers. In terms of business operation length, most respondents have been running their businesses for 5-10 years (41%). The majority employ between 5-10 employees (42%), and their marketing scope is predominantly international (50%).

By distributing questionnaires directly to SME managers, the study ensures a representative sample. This allows for firsthand insights from those actively involved in running SMEs, providing a nuanced understanding of their operational dynamics and strategic orientations. A significant proportion of SMEs have operated for 5-10 years, indicating a level of industry experience and resilience. This tenure suggests that these businesses have navigated through various market conditions, offering valuable perspectives on how organizational learning and supply chain agility contribute to their performance. Moreover, the majority of SMEs employ between 5-10 employees, highlighting their status as typical small to medium-sized enterprises. This characteristic is crucial as it often signifies a hands-on management approach and a close-knit organizational culture, which are pivotal factors influencing learning capabilities and agility within the supply chain. The predominance of an international marketing scope among these SMEs underscores their ambition and competitiveness in global markets. Understanding how these businesses manage supply chain dynamics and respond to global market demands is essential for assessing the impact of organizational learning and agility on their overall performance and sustainability.

Validity and Reliability Test

Validity and reliability are fundamental concepts evaluated in Partial Least Squares Structural Equation Modeling (PLS-SEM), particularly through convergent and discriminant validity assessments. Convergent validity is assessed using the Average Variance Extracted (AVE), which requires a minimum threshold of 0.5 and cross-loading values above 0.7 to establish that each measurement item effectively measures its intended construct with consistency and accuracy. The results of these assessments, including AVE values, Cronbach's alpha coefficients, and Composite Reliability coefficients after refining the instrument set, are detailed in Table 2. Internal consistency is ensured by meeting the criteria of Cronbach's alpha values ≥ 0.7 and Composite Reliability values ≥ 0.6. These metrics collectively confirm that all measurement instruments used in the study are robust and dependable for capturing

Table 1. Respondents Demographic Data

Length of Operation	%	Number of employees	%	Market Reach	%
< 5 years	31%	< 5 people	28%	Local	10%
5 to 10 years	41%	5 to 10 people	42%	Regional/National	20%
>10 years	28%	>10 people	30%	International	50%

Table 2. Construct Reliability and Validity

Variables	Cronbach's Alpha	Coefficient of Homogeneity	Composite Reliability	Average Variance Extracted (AVE)
External Learning	0.856	0.880	0.904	0.703
Internal Learning	0.815	0.840	0.890	0.731
SMEs Performance	0.840	0.854	0.886	0.610
Supply Chain Agility	0.876	0.883	0.910	0.670

Table 3. The Variance (R^2) in The Dependent Variables

Variables	R Square	R Square Adjusted
SMEs Performance	0.824	0.818
Supply Chain Agility	0.434	0.422

and analyzing variables related to organizational learning, supply chain agility, and the performance of fashion SMEs in Indonesia.

Structural Model Test

The study employed Smart PLS 3.00 to conduct a structural model analysis aimed at explaining causal relationships among latent variables. This approach included rigorous testing to explore the interrelationships between these latent components. According to Hair et al. (2016), several critical tests were employed: R-Square for assessing variance in endogenous constructs, Effect Size (F Square) to evaluate model goodness, and Prediction Relevance (Q square) to gauge predictive capability. The findings revealed a Gof value of 0.653, indicating a good fit for the model, and a Q2 value of 0.739, demonstrating strong predictive relevance. Specific R2 values, crucial for understanding the explained variances, are detailed in Table 3. Additionally, Table 4 presents the results of the Estimate for Path Coefficients analysis, which highlights the magnitude and significance of relationships between latent constructs.

Table 4 illustrates that the model examining the impact of supply chain agility, internal learning, and external learning on SME performance is statistically significant ($p < 0.05$). These findings indicate that external learning (EL) positively and significantly influences both SME performance and supply chain agility (SCA). Similarly, internal learning (IL) also shows a positive and significant relationship with SME performance and supply chain agility. This suggests that supply chain agility plays a crucial moderating role in enhancing these relationships. Overall, these results confirm that all hypothesized relationships in the study are supported by empirical evidence. For a visual representation, the structural model depicting SME performance can be observed in Figure 2. This model provides a comprehensive overview of how organizational learning dynamics and supply chain agility contribute to the performance of SMEs in the context of the Indonesian fashion industry.

Mediation Effect

Mediation effect is assessed by analyzing the indirect influence values derived from bootstrapping results using the SmartPLS application program. A critical criterion is the significance level ($p < 0.05$), indicating the acceptance of

Table 4. Table 4. Mean, STDEV, T-Values, P-Values

Hypothetical Relationship	Original Sample (O)	Sample Mean (M)	Std. Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Results
Hypothesis 1	0.389	0.386	0.072	5.432	0.000	Supported
Hypothesis 2	0.564	0.565	0.071	7.934	0.000	Supported
Hypothesis 3	0.121	0.125	0.050	2.406	0.017	Supported
Hypothesis 4	0.199	0.206	0.094	2.126	0.034	Supported
Hypothesis 5	0.551	0.550	0.065	8.417	0.000	Supported

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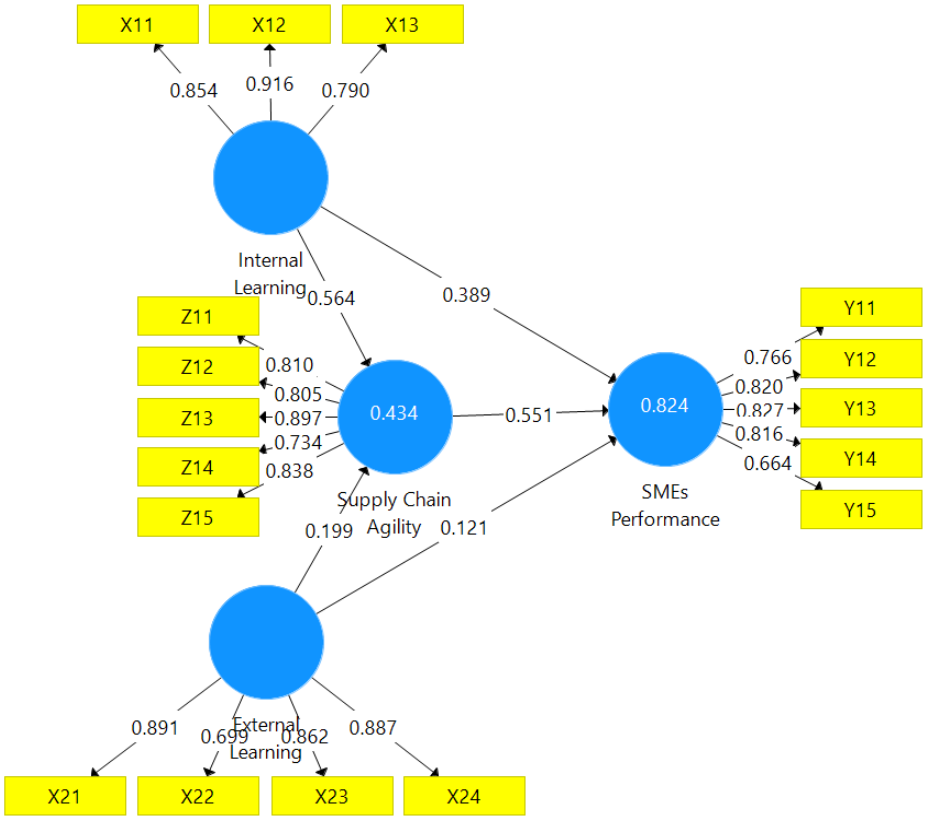

Figure 2. Representation of Structural Model Test

study hypotheses. The results from testing these hypotheses are presented in Table 5. The indirect effect analysis reveals that supply chain agility, influenced by internal learning, exerts an indirect positive impact on SME performance. Specifically, the path coefficient value is 0.1110 with a significance level of 0.046, indicating statistical significance ($p < 0.05$). This highlights that improvements in supply chain agility, driven by internal learning initiatives, contribute positively to enhancing overall SME performance. Furthermore, the structural model evaluation demonstrates that external learning indirectly affects business performance through supply chain agility. The path coefficient value for this relationship is 0.310, and the significance level is highly significant at 0.000 ($p < 0.05$). This underscores the crucial role of external learning in fostering supply chain agility, which in turn enhances business performance within the context of the study.

The study makes significant theoretical contributions to the field of supply chain management, particularly in understanding supply network agility. It establishes a conceptual framework grounded in a resource-based approach that integrates both internal and external organizational learning. This framework not only aids in predicting supply chain agility but also identifies critical competencies essential for competing effectively in a dynamic business environment. One of the key contributions of this study lies in its comprehensive exploration of how organizational learning influences supply chain agility and, subsequently, business performance. This research fills a notable gap in the literature by being the first, to the best of current knowledge, to empirically assess supply chain agility as a mediator between organizational learning and company performance within fashion SMEs.

Table 5. The Specific Indirect Effects

Indirect Effect	Original Sample (O)	T Statistics (|O/STDEV|)	P Values
External Learning → Supply Chain Agility → SMEs Performance	0.110	1.998	0.046
Internal Learning → Supply Chain Agility → SMEs Performance	0.310	6.167	0.000

Moreover, the empirical findings shed light on the intricate dynamics among these variables, offering valuable insights for practitioners in the fashion industry. These insights can inform strategic decisions related to resource management and supply chain optimization, empowering businesses to meet the evolving demands of the global market effectively.

The findings of this study robustly validate all proposed hypotheses. Specifically, the first hypothesis positing that internal learning significantly and positively influences supply chain agility has been confirmed. This aligns closely with previous research by Khan & Wisner [7], Yu et al. 14], and Braunscheidel & Suresh [24] all of whom also found that internal learning positively impacts supply chain agility. This relationship stems from internal learning activities such as employee training and knowledge absorption, which enhance the efficacy of supply chain management practices. The effectiveness of supply chain agility is particularly pronounced when knowledge gained through employee training is applied to optimize the company's supply chain operations. As highlighted by Yu et al. [14], collaborative interactions among supply chain participants foster organizational learning by integrating insights from suppliers, customers, and within the organization itself.

The second hypothesis, asserting that internal learning positively and significantly impacts company performance, has been substantiated by the findings of this study. This finding is consistent with previous research conducted by Khan & Wisner [7], and Wujiabudula & Zehir [34], all of whom have similarly demonstrated the positive relationship between internal learning and company performance. Internal learning serves as a crucial corporate resource that enhances employee responsiveness and overall organizational effectiveness. This encompasses various internal facets such as human resources, finance, market dynamics, marketing strategies, innovation capabilities, knowledge sharing practices [35], and operational efficiencies [36]. Within the realm of human resources, internal learning refers to the systematic training of employees within an organization, which equips them with necessary skills and knowledge aligned with business objectives [37]. This emphasis on continuous learning fosters a responsive workforce that contributes to the company's success [10].

Moreover, companies that prioritize internal learning gain competitive advantages through cost reductions, enhanced product quality, and goal attainment facilitated by skilled employees [35]. Studies by Li et al. [37] further highlight that consistent learning initiatives within companies lead to sustained workforce productivity and improved company performance. From a market perspective, internal learning is associated with increased market share, as trained employees bring strategic insights that drive business growth [10], [37]. Furthermore, internal learning fosters the creation of new knowledge within organizations, which enhances innovation capabilities and overall performance [7]. Operationally, employee training influences various aspects such as new product introductions, product/service quality, marketing effectiveness, and customer satisfaction [36]. This comprehensive approach to internal learning underscores its pivotal role in driving organizational success through continuous improvement and adaptation to market demands.

The third hypothesis, which proposes that external learning positively and significantly influences supply chain agility, has been supported by the study's findings. These results align with previous research by Yu et al. [14], indicating that external learning contributes positively and significantly to enhancing supply chain agility. External learning plays a critical role in driving supply chain agility, as emphasized by Tse et al. [28]. It enables organizations to respond swiftly to customer demands and market fluctuations, thereby enhancing overall supply chain responsiveness. Organizations with robust external learning capabilities are better equipped to achieve higher levels of supply chain agility. This capacity allows them to adapt quickly and flexibly to uncertainties in the market environment. Moreover, sustained external learning initiatives yield long-term benefits such as improved supplier relationships, regular engagement with suppliers on new products, and enhancements in both process and product quality. Furthermore, businesses that maintain open lines of communication with their suppliers are more likely to enhance their agility. This ongoing dialogue facilitates better alignment of supply chain processes with market demands, thereby improving overall operational efficiency and responsiveness.

The fourth hypothesis, asserting that external learning has a positive and significant effect on company performance, is validated. This finding contrasts with other studies, such as Tse et al. [28], which identified only an indirect effect and highlighted potential issues with knowledge transfer mechanisms within companies. Additionally, Khan &

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Wisner [7] found no consistent evidence of external learning impacting performance across different industries, suggesting that its effectiveness may depend on specific industry and environmental factors. While external learning is evidently beneficial for fashion SMEs in Indonesia, its impact may not be universally applicable across all sectors and contexts. Furthermore, SMEs often struggle to access new information and improve performance without adequate guidance and knowledge about available resources. This implies that external factors may not significantly influence performance if the company lacks the ability to effectively learn from external sources. Therefore, to help SMEs operate more efficiently, stakeholders, including the government and relevant institutions, must provide additional support. Enhanced guidance and access to resources are crucial for SMEs to fully benefit from external learning and improve their performance.

The fifth hypothesis, which posits that supply chain agility (SCA) has a positive and significant impact on company performance, has been confirmed by the study's findings. It has been established that supply chain agility indeed enhances company performance significantly. This finding aligns with those in [8], [28], [31], [32], and [33], all of whom have similarly demonstrated the positive relationship between supply chain agility and company performance. According to Chan et al. [8] and Abeysekara et al. [31], supply chain agility plays a critical role in improving company performance by enabling businesses to swiftly adapt to changing market conditions. Eckstein et al. [33] emphasize that the high adaptability inherent in supply chain agility positively impacts both cost and operational performance. Similarly, Degroote & Marx [32] highlight that supply chain agility contributes to enhancing both financial and operational performance. Supply chain agility must possess robust characteristics to effectively navigate turbulent changes and sustain performance improvements [31]. This underscores the importance of integrating agile supply chain practices to enhance overall organizational resilience and performance in response to evolving market dynamics.

The findings of this study underscore that supply chain agility (SCA) can serve as a mediator in the relationship between internal and external learning and company performance. This aligns with Budiarti et al. [10], who also highlighted the mediating role of supply chain agility between internal learning efforts and company performance outcomes. Enhancing company performance requires maximizing internal learning capabilities to effectively respond to both suppliers and customers. Wang & Feng [38] emphasize that enhancing competitiveness and performance hinges on strengthening internal integration within the supply chain. Implementing an organizational strategy that fosters seamless communication between businesses and their supply partners is crucial in enhancing internal integration. According to Yu et al. [14], collaborative relationships among supply chain partners enhance organizational learning by facilitating the exchange of insights and best practices between companies, suppliers, and customers. This collaborative environment promotes information sharing that helps businesses better understand and meet customer demands [38].

Somjai et al. [39] have clarified that supply chain agility (SCA) acts as a mediator through which external knowledge directly influences company performance. Conversely, Khan & Wisner [7] did not find support for supply chain agility as a mediator between internal learning and company performance. However, Tse et al. [28] argue that organizations focusing on learning enhance their innovation capabilities, thereby improving overall organizational performance. Additionally, Budiarti et al. [10] propose that supply chain agility serves as a mechanism through which internal learning indirectly impacts company performance. These perspectives highlight the intricate relationship between organizational learning, supply chain agility, and their combined impact on company performance in modern business contexts. Organizational learning is crucial as it enhances creativity within the organization, thereby contributing to improved company performance. This link between learning and business performance underscores the role of creativity and agility, which can be fostered through both internal development and external management practices.

CONCLUSION

This research emphasizes the significant impact of both internal and external learning on business performance of fashion SMEs in Indonesia. Internal learning, which involves the acquisition and application of knowledge within

the organization, directly enhances how these SMEs operate and perform. This could include improving production processes, design innovation, or operational efficiency tailored to local market demands. External learning, on the other hand, refers to knowledge gained from stakeholders such as suppliers, industry networks, or market trends. The study underscores that leveraging external learning effectively can also lead to improved business outcomes. This might involve understanding and adapting to trends in fashion preferences, enhancing product quality based on supplier insights, or optimizing supply chain logistics for better responsiveness to customer demands. Supply chain agility emerges as a critical intermediary factor influenced by both internal and external learning. The ability to adapt quickly and effectively to changes in consumer preferences or market conditions can significantly impact the overall performance of Fashion SMEs in Indonesia. This flexibility not only supports operational agility but also contributes to customer satisfaction and competitiveness in the market. Collaborative efforts among SMEs can further enhance learning and innovation through shared knowledge and resources. Moreover, actively seeking customer feedback and utilizing it to refine products and services is crucial for staying relevant and meeting consumer expectations. While these insights are specific to the fashion industry and SMEs in Indonesia, future research could expand to include a broader range of craft SMEs to better understand how learning capabilities impact business performance across different sectors and contexts. This holistic approach would provide valuable insights into enhancing SME competitiveness and sustainability in Indonesia's evolving market landscape.

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CONFLICT OF INTEREST

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