

## Uncertain Supply Chain Management

homepage: [www.GrowingScience.com/uscm](http://www.GrowingScience.com/uscm)**Developing model of logistics capability, supply chain policy on logistics integration and competitive advantage of SMEs****Ahmad Sugiono<sup>a\*</sup>, Ely Masykuroh<sup>b</sup>, Endang Sungkawati<sup>c</sup>, Setyadjit<sup>d</sup>, Lili Dahliani<sup>e</sup>, Ita Yustina<sup>f</sup>, Jatmiko Yogopriyatno<sup>c</sup>, and Istiana Hermawati<sup>g</sup>**<sup>a</sup>Management Science Program, Faculty of Economic and Business, Indonesian Education University, Indonesia<sup>b</sup>Faculty of Economic and Islamic Business, Islamic State Ponorogo University (IAIN Ponorogo), Indonesia<sup>c</sup>Wisnuwardhana Universty, Malang, Indonesia<sup>d</sup>Pusat Riset Agroindustri, Badan Riset dan Inovasi Nasional, Indonesia<sup>e</sup>IPB University, Bogor, Indonesia<sup>f</sup>National Research and Innovation Agency of The Republic of Indonesia (BRIN), Research Center for Technology and Food Processing, Research<sup>g</sup>Universitas Bengkulu, Indonesia<sup>h</sup>Badan Riset dan Inovasi Nasional, Indonesia**ABSTRACT***Article history:*

Received March 3, 2023

Received in revised format March 18, 2023

Accepted April 29 2023

Available online

April 29 2023

*Keywords:**Supply chain policy**Logistical capability**Logistics integration**Competitive advantage**SMEs*

This study aims to analyze the influence of supply chain policies, logistical capabilities, on logistical integration and competitive advantage in SMEs in Indonesia. The measurement method uses structural equation modeling (SEM) analysis using SmartPLS 4.0 software to analyze the influence of supply chain policies, logistical capabilities, on logistics integration and competitive advantage. The research data was obtained from distributing online questionnaires via social media. The questionnaire was designed using a Likert scale of 7. The respondents used in this study were SMEs owners who were determined through simple random sampling. The online questionnaire was distributed to 490 UKM owners. The stages of data analysis are validity test, reliability test and significance test or hypothesis test. Based on the results of data processing carried out, it was found that supply chain policy has a positive effect on logistical integration, logistics capability has a positive effect on logistics integration, supply chain policy has a positive effect on competitive advantage, logistics capability has a positive effect on competitive advantage, logistics integration has a positive effect on competitive advantage. The novelty of this research is the relationship model of logistics capability and supply chain policy on logistics integration and competitive advantage in SMEs organizations. The theoretical implication of this research is to support previous theories that logistics capability and supply chain policy play a role in encouraging increased logistics integration and encouraging increased competitive advantage in SMEs organizations. The practical implication of this research is the management of SMEs to implement logistics capability and create and implement supply chain policies to encourage increased logistics integration so that it will increase competitive advantage.

© 2023 Growing Science Ltd. All rights reserved.

**1. Introduction**

Business competition is getting tougher in this era of globalization for companies to rearrange the strategy and logistics system within the company (Naway & Rahmat, 2019). The essence of competition lies in how companies implement processes to produce good products, goods or services that are better, cheaper, and faster than their competitors, for that a company must be able to improve the performance of its logistics system to continue to compete and progress (Notteboom et al., 2020). A business activity requires logistics activities in it because logistics is part of the supply chain process. Logistics activities consist of facility location, transportation, inventory, communication, handling, and storage. Companies must consider

\* Corresponding author

E-mail address [ahmadsugiono@upi.edu](mailto:ahmadsugiono@upi.edu) (A. Sugiono)

logistics issues to ensure that logistics supports the company's strategy. If the operational function supports the overall company strategy, then logistics must support the operational function strategy (Permana & Soediantono, 2022). Conversely, if the operational function is not to support the company's strategy, the company's operations will be hampered as late production due to a lack of raw materials will impact consumers. Based on the theory above, logistics is the flow of raw materials from suppliers to storage. In this industrial revolution era, competitive advantage and high focus can strengthen a company's market orientation where a company's competitive advantage can shape the success rate of business performance. Competitive advantage is closely related to the company's ability to understand consumer needs in building an effective and efficient distribution network and management. The existence of competitors makes the company more aware of the need to improve its ability to excel in competition. According to Alabdali & Salam (2022) Existing literature shows that SMEs have various supply chain deficiencies that affect their competitiveness. For example, compared to large enterprises, SMEs are understood to be more vulnerable to supply chain disruptions, lack adequate resources, do not adequately prepare for supply chain disruptions, and face several operational constraints that hinder their competitive advantage (Alabdali & Salam, 2022). In addition, increasing SME failure rates have been seen in both developed and developing countries. According to Biswas et al. (2020) SMEs experiencing delivery delays, poor quality products or delivery failures, reflecting poor supply chain performance and reduced competitive advantage. Recent empirical literature has underscored the role of logistics and supply chain management (SCM) practices and capabilities in creating a firm's competitive advantage. SCM practices such as strategic supplier partnerships, customer relations, information sharing, and deferral have been established as important for building competitive advantage (Biswas et al., 2020; Arijanto, 2022).

According to Chang et al. (2022) Competitive advantage and high focus can strengthen a company's market orientation where a company's competitive advantage can shape the success rate of business performance. Competitive advantage is closely related to the company's ability to understand consumer needs in building an effective and efficient distribution network and management. The existence of competitors makes the company more aware of the need to improve its ability to excel in competition. Existing literature shows that SMEs have various supply chain deficiencies that affect their competitiveness. For example, compared to large enterprises, SMEs are understood to be more vulnerable to supply chain disruptions, lack adequate resources, are not adequately prepared for supply chain disruptions, and face several operational constraints which impede competitive advantage (Alshurideh et al., 2019). Shraah et al. (2022) examined the relationship between supply chain management practices, logistics capabilities, logistics integration and the competitive advantage of Small and Medium Enterprises (SMEs). Logistics capabilities are part of a company's resources including all assets, competencies, organizational processes, company attributes, information, knowledge, and others that make it possible to understand and implement strategies that increase efficiency and effectiveness. Logistical capabilities have been studied extensively and measurement scales have been developed to link capabilities with competitive advantage and superior firm performance (Herden, 2020). Logistics activities affect performance regarding increasing revenue and reducing costs. The use of logistical capabilities as a means of creating differentiation is also investigated. These researchers found that logistical capabilities make a major contribution to corporate strategy and performance and sometimes provide a competitive advantage (Baah & Jin, 2019).

The effect of logistical capability on business performance is supported and strengthened by research conducted by Bielecki and Szymonik (2015) which shows that the logistics capability variable has a significant effect on business performance. Chang et al. (2022) and Biswas et al. (2020) stated that greater logistics capability within a company consisting of logistics infrastructure, supplier locations, fast and reliable delivery, low distribution costs, and distribution scope will improve business performance. Logistics capability contributing to business performance will also increase the capability of logistics activities within the company. A business needs to have high capability in managing its logistics management (Alshurideh et al., 2019). Competitive advantage arises when a company can create better economic value than its competitors. Based on time considerations, competitive advantage is divided into two: (1) temporary competitive advantage that lasts for a short time, and (2) sustainable competitive advantage that can last longer. The creativity factor turns out to be a trigger for economic and social change which in turn can become a renewable resource in the formation of a company's competitive advantage (Alabdali & Salam, 2022). Competitive advantage refers to a comparative advantage in the market position that leads a company to outperform its competitors. For example, a company can achieve a cost advantage when it operates at a lower cost than its competitors but offers a comparable product. Also, a company can achieve a differentiation advantage when customers consistently perceive its offerings as higher than those of its competitors. Competitive advantage can distinguish between two types of differentiation advantage: innovation and the market. In particular, a market differentiation advantage occurs when a company creates a unique image in the market and achieves customer loyalty through meeting customers' special needs, and an innovation differentiation advantage arises when a company creates current and attractive products by leading competitors in quality, efficiency, design innovation, and style (Basheer et al., 2019; Jernsittiparsert et al., 2019).

## **2. Literature Review and Hypothesis Development**

### *2.1 Logistics Capability*

Logistics capability is a capability that basically supports the company's logistics function to run properly and logistics capability within a company can be considered as a key strategic resource or capability for achieving sustainable competitive advantage and may have a significant impact on the competitiveness and performance of the company and even the supply

chain. According to Baah and Jin (2019), logistics capabilities are skills, attributes and specific knowledge that help companies manage their logistics activities such as the transportation and distribution of raw materials and finished materials efficiently and effectively. From the above understanding it can be concluded that logistics capability is a company's ability to manage logistics activities as a process of planning, implementing, and controlling flows efficiently and effectively in the cost of raw materials, inventory processes, finished goods, and the information involved from the point of origin to the consumption point. According to Biswas and Anand (2020) in their research logistics capability indicators consist of: 1. Managing pre- and post-sales services. The company's ability to manage logistics services well includes manufacturing, packaging, assembly, and delivery. 2. Distribution network coverage. The company's ability to develop strategies regarding company targets in accordance with what it wants to achieve, including good distribution coordination with related parties. 3. Speed and reliability of delivery, the company's ability to build an effective logistics process that allows guaranteed speed and reliability in the delivery of both raw materials and finished products. 4. Low total distribution costs, the company's ability to achieve a minimum cost of the total costs incurred effectively from the logistics activities carried out (Basheer et al., 2019; Biswas et al., 2020). Logistics capabilities that continue to increase will be able to provide benefits in reducing costs. Through the existence of logistical capabilities will be able to create differentiation. Logistics capability aims to create differentiation or uniqueness of a company, which was found in previous research that logistics capability can make a major contribution to corporate strategy, logistics performance, and competitive advantage. There are several indicators that measure the magnitude of logistics capability, as follows. Unique services have strategic added value. Value added is the term given to describe the economic value added to a product or service offered to consumers.

## *2.2 Supply Chain Policy*

Supply chain policy is considered as an organizational function or operational activity that determines the effectiveness and efficiency of the supply chain. Some of the components of a supply chain policy include supplier partnerships, information sharing, process flows, and outsourcing. These components are considered as an evolution of the current supply chain policy, especially in the manufacturing industry. The important aspects of supply chain policy are quality management, procurement and customer relationship management, information technology and adjustment through delay activities. According to Shraah et al. (2022), exchange of information between trading partners in supply chains, mass adjustments and delays are important supply chain policies that ensure a well-integrated supply chain. Therefore, supply chain policy is considered as the perfect recipe for the success of many companies in different industries. There are six SCMP dimensions, namely, supply chain characteristics, customer service management, geographical proximity, SCI, timely capabilities, and information sharing (Alabdali & Salam, 2022).

## *2.3 Competitive Advantage*

Competitive advantage is the extent to which an organization can create a position that can sustain the market as long as competitors remain. A company creates a competitive advantage through competitiveness or priority which is defined as the preferences or strategic aspects in which the business chooses to compete in the target market. By having a competitive advantage, the company will be able to survive to continue the life of the company. Absolute competitive advantage must be owned by the company/product to achieve product performance or success. The intense business competition requires companies to have a competitive advantage, otherwise the company cannot last long. Competitive advantage in an organization can be obtained by paying attention to superior value for customers, culture and climate to increase efficiency and effectiveness. Judging from many previous studies, competitive advantage itself has two different but interrelated implications. The first emphasizes excellence or excellence in terms of company resources and capabilities. Companies that continue to pay attention to the development of their performance and strive to improve their performance have the opportunity to achieve a competitive position. Indeed, a company that has strong capital must continue to compete with other companies. Sutdualan et al. (2019) stated several indicators used to measure competitive advantage, namely uniqueness, scarcity, not easily imitated, not easily replaced, and competitive prices. This uniqueness is a combination of artistic value and customer taste. Competitive price is the company's ability to adjust product prices to general prices in the market. Competitive advantage basically develops from the value an organization can create for its buyers that exceeds the organization's costs of creating it. Value is something buyers are willing to pay for, and superior value comes from offering a lower price than competitors offering comparable benefits or providing unique benefits that more than offset the higher price. This is more directed at how organizations can create goods that can be given a higher value than the costs incurred, and consumers must feel that by buying goods from the organization, consumers feel the benefits are greater than the value of the sacrifices incurred. Competition is a condition that needs to be considered by every organization, so the organization must have a strategy that can be used as a weapon in winning the existing competition. Sustainable competitive advantage is the direction of organizational strategy, which is not an end, but is a tool to achieve organizational goals, namely organizational performance that generates relatively high profits. So, the point is that besides the organization having a competitive advantage that aims to win the competition in the business environment, the organization also uses competitive advantage to achieve the desired organizational performance goals. Difficult to replace means proper replacement is not possible (Soemadi et al., 2022).

### 3. Hypothesis Development

#### 3.1 Effect of Supply Chain Policy on Logistics Integration

Several previous studies have found that supply chain policy has a positive and significant effect on logistics integration. Sutduncan et al. (2019) observed that supply chain practices facilitate logistics capabilities and logistics integration. The role of SCM practices such as strategic supplier partnerships, customer relations and information sharing in logistics integration is very important. For example, the literature reveals how it is impossible to achieve integrated logistics capabilities without cooperation at all levels within a company and among the companies that make up the supply chain. Reklitis et al. (2021) suggested that SCM practices such as cooperation, coordination and communication lead to integrated logistics capabilities. Likewise, Basheer et al. (2019) found that supply chain linkages make logistics integration effective. Based on the description above, the hypothesis proposed is:

**H<sub>1</sub>:** *Supply chain policy has a positive effect on logistics integration.*

#### 3.2 Effect of Logistics Capability on Logistics Integration

Previous studies found that logistics capability has a positive and significant effect on logistics integration. According to Biswas et al. (2020), the integration of capabilities not only helps in adapting to the business environment but also shaping it through response to changes and opportunities. With globalization and cross-border transactions, logistics capabilities are renowned for successful integration. According to Alabdali and Salam (2022), logistics personnel have the unique ability to actively coordinate with other functions within the company and extend logistics externally to combine customers and suppliers. Based on the description above, the hypothesis proposed is:

**H<sub>2</sub>:** *Logistics capability has a positive effect on logistics integration.*

#### 3.3 Effect of Supply Chain Policy on Competitive Advantage

Several previous studies have found that supply chain policy has a positive and significant effect on competitive advantage. According to Chang et al. (2022), SCM practices have an impact on company performance and competitive advantage through price or cost, quality, delivery dependability, time to market, and product innovation. Previous studies have shown that SCM practices such as strategic supplier partnerships can increase competitive advantage through improving supplier performance and reducing time to market. Biswas and Anand (2020) confirm that there is a strong relationship between supply chain practices and competitive advantage. Finally, recent research has emphasized that SCM practices such as buyer-supplier relations, information sharing and customer relationship management influence various aspects of competitive advantage. Based on the description above, the hypothesis proposed is:

**H<sub>3</sub>:** *Supply chain policy has a positive effect on competitive advantage.*

#### 3.4 Effect of Logistics Capability on Competitive Advantage

According to Wang et al. (2020), logistics capabilities such as demand management and information management capabilities allow companies to differentiate their logistics activities from competitors. Demand management capabilities are customer-focused capabilities that enable companies to meet specific customer expectations by providing differentiation through unique value-added activities. According to Rizki et al. (2022), logistical capability, if properly managed, can become a core competency for companies geared toward achieving competitive advantage and performance. Based on the description above, the fourth hypothesis of this study is:

**H<sub>4</sub>:** *Logistics Capability has a positive effect on competitive advantage.*

#### 3.5 The Effect of Logistics Integration on Competitive Advantage

Previous studies found that Logistics Integration has a positive and significant effect on Competitive Advantage. According to Ebenezer and Zhuo (2019), the company's resources can be a source of competitive advantage. Integrating logistics externally to include customers and suppliers can yield benefits such as asset productivity, operational effectiveness, and increased customer value. Integration of logistics capabilities is said to be a prerequisite for successful performance in a competitive environment through lowering overall company costs, improving customer relationships and delivering superior customer value. Based on the description above, the fifth hypothesis of this study is:

**H<sub>5</sub>:** *Logistics integration has a positive effect on competitive advantage.*

## 4. Method

This research is quantitative and the measurement method uses structural equation modeling (SEM) analysis using SmartPLS 4.0 software to analyze the influence of supply chain policies, logistical capabilities, on logistics integration and competitive advantage. The research data was obtained from distributing online questionnaires via social media. The questionnaire was designed using a Likert scale of 7. The respondents used in this study were UKM owners who were determined through simple random sampling. The online questionnaire was distributed to 490 UKM owners. The stages of data analysis are validity test, reliability test and significance test or hypothesis test. Fig. 1 demonstrates the summary of the structure of the proposed model.

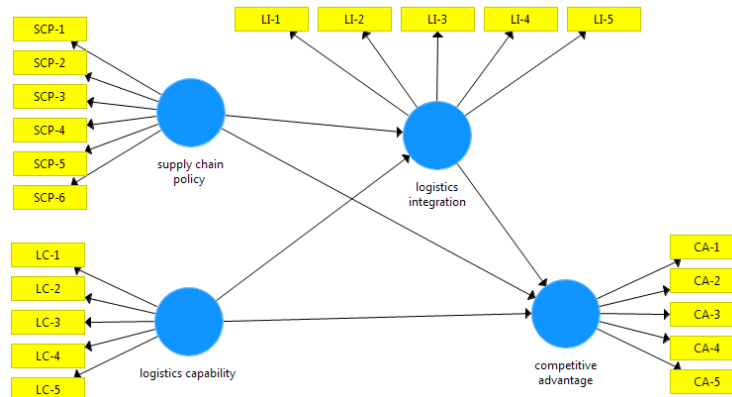


Fig. 1. Research Model

### Variables Indicators:

**Supply Chain Policy** Supply chain policy is assessed as a function or operational activity of an organization or company that determines the effectiveness and efficiency of its supply chain. Several components of the supply chain policy include supplier partnerships, information sharing, process flows and outsourcing.

Supply chain policy indicators are as follows: Technical capability, Structural capability, Logistical capability Logistical capability Logistical capability is part of the company's resources including all assets, competencies, organizational processes, company attributes, information, knowledge, etc. which make it possible to understand and implementing strategies that increase efficiency and effectiveness.

Logistics capability indicators are as follows: Logistics Efficiency Assessment, Research on Logistics Effectiveness Logistics Integration In the context of logistics and SCM.

Logistics integration indicators are as follows: Logistics activities between respondent companies and supply companies are well coordinated. Respondent companies' logistics activities are well integrated with supply company logistics activities, Respondents integrate logistics activities that are integrated with their suppliers, Respondent company's logistics integration with suppliers is supported by distributors' reliable and also good warehousing facilities. The distribution of goods inside and outside the respondent's company is well integrated with suppliers Competitive Advantage Competitive advantage is the extent to which the organization is able to create a position that can support the market as long as competitors remain.

The indicators of competitive advantage are Cost Leadership, Customer Service, Innovative Marketing Technology and Differentiation.

## 5. Result and Discussion

### 5.1 Convergent Validity Testing

The indicator is considered valid if the relationship it has is more than 0.7. If the research is explanatory, the indicators used are 0.6 to 0.7 (Purwanto et al., 2021). Based on Fig. 2, the value of all indicators is greater than 0.7 so that all indicators are concluded to be valid.

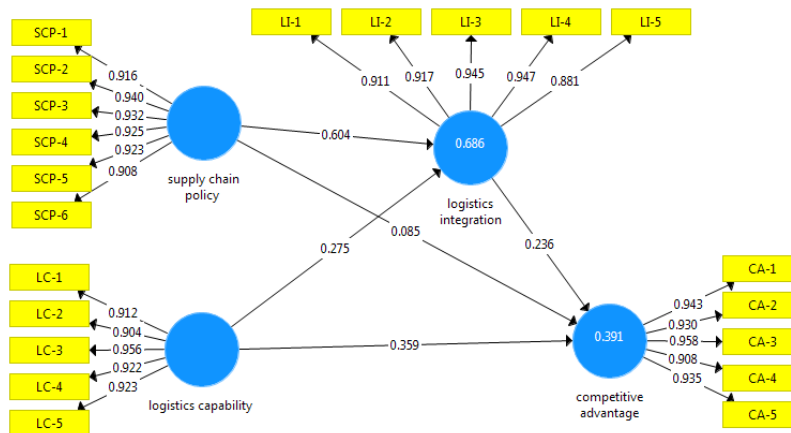


Fig. 2. Validity and Reliability testing

5.2 Discriminant Validity Test Results

The AVE value can be said to be good if the value per variable is > 0.5. Table 1. Shows discriminant validity has met the AVE value.

Table 1  
Validity and Reliability testing

Variable	Cronbach Alpha	Rho A	CR	AVE
Supply chain policy	0.913	0.926	0.909	0.864
Logistics Capability	0.910	0.923	0.917	0.809
Logistics integration	0.91360	0.934	0.929	0.831
Competitive advantage	0.918	0.912	0.912	0.832

The recommended discriminant validity of all of variables have maintained AVE values > 0.5, which means that it has met the discriminant validity criteria.

5.3 Cronbach's Alpha Test Results

Cronbach's alpha is good if the value is ≥ 0.7. All variables have Cronbach's Alpha ≥ 0.7. The results show that the form of the variables above meets Cronbach's Alpha and it means that the reliability is strong.

5.4 Composite Reliability Test Results

Composite reliability is good if the value is ≥ 0.7. All variables have CR value greater than 0.7, which means they have good reliability since they have reached the criteria of composite reliability.

5.5 Hypothesis Testing

Fig. 3 and Table 3 present the summary of the results.

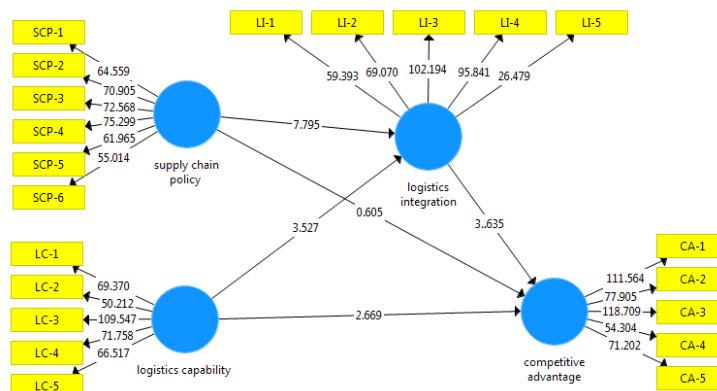


Fig. 3. Hypothesis Testing

**Table 3**  
Hypothesis Testing

Correlation	P Value	Result
H1: Supply chain policy → Logistics integration.	0.000	Supported
H2: Logistics capability → Logistics integration	0.000	Supported
H3: Supply chain policy → Competitive advantage	0.001	Supported
H4: Logistics Capability → Competitive advantage	0.003	Supported
H5: logistics integration → Competitive advantage	0.001	Supported

#### *Effect of supply chain policy on logistics integration*

Based on the results of data processing, it was found that supply chain management has proven to have a positive and significant influence on logistics integration in SMEs. The result is consistent with the result stated by Saragih et al. (2020), Shraah et al. (2022); Haris and Kusuma (2023) and Sutduean et al. (2019). Thus, there is a significant positive effect between supply chain management and logistics integration. Supply chain relationships make logistics integration more effective. This happens because if SMEs improve SCM practices such as exchanging accurate information and strengthening relationships with other supply chain parties, SMEs will get an increase in logistics integration operations both internally and externally (Tarigan et al., 2021). Remondino et al. (2022) argue that the existence of supply chain management practices facilitates logistics capabilities and logistics integration. The role of SCM practices such as strategic supplier partnerships, customer relations and information sharing in logistics integration is very important. For example, the literature reveals how it is impossible to achieve integrated logistics capabilities without cooperation at all levels within a company and among the companies that make up the supply chain. Supply chain management and logistics will determine how quickly the company is able to provide products that are close to its customers according to the chosen marketing channel, and how quickly the company is able to fulfill orders from consumers, and how cost-efficient is the distribution of products from the company's factories or warehouses to consumers. end. This distribution fee structure includes trading costs and transportation costs.

#### *Effect of logistics capabilities on logistics integration*

Based on the results of data processing carried out, it was found that logistics capability proved to have a significant effect on logistics integration. This suggests that SMEs that improve their information management and demand management capabilities are likely to achieve greater internal and external integration of their logistics activities. Yusuf and Soediantono (2022) also found that companies with well-developed capabilities can ensure good logistics integration with suppliers and customers.

#### *The influence of supply chain management on competitive advantage*

Based on the results of the analysis it was found that supply chain management has proven to have a positive and significant effect on competitive advantage. This result is similar to that found by Remondino and Zanin (2022) which significantly predicts competitive advantage. Research conducted by Siagian et al. (2021); Sutduean et al. (2019) also show results where higher level of SCM practices will increase competitive advantage in improving company performance. SCM practices will increase competitive advantage through price/cost, quality, delivery reliability, time to market, and product innovation. Companies need to consider supply chain issues to ensure that the supply chain supports the company's strategy. If the operations management function supports the overall company strategy, then the supply chain is designed to support the operations management strategy. Facilities and costs required to meet consumer needs, with the aim of achieving minimum costs and maximum service levels are all considered in supply chain management. Competitive advantage refers to the extent to which an organization can build a defensible position over competitors. Companies can pursue either cost leadership or differentiation strategies to achieve competitive advantage. Then, several authors suggest different dimensions of competitive advantage. There are five dimensions: competitive price, premium price, quality value to customers, reliable delivery, and production innovation. The most used dimensions of competitive advantage include price/cost, quality, delivery dependability, product innovation, and time to market.

#### *The effect of logistical capabilities on competitive advantage*

Based on the results found, it can be concluded that logistics capability has a significant influence on competitive advantage. This result supports the results found by Sutduean et al. (2019) where there is a positive but insignificant relationship between logistics capability and competitive advantage. This implies that SME relationships and the integration of information and logistics with customers may not cause significant variations in their competitive advantage.

#### *The effect of logistics integration on competitive advantage*

From the results obtained, it can be concluded that logistics integration has a significant effect on competitive advantage. This is in line with the findings obtained by Siagian et al. (2021) and Sutduean et al. (2019). This might happen because there is

still low integration between SMEs and suppliers so that logistics integration has not fully impacted the competitive advantage of SMEs.

Supply chain management and logistics will determine how quickly the company is able to provide products that are close to its customers according to the chosen marketing channel, and how quickly the company is able to fulfill orders from consumers, and how cost-efficient is the distribution of products from the company's factories or warehouses to consumers. This distribution fee structure includes trading costs and transportation costs. Logistics capabilities that continue to increase will be able to provide benefits in reducing costs. Through the existence of logistical capabilities will be able to create differentiation. From this study it was found that logistics capabilities make a major contribution to corporate strategy, logistics performance, and competitive advantage. Therefore, conceptual studies regarding the development of collaboration and information sharing between freight forwarders and their business partners are very important to research. Logistics capability aims to create differentiation or uniqueness of a company, which was found in previous research that logistics capability can make a major contribution to corporate strategy, logistics performance, and competitive advantage. There are several indicators that measure the magnitude of logistics capability. Unique services have strategic added value. Value added is the term given to describe the economic value added to a product or service offered to consumers. Competitive advantage basically develops from the value an organization can create for its buyers that exceeds the organization's costs of creating it. Value is something buyers are willing to pay for, and superior value comes from offering a lower price than competitors offering comparable benefits or providing unique benefits that more than offset the higher price. This is more directed at how organizations can create goods that can be given a higher value than the costs incurred, and consumers must feel that by buying goods from the organization, consumers feel the benefits are greater than the value of the sacrifices incurred. Competition is a condition that needs to be considered by every organization, so the organization must have a strategy that can be used as a weapon in winning the existing competition. Sustainable competitive advantage is the direction of organizational strategy, which is not an end in itself, but is a tool to achieve organizational goals, namely organizational performance that generates relatively high profits. So, the point is that besides the organization having a competitive advantage that aims to win the competition in the business environment, the organization also uses competitive advantage to achieve the desired organizational performance goals.

For an organization to be able to compete and have good organizational performance, it must be supported by implementing supply chain management. Supply chain management is a set of approaches to streamline the integration of suppliers, manufacturers, warehouses, and storage, so that goods are produced and distributed in the right quantities, in the right locations, at the right time to minimize costs and provide satisfactory service to consumers. Supply chain management is an organizational network that involves upstream and downstream relationships in different processes and activities that provide value in the form of products and services to consumers. Competitive advantage basically grows from the value or benefits that a company can create for its buyers that are more than the costs that the company must incur to. This value or benefit that buyers are willing to pay for, and superior value comes from offering a lower price than competitors' prices for equivalent benefits or offering unique benefits that exceed the price offered. To improve Indonesia's logistics performance, several strategic initiatives need to be undertaken namely the integration of multimodal transportation networks through the alignment of road infrastructure, railroads, and ports to facilitate access for land transportation to air and sea transportation. Simplification of logistics transportation documentation and communication through the application of ICT for logistics transportation planning and control. transportation companies, freight forwarding companies and companies to provide efficient logistics service solutions. The demand for infrastructure is not only about quality, but also about capacity and connectivity. Logistics activities expect infrastructure that can become the backbone of efficient transportation operations with good quality. It is a challenge for the Government, BUMN, and the private sector to provide and manage logistics infrastructure, so that it can improve logistics performance nationally to create national competitiveness, especially for the competitiveness of Indonesian products, both to seize market opportunities domestically and internationally.

## **6. Novelty, Theoretical, Practical and Managerial Implications**

The novelty of this research was to consider the effects of logistics capabilities and supply chain policies on logistics integration and competitive advantage in SMEs organizations. The theoretical implication of this research was to support previous theories that logistics capability and supply chain policy play a role in encouraging increased logistics integration and encouraging increased competitive advantage in SMEs organizations. The practical implication of this research is the management of SMEs to implement logistics capability and create and implement supply chain policies to encourage increased logistics integration so that it would increase competitive advantage. The results of this study are expected to provide knowledge about how supply chain policy and logistics capability influence logistics integration and competitive advantage in SMEs. The results of this study are expected to provide input for the performance of SMEs regarding the importance of the influence of supply chain policy and logistics capability on logistics integration and competitive advantage in SMEs. This research contributes to the contribution of information for the development of scientific principles, especially management. This study contributes to reference material and comparisons in the development of subsequent studies related to the Influence of Supply Chain Policy and Logistics Capability on Logistics Integration and Competitive Advantage in SMEs.



## 7. Conclusion

Based on the results of research and discussion on the influence of supply chain management, logistics capability on logistics integration and competitive advantage in SMEs, it can be concluded that supply chain management has a positive and significant influence on logistics integration. Logistics capabilities have had a positive and significant influence on logistics integration, and this supports the second hypothesis. Supply chain management has proven to have a positive and significant influence on competitive advantage. Logistics capability has had no significant effect on competitive advantage. Also, logistics integration has had no significant effect on competitive advantage.

According to our findings, SMEs should start developing strategies to build better integration with suppliers. They can carry out good supply chain management by improving facilities and technologies to compete with other companies in this millennial era. SMEs are expected to continue to improve their competitive capabilities both in terms of price, customer service, innovative technology, and product uniqueness so that they could continue to survive and compete, especially in the same industry and improve company performance through customer satisfaction.

Future research is expected to expand this research by conducting research on manufacturing, service and retail industries that have formally implemented SCM practices.

## References

- Alabdali, M. A., & Salam, M. A. (2022). The impact of digital transformation on supply chain procurement for creating competitive advantage: An empirical study. *Sustainability*, 14(19), 12269.
- Alshurideh, M., Alsharari, N. M., & Al Kurdi, B. (2019). Supply chain integration and customer relationship management in the airline logistics. *Theoretical Economics Letters*, 9(02), 392.
- Arijanto, R. (2022). The Role of Supply Chain Management on Competitive Advantage and SMEs Operational Performance During Post Pandemic and Digital Era. *Journal of Industrial Engineering & Management Research*, 3(6), 128 - 137. <https://doi.org/10.7777/jiemar.v3i6.410>
- Baah, C., & Jin, Z. (2019). Sustainable supply chain management and organizational performance: the intermediary role of competitive advantage. *Journal of Management & Sustainability*, 9, 119.
- Basheer, M., Siam, M., Awn, A., & Hassan, S. (2019). Exploring the role of TQM and supply chain practices for firm supply performance in the presence of information technology capabilities and supply chain technology adoption: A case of textile firms in Pakistan. *Uncertain Supply Chain Management*, 7(2), 275-288.
- Bielecki, M., & Szymonik, A. (2015). The impact of logistics Security conditions on the logistical efficiency of the product. *Acta Technica Corviniensis-Bulletin of Engineering*, 8(1), 39.
- Chang, C. H., Lu, C. S., & Lai, P. L. (2022). Examining the drivers of competitive advantage of the international logistics industry. *International Journal of Logistics Research and Applications*, 25(12), 1523-1541.
- Biswas, S., & Anand, O. P. (2020). Logistics Competitiveness Index-Based Comparison of BRICS and G7 Countries: An Integrated PSI-PIV Approach. *IUP Journal of Supply Chain Management*, 17(2).
- Ebenezer, A., & Zhuo, S. (2019). Reverse logistics and performance of bottled and sachet water manufacturing firms in Ghana: The intervening role of competitive advantage. *IOSR Journal of Business Management*, 21, 34-39.
- Haris, M., & Kusuma, C. (2023). Optimizing Maritime Supply Chain Resilience with Port Integration and Inland Distribution at Base Pier. *Journal of Industrial Engineering & Management Research*, 4(1), 112-117. <https://doi.org/10.7777/jiemar.v4i1.448>
- Herden, T. T. (2020). Explaining the competitive advantage generated from Analytics with the knowledge-based view: the example of Logistics and Supply Chain Management. *Business Research*, 13(1), 163-214.
- Jermisittiparsert, K., Namdej, P., & Somjai, S. (2019). Green supply chain practices and sustainable performance: moderating role of total quality management practices in electronic industry of Thailand. *International Journal of Supply Chain Management*, 8(3), 33-46.
- Mukaromah, H., Muhajir, M., Fathudin, F., Purwanti, K., Ansori, Y., Fahlevi, M., ... & Purwanto, A. (2022). The role of buzz and viral marketing strategic on purchase intention and supply chain performance. *Uncertain Supply Chain Management*, 10(2), 637-644.
- Naway, F., & Rahmat, A. (2019). The mediating role of technology and logistic integration in the relationship between supply chain capability and supply chain operational performance. *Uncertain Supply Chain Management*, 7(3), 553-566.
- Notteboom, T., van der Lugt, L., van Saase, N., Sel, S., & Neyens, K. (2020). The role of seaports in green supply chain management: Initiatives, attitudes, and perspectives in Rotterdam, Antwerp, North Sea Port, and Zeebrugge. *Sustainability*, 12(4), 1688.
- Permana, A. I., & Soediantono, D. (2022). The Role of Eco Supply Chain on Environment and Operational Performance of Indonesian Defense Industry. *Journal of Industrial Engineering & Management Research*, 3(3), 73 - 84. <https://doi.org/10.7777/jiemar.v3i3.284>
- Purwanto, A., & Juliana, J. (2022). The effect of supplier performance and transformational supply chain leadership style on supply chain performance in manufacturing companies. *Uncertain Supply Chain Management*, 10(2), 511-516.

- Reklitis, P., Sakas, D. P., Trivellas, P., & Tsouflias, G. T. (2021). Performance implications of aligning supply chain practices with competitive advantage: Empirical evidence from the agri-food sector. *Sustainability*, *13*(16), 8734.
- Remondino, M., & Zanin, A. (2022). Logistics and Agri-Food: Digitization to Increase Competitive Advantage and Sustainability. Literature Review and the Case of Italy. *Sustainability*, *14*(2), 787.
- Rizki, A. F., Murwaningsari, E., & Sudibyoy, Y. A. (2022). Integration Green Supply Chain Management and Environmental Consciousness: Direct Effects Sustainability Performance. *International Journal of Social and Management Studies*, *3*(5), 198–213. <https://doi.org/10.5555/ijosmas.v3i5.238>
- Saragih, J., Tarigan, A., Silalahi, E. F., Wardati, J., & Pratama, I. (2020). Supply chain operational capability and supply chain operational performance: Does the supply chain management and supply chain integration matters. *International Journal of Supply Chain Management*, *9*(4), 1222-1229.
- Shraah, A., Abu-Rumman, A., Alqhaiwi, L., & AlShaar, H. (2022). The impact of sourcing strategies and logistics capabilities on organizational performance during the COVID-19 pandemic: Evidence from Jordanian pharmaceutical industries. *Uncertain Supply Chain Management*, *10*(3), 1077-1090.
- Siagian, H., Tarigan, Z. J. H., & Jie, F. (2021). Supply chain integration enables resilience, flexibility, and innovation to improve business performance in COVID-19 era. *Sustainability*, *13*(9), 4669.
- Sutducan, J., Singa, A., Sriyakul, T., & Jermisittiparsert, K. (2019). Supply chain integration, enterprise resource planning, and organizational performance: The enterprise resource planning implementation approach. *Journal of Computational and Theoretical Nanoscience*, *16*(7), 2975-2981.
- Soemadi, R. R. A., Nadeak, M., & Novitasari, D. (2022). The Role of Supply Chain Management Practices on Competitive Advantage and Performance of Agroindustry SMEs. *International Journal of Social and Management Studies*, *3*(5), 188–197. <https://doi.org/10.5555/ijosmas.v3i5.237>
- Tarigan, Z. J. H., Siagian, H., & Jie, F. (2021). Impact of internal integration, supply chain partnership, supply chain agility, and supply chain resilience on sustainable advantage. *Sustainability*, *13*(10), 5460.
- Wang, M., Wang, B., & Abaresi, A. (2020). Blockchain technology and its role in enhancing supply chain integration capability and reducing carbon emission: A conceptual framework. *Sustainability*, *12*(24), 10550.
- Yusuf, A., & Soediantono, D. (2022). Supply Chain Management and Recommendations for Implementation in the Defense Industry: A Literature Review. *International Journal of Social and Management Studies*, *3*(3), 63–77. <https://doi.org/10.5555/ijosmas.v3i3.142>



© 2023 by the authors; licensee Growing Science, Canada. This is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC-BY) license (<http://creativecommons.org/licenses/by/4.0/>).