

## Rethinking operational decisions making: Strategic drivers from management commitment, supply chain transparency and integration

Sautma Ronni Basana<sup>a</sup>, Mariana Ing Malelak<sup>a</sup>, Hotlan Siagian<sup>a</sup>, Ruth Srininta Tarigan<sup>a</sup>, Zeplin Jiwa Husada Tarigan<sup>a\*</sup> and Zarul Azhar bin Nasir<sup>b</sup>

<sup>a</sup>School Business Management, Petra Christian University, Surabaya, Indonesia

<sup>b</sup>Faculty of Business and Management, Universiti Teknologi MARA Perak Branch, Malaysia

### CHRONICLE

#### Article history:

Received July 10 2025

Received in Revised Format

July 19 2025

Accepted August 12 2025

Available online August 12

2025

#### Keywords:

*Commitment management*

*Supply chain transparency*

*Supply chain integration*

*Operational decision-making*

### ABSTRACT

This study aims to examine the influence of commitment management on supply chain integration, supply chain transparency, and operational decision-making in manufacturing companies in Indonesia. Amidst the increasing complexity of supply chains and the demands for rapid, data-driven decision-making, companies need to build integrated and transparent systems, supported by strong commitment from top management. This study used a quantitative approach with a survey method of 128 respondents from manufacturing companies in Java, and the data were analyzed using Partial Least Square (PLS) techniques. The results showed that commitment management significantly influenced supply chain integration, supply chain transparency, and operational decision-making. Supply chain integration was also shown to influence supply chain transparency, but not significantly on operational decision-making. Meanwhile, supply chain transparency significantly influenced operational decision-making. A mediation test showed that the indirect influence of commitment management on operational decision-making through supply chain integration and transparency was not significant. This indicates that operational decision-making still relies heavily on the direct involvement of top management. This study provides a theoretical contribution in enriching the understanding of the role of management commitment in supply chain-based operational decision-making systems. Practically, the results of this study recommend strengthening the role of middle managers, decision-making training, and the implementation of integrated information systems to improve the effectiveness of operational decisions in real time.

© 2025 by the authors; licensee Growing Science, Canada

## 1. Introduction

The Indonesian manufacturing industry is constantly striving to meet the challenges of accelerating globalization (Pirmanta et al., 2021). Manufacturing companies face global challenges, including the need for products that can compete with other industries using technology (Sharma & Joshi, 2023). A crucial aspect of the manufacturing industry is increasing competitiveness with increasingly open tariffs and product competition between countries. Manufacturing companies strive to manage their supply chains efficiently and effectively. Management carried out by manufacturing companies involves internal and external partners (Oubrahim & Sefiani, 2025). Manufacturing companies need to involve all departments within the company so that existing information can be accessed by other departments (Dhaigude et al., 2021). The involvement of all departments within the company allows access to information by relevant departments as needed for effective coordination (Yuan et al., 2022). Open information between departments within the company can create a shared understanding in line with common goals, thus enabling timely decisions (Lo et al., 2025). Internal company integration allows data between various departments to be synchronized and interconnected, thus impacting data accuracy and completeness (Munir et al., 2020). This synchronization ensures the company's data is accurate and allows for informed decisions that align with its needs (Leewis et al., 2025).

\* Corresponding author

E-mail [zeplin@petra.ac.id](mailto:zeplin@petra.ac.id) (Z. J. H. Tarigan)

ISSN 1929-5812 (Online) - ISSN 1929-5804 (Print)

2025 Growing Science Ltd.

doi: 10.5267/j.dsl.2025.8.005

Transparency of data within a company can make work processes more synchronized between departments (Gligor et al., 2022). Open data that allows staff to access across departments as needed improves collaboration (Vivaldini & De Sousa, 2024). A company's ability to build transparency between departments reduces duplication of work and improves decision-making accuracy (Virmani et al., 2025). Internally generated and integrated data will produce accurate data and reporting tailored to the needs of the company's functional areas (Jajja et al., 2018). The implementation of an integrated data system within a company allows for real-time data flow between departments. Open access to information allows specific departments to access data as needed, enabling them to respond quickly and accurately (Dhaigude et al., 2021). Internal company integration, which allows real-time access to cross-functional information, fosters mutually supportive coordination (Kabir et al., 2025). Each function within an organization does not operate independently but rather exists within a unified ecosystem that supports each department. Managing internal integration in a company can create synergy between departments that works well to produce strong external integration (Shahzad et al., 2024).

External integration requires data transparency between a company and its external partners (Shi et al., 2024). Suppliers require accurate material requirements data from the company to estimate inventory needs (Nguyen et al., 2025). External integration can be robust and effective when information is shared between the company and its suppliers or customers (Pirmanta et al., 2021). The coordination established by a company with external partners is based on joint planning and can be enhanced within the business process to achieve more competitive company performance (Uvet et al., 2025). Integration with suppliers extends beyond raw material procurement to the ongoing exchange of demand projection data as needed. Companies can also share production plans with supplier partners and confirm with customers to ensure delivery flexibility. The company's ability to understand customer relationships is crucial for product orders (Tarigan, Tanuwijaya, et al., 2020). Companies can provide access to systems to understand operational conditions, facilitating comprehensive decision-making (Nguyen et al., 2025). Supply chain integration in a company is a collaboration of internal and external integration (Pirmanta et al., 2021). Established supply chain integration within a company can result in supply chain transparency.

Many manufacturing companies face challenges in improving supply chain transparency to create better integration (Munir et al., 2020). The context of the manufacturing industry can make supply chain transparency even more important given the increasingly complex supplier network (Lo et al., 2025). Supply chain transparency is becoming increasingly important for manufacturing companies due to the increasingly complex global supplier and distribution networks (Shi et al., 2024). Supply chain transparency is becoming a new demand for accurate and real-time information from customers (Su et al., 2013). Companies with strong chain supply can reduce operational risk and increase efficiency. Supply chain transparency enables decision-makers in manufacturing companies to determine strong strategic steps (Nishad et al., 2025). Supply chain transparency can increase trust between business partners because they share information to quickly understand partner conditions (Patil et al., 2024). Supply chain transparency formed in companies using enterprise resource planning can create a more effective supply chain system and enable companies to be more responsive to market changes (Tarigan et al., 2020).

Supply chain transparency offers numerous benefits to companies, necessitating consistent implementation in daily business practices. A company's ability to empower external partners to maximize the use of information provided allows it to adapt to uncertain business environments (Jia et al., 2024). A major concern for companies is the risk of confidentiality being leaked to competitors. Strategic information held by a company can be shared with business partners for misuse, so appropriate boundaries need to be set (Su et al., 2013). This information can be used by unauthorized parties. Excessive transparency also risks triggering product imitation practices by competitors, which can cause significant losses for the company. Transparency can easily be accessed by competitors regarding the company's innovations. The ability of company management to collaborate with external partners plays a key role in determining the extent to which transparency can be implemented effectively without sacrificing strategic advantage (Alhawamdeh & Alsmairat, 2019). Management needs to establish a balanced policy between information disclosure and the protection of sensitive company data. The use of secure digital technology is also an important factor in ensuring that information shared in the supply chain remains protected and can only be accessed by authorized parties (Siagian & Tarigan, 2021).

Supply chain transparency is closely linked to supply chain integration, which refers to the integration between suppliers, manufacturers, and distributors in conducting business operations (Nguyen et al., 2025). Good transparency between companies and external partners can foster robust supply chain integration (Patil et al., 2024). Supply chain transparency enables companies to optimize efficiency, increase visibility into the flow of goods and information, and accelerate response times to changes in customer demand (Virmani et al., 2025).

Supply chain integration can enhance collaboration between business partners, enabling companies to reduce inefficiencies and increase competitiveness (Kitsis & Chen, 2021). Furthermore, supply chain transparency contributes to the implementation of good supply chain practices to support company competitiveness, necessitating appropriate operational decision-making (Lo et al., 2025). The implementation of best practices in the supply chain requires continuous operational decision-making (Pourhejazy et al., 2020). The use of digitalization in inventory management and data-driven systems for demand analysis can help determine operational decision-making (Siagian et al., 2025). Technology adoption in manufacturing companies can monitor operational conditions in real time (Xu et al., 2024) and assist operational decision-making in achieving more optimal operational performance (Leewis et al., 2025). Increased transparency combined with

efficient supply chain practices positively impacts operational decision-making in winning the competition (Vivaldini & De Sousa, 2024). The challenge for manufacturing companies in Indonesia is understanding the extent to which they implement transparency with their business partners. Companies need to prepare for independence in facing the challenges of digitalization and transparency, so mapping the conditions for implementing transparency in the supply chain is crucial. Transparency truly provides benefits for manufacturing companies in Indonesia. Some companies may experience positive impacts such as increased efficiency and stronger business relationships, but others may face obstacles such as an increased risk of data breaches and an inability to protect their competitive advantage. The combination of management commitment, supply chain integration, and supply chain transparency directly contributes to operational decision-making. With increasing industrial competition in the digital era, companies that are able to manage their supply chains transparently and integrated will have a greater competitive advantage. Based on the explanation above, three broad research objectives were established: first, to determine the magnitude of the impact of commitment management in manufacturing companies on supply chain transparency, supply chain integration, and operational decision-making. Second, to determine the magnitude of the influence of supply chain integration on supply chain transparency and operational decision-making. Third, to determine the magnitude of the influence of supply chain transparency on operational decision-making.

## 2. Literature Review

### 2.1. Commitment Management

Management commitment is an action taken by company leaders to support the organization's strategic goals (Kitsis & Chen, 2021). Company management can determine policies tailored to the company's internal conditions to anticipate external changes by allocating resources (Opoku et al., 2025). Management commitment can direct company resources to carry out all manufacturing processes efficiently and sustainably. Management commitment to change within the organization can anticipate competitive competition. Company management is expected to encourage process and product innovation to produce superior competitiveness. Management support provided in the implementation of technology is in accordance with the needs of the company's organization (Sharma & Joshi, 2023). Management can provide adequate funds to provide good work facilities. Management commitment provided by the organization can support work efficiency and the achievement of organizational goals (Shahzad et al., 2024). Top management commitment can generate initiatives and ideas to increase employee productivity. Companies can ensure that business processes are executed effectively and that planned improvement plans are implemented optimally by involving all components within the company (Tarigan et al., 2020). A strong commitment from top management is required to ensure the management system runs smoothly and aligns with company objectives (Tarigan, Tanuwijaya, et al., 2020). Management commitment contributes to the company's ability to collaborate transparently with external partners (Opoku et al., 2025).

### 2.2. Supply Chain Integration

Supply chain integration is crucial for companies to improve efficiency and effectiveness (Yuan et al., 2022). Cross-functional integration is a form of internal integration, while cross-organizational integration is a form of external integration (Munir et al., 2020). Frequent obstacles for companies in supply chain integration are scattered data and difficulties in accessing it in real time. The process of adjustment and coordination between internal company functions can work simultaneously and eliminate partial processes (Munir et al., 2020). Coordination built into the supply chain flow needs to be aligned and synchronized to provide a competitive advantage (Yuan et al., 2022). A company's ability to manage cross-functionally well can produce strong synergy between departments, facilitating rapid and precise coordination (Jajja et al., 2018). Well-functioning internal coordination impacts the company in increasing collaboration with external partners as a form of external integration (Pirmanta et al., 2021). Internal integration focuses on a company's ability to connect internal business processes to optimize resource utilization and enable appropriate and adequate decision-making. Internal collaboration can include collaborating on raw material procurement (Jajja et al., 2018; Yuan et al., 2022), developing market-appropriate products (Munir et al., 2020), and developing strategically relevant products (Munir et al., 2020). and ensure that the products produced meet customer needs (Yuan et al., 2022). Supply chain integration is determined by strong internal integration, well-coordinated supplier integration, and adequate customer integration. Interorganizational processes within the supply chain can share information quickly and in real time (Kabir et al., 2025). Success occurs when communication throughout the supply chain is seamless (Dhaigude et al., 2021). Communication between companies and external partners can lead to strategic decisions that support strong collaboration (Munir et al., 2020). This creates strong synchronization and significantly impacts efficiency and effectiveness throughout the supply chain (Yuan et al., 2022).

### 2.3. Supply Chain Transparency

Supply chain transparency is the open flow of information accessible to internal and external partners in the supply chain (Shi et al., 2024). Companies can gain a thorough understanding of the conditions faced by ongoing business processes (Patil et al., 2024). Companies can understand the constraints faced by supplier partners in providing materials as needed (Nguyen et al., 2025). Companies can monitor work processes on the production floor in real time and resolve emerging issues using information technology capabilities (Siagian & Tarigan, 2021). Internal data transparency can foster effective communication

and adequate coordination (Gligor et al., 2022). Departments within a manufacturing company can function effectively when data access is available across functions (Jajja et al., 2018). Manufacturing companies can provide accurate data to internal and external partners regarding needs (Pirmanta et al., 2021). Supply chain transparency can build trust with external partners (Shi et al., 2024). Transparency within a company can provide easily traceable processes and provide the right location with the right quantity (Lo et al., 2025). Supply chain transparency enables manufacturing companies to have strong data accountability, thus becoming a company advantage in consumer perception (Uvet et al., 2025). This transparency allows companies to carry out production and other operational processes correctly and not violate applicable regulations. Companies conduct business processes ethically and build strong partnerships because they are relevant to business partners (Su et al., 2013). This openness impacts operational decision-making that is fast and focused on the company's needs.

#### *2.4. Operational decision-making*

Operational decision-making is crucial for companies in determining appropriate and appropriate decisions (Alhawamdeh & Alsmairat, 2019). Operational decision-making is a decision made by middle management that aligns with strategic and tactical decisions (Leewis et al., 2025). Operational decisions support and are aligned with long-term strategic policies established by company leadership. Operational decisions are necessary to build synergy with internal and external partners to achieve strong and sustainable company performance. Operational decisions made by companies focus more on short-term activities following strategic decisions, considering numerous relevant criteria (Oubrahim & Sefiani, 2025). Operational decisions are related to resolving issues related to data asymmetry within the company, requiring rapid coordination (Weerasekara & Bhanugopan, 2023). Operational decisions focus on company operational activities such as determining production schedules and managing raw material availability (Nguyen et al., 2025). Operational decision-making encompasses urgent decisions such as allocating resources, reallocating logistics resources, average supply chain time, company logistics inflexibility, sourcing efficacy, and variance in customer requirements (Pourhejazy et al., 2020). Operational decisions need to consider the balance of all lines to achieve optimal production and meet customer demand.

Manufacturing companies have high flexibility in meeting customer order changes and the high uncertainty of the global system, necessitating operational decisions. The company's advantage in determining the number of employees for a given period and ensuring synchronization between internal and external processes requires a fast and simultaneous process. Operational decision-making is repetitive and requires a high level of focus and urgency to ensure proper operational alignment, thus requiring technology (Xu et al., 2024). These decisions are made when needed and in real time to ensure business processes continue to run smoothly (Lo et al., 2025). These decisions are necessary to ensure the company's normal operation and eliminate obstacles during the production process. The decision-making process is a crucial element in ensuring the smooth operation of a company (Nishad et al., 2025). Operational decisions are made precisely and in alignment with company strategy, thus the use of digital technology is essential (Leewis et al., 2025). The use of technology in determining operational decisions can result in cost efficiency, product quality, and speed of service. The use of technology in operational decision management is essential to produce systematic, data-driven processes that reflect real-world conditions (Kabir et al., 2025). Operational success depends heavily on the ability to make quick and accurate decisions (Siagian et al., 2025). Companies that can strengthen their operational decision-making capabilities quickly, responsively, and based on data will have a greater chance of surviving and growing in increasingly dynamic business competition (Vivaldini & De Sousa, 2024).

#### *2.5. Relationship between research concepts*

##### *2.5.1. The relationship between commitment management and supply chain transparency*

The complexity of business processes for companies impacts the organization and control of processes. Today's businesses face high levels of uncertainty, resulting in significant pressure from the market and supply (Tarigan, Tanuwijaya, et al., 2020). Information transparency for all critical internal company components and external partners ensures up-to-date information throughout the supply chain (Shi et al., 2024). Management commitment is crucial for maintaining the trust of external partners by providing transparent access to information as needed throughout the supply chain (Siagian & Tarigan, 2021). Management commitment demonstrates the extent to which a company adheres to established policies to support supply chain transparency. Management commitment is essential for determining implementation decisions for companies in supply chain transparency using enterprise resource planning (Tarigan et al., 2020). Management commitment impacts supply chain transparency, thereby improving synchronization between departments (Opoku et al., 2025). Transparency resulting from management commitment allows for the oversight and monitoring of all business activities within the company (Uvet et al., 2025). Supply chain transparency allows other departments to monitor raw material procurement activities within the company (Nguyen et al., 2025). Management commitment plays a crucial role in supply chain transparency, providing accurate and timely reporting on the company's conditions (Patil et al., 2024).

**H<sub>1</sub>:** *Commitment management has an impact on supply chain transparency.*

### 2.5.2. *The relationship between commitment management and supply chain integration*

Management commitment to a company can generate coordination and collaboration as a form of effective supply chain integration both internally and externally. Management commitment is crucial for management involvement in determining the company's direction and strategy in managing supply chain integration (Kitsis & Chen, 2021). Strong commitment from top management can provide physical and non-physical resources to support supply chain integration, fostering collaboration and continuous improvement. Top management monitoring of information and material flows can be a company's strength in improving supply chain integration and providing effective and efficient services (Munir et al., 2020). Without top management support, conflicts of interest can arise between departments, hindering business processes. Strong management commitment impacts supply chain integration, resulting in faster customer response (Shahzad et al., 2024). Weak commitment can result in failed system implementation, resulting in inaccessibility of data to relevant departments in real time (Sharma & Joshi, 2023). Slow data can lead to sluggish business process systems or slow decision-making. Management commitment is a strategic foundation for the success of supply chain integration (Dhaigude et al., 2021), because without leadership and full support from top management, integration only solves operational problems without any real strategic impact (Tarigan et al., 2020).

**H<sub>2</sub>:** *Commitment management influences supply chain integration.*

### 2.5.3. *The relationship between commitment management and operational decision-making*

Commitment management is crucial for middle managers and staff in determining operational decision-making that impacts the company's operational effectiveness (Tarigan et al., 2020). Top management commitment can be a key driver for employees in making the right choices and daring to make sound decisions at the operational level. Strong management commitment can provide and set direction for decision-makers at the company's operational level to implement established systems (Opoku et al., 2025). Management commitment needs to adequately empower employees through training to enhance their ability and speed in operational decision-making (Nishad et al., 2025). Management commitment in determining company operations is related to the allocation of required resources in production areas and other units as needed. Management commitment can maintain organizational culture and create a control system in the operational department to support goal achievement (Pourhejazy et al., 2020). Management commitment creates clarity of direction for operational decision-makers. Committed management will provide clear direction and strategy, and firm boundaries for operational employees in making decisions (Leewis et al., 2025). The established management commitment can serve as a role model and guide for lower-level decision-making. Organizations with highly committed management always provide adequate training for operational employees (Shahzad et al., 2024). Management commitment can grant authority to the operational department in making decisions appropriate to the problems faced (Weerasekara & Bhanugopan, 2023). Rapid decision-making for operational employees who have been entrusted with making quick decisions that have a direct impact on customer service or production efficiency. Established management commitment can create a responsive and adaptive organizational culture. Operational decisions need to be flexible and based on the challenges the company faces (Jia et al., 2024). Management commitment is the foundation for establishing an agile organizational structure capable of responding quickly to change through appropriate operational decisions.

**H<sub>3</sub>:** *Commitment management has an impact on operational decision-making.*

### 2.5.4. *The relationship between supply chain integration, transparency and operational decision-making*

In the current digital era, supply chain integration within and outside the organization has increased supply chain transparency (Shi et al., 2024). Alignment between internal company business processes and external partners is essential for supply chain transparency so that activities can be mutually controlled and strengthened (Gligor et al., 2022). Entities in the supply chain between departments within the company can be shared with external partners so they can understand the company's condition (Munir et al., 2020). Supply chain integration can create a flow of information from suppliers to the company that is accessible to relevant departments, thereby increasing supply chain transparency by sharing information with external partners (Jajja et al., 2018). Optimal integration in a harmonious supply chain system result in strong coordination (Weerasekara & Bhanugopan, 2023). Supply chain transparency, which relies on the openness of internal information, can be shared with external partners to accurately estimate order demand (Pirmanta et al., 2021; Siagian & Tarigan, 2021). The ability to track material movements and production processes using supply chain integration can be enhanced with supply chain transparency. Supply chain integration, with data from various departments and external partners, can be consolidated into a single system to achieve supply chain transparency (Dhaigude et al., 2021). The use of digital technology systems that integrate data across company functions can be the foundation for implementing supply chain transparency. Strong supply chain integration fosters strong coordination between components, ensuring that all processes meet established standards, which contributes to increased supply chain transparency (Gligor et al., 2022). Supply chain transparency can be achieved in an environment based on trust, defined by supply chain integration, which strengthens collaborative relationships between business partners (Shi et al., 2024). Supply chain integration, which involves all parties in the supply chain, fosters engagement and shared goals, fosters openness in information sharing (Munir et al., 2020).

Business process coordination in aligning integration functions between cross-functional and inter-company processes determines operational decision-making in carrying out process continuity (Vivaldini & De Sousa, 2024). Supply chain integration that occurs in a company can share information in real time with all parties who will access the data. Problems faced internally and with external partners can be resolved immediately, eliminating delays. Horizontal and vertical integration in the supply chain requires accurate data to determine joint planning for more optimal operational decision-making (Oubrahim & Sefiani, 2025). Proper communication through supply chain integration creates aligned goals and works based on the same strategy for complementary operational decision-making (Siagian et al., 2025). Supply chain integration provides an integrated system that facilitates the evaluation of operational conditions comprehensively, enabling appropriate operational decision-making (Pourhejazy et al., 2020). Supply chain transparency is crucial for companies to make rapid operational decisions because the necessary data is readily available (Virmani et al., 2025). Supply chain transparency facilitates access for relevant departments to financial information and the flow of goods within the company (Jia et al., 2024). It also allows external partners to access company data, allowing it to be tailored to their needs (Vivaldini & De Sousa, 2024). Supply chain transparency can provide accurate data in real time (Kabir et al., 2025). Partner companies have direct access to primary data from the supply chain regarding raw material availability and production planning (Lo et al., 2025). Operational managers can quickly and responsively identify operational challenges to ensure smooth production continuity. Supply disruptions from key suppliers can provide rapid and transparent information, enabling operational teams to quickly seek alternatives (Dhaigude et al., 2021). With transparent information, companies can forecast demand more accurately (Patil et al., 2024), minimize excess or shortage inventory, and prevent bottlenecks in the production process. This is crucial for decisions such as how many units to produce or when is the best time to reorder.

**H4:** *Supply chain integration has an impact on supply chain transparency.*

**H5:** *Supply chain integration has an impact on operational decision-making.*

**H6:** *Supply chain transparency has an impact on operational decision-making.*

#### 2.5.5. The relationship between commitment management and operational decision-making through supply chain transparency and integration

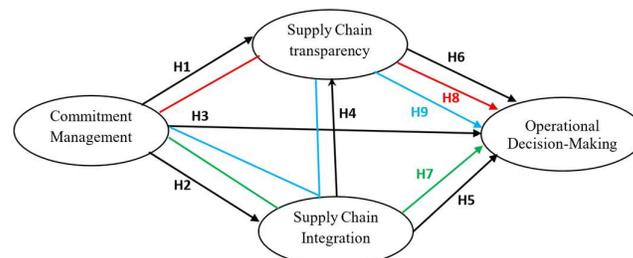
Strong management commitment to the company is crucial for effective operational decision-making (Alhawamdeh & Alsmairat, 2019). High management commitment supports internal company integration by allocating a budget for updating information technology software and hardware to facilitate real-time data access. The availability of an integrated information technology system within the company facilitates integration with external partners, thus ensuring effective supply chain transparency (Leewis et al., 2025). Both the upstream and downstream supply chains can access company data as a form of external integration, enabling intensive communication and improving supply chain transparency (Gligor et al., 2022; Lo et al., 2025). Top management within the company demonstrates a strong commitment to information needs, thus enhancing internal and external cross-functional collaboration (Munir et al., 2020), a form of supply chain integration that impacts supply chain transparency and results in effective operational decision-making (Pourhejazy et al., 2020). Supply chain transparency acts as a bridge connecting managerial commitment to the quality of operational decisions (Shi et al., 2024). Strong management commitment, coupled with adequate supply chain transparency and the use of technology for data integration (Jajja et al., 2018; Dhaigude et al., 2021), ensures easy access for stakeholders to make operational decisions quickly and accurately. High transparency impacts operational decisions based on accurate data, making them more efficient, responsive, and aligned with established business strategies. Based on this explanation, the research hypotheses H7–H9 can be established as follows:

**H7:** *Commitment management influences operational decision-making with supply chain integration as an intervening variable.*

**H8:** *Commitment management influences operational decision-making with supply chain transparency as an intervening variable.*

**H9:** *Commitment management influences operational decision-making with supply chain integration and transparency as intervening variables.*

Based on the explanation in the literature review, the research model can be determined in Fig. 1.



**Fig. 1.** Rethinking Operational Decision-Making Research Model

### 3. Research Method

The measurements conducted in this study considered the theory of human resources in the adoption of information technology in supply chain management. The study was determined by 23 measurement items consisting of commitment management (five measurement items), supply chain integration (eight measurement items), supply chain transparency (five measurement items), and operational decision making (five measurement items). Each measurement was conducted using a questionnaire with a five Likert scale (1 = strongly disagree, and 5 = strongly agree). The criteria for respondents who had adopted information technology as a company's operational system. Employees as respondents had worked in the company for at least two years and were able to use information technology in their daily work activities. The research hypothesis testing used PLS (Partial Least Square) to answer all hypotheses used. The hypothesis was declared accepted if the t-statistics  $\geq 1.96$  or p-value  $\leq 0.05$  and rejected if the opposite occurred.

Commitment management is expressed by concrete actions taken by top management in implementing the company's strategy consistently and sustainably. Measurement items established by adopting research by Kitsis and Chen (2021); Shahzad et al. (2024) for commitment management are: Top management is an important part of the company's strategy (CM1), Sustainability views are important for most top management (CM2), top management meets the demand for necessary resources (CM3), top management supports efforts to improve initiatives (CM4), management encourages trained employees to address issues (CM5). Supply chain integration is an alignment process carried out by manufacturing companies in building integrated business processes within the company and involving external partners to achieve common goals to increase competitiveness (Yuan et al., 2022; Munir et al., 2020; Jajja et al., 2018). Measurement items used for supply chain integration consist of internal integration with the item of collaboration between functions running well (II1), each department gets adequate data access rights (II2), supplier integration with the item of the company sharing information with supplier partners (SI1), the company involving suppliers in planning (SI2), the company involving suppliers in making decisions (SI3) and customer integration with the item of the company sharing information with customer partners (CI1), the company involving customers in planning (CI2), and the company involving customers in making decisions (CI3).

Supply chain transparency is the openness of information flow that can be accessed by internal and external partners in the supply chain flow as needed to make fast, accurate, and reliable decisions. Measurement items adopting research by Lo et al. (2025); Gligor et al. (2022); Jia et al. (2024) used for supply chain transparency are information available in real time (SCT1), information can be accessed by external partners (SCT2), business processes are openly explained to partners (SCT3), business partners can know the status of the company's processes (SCT4), policies support information transparency (SCT5). Operational decision making is a decision that is made to align with strategic and tactical decisions. The measurement items used for operational decision making are decision making using accurate data (ODM1) (Leewis et al., 2025), decision making using complete data (ODM2) (Leewis et al., 2025), decision making considering all different alternatives (ODM3) (Alhawamdeh & Alsmairat, 2019), involving related units in determining operational decisions (ODM4) (Alhawamdeh & Alsmairat, 2019; Siagian et al., 2025), and periodic evaluation of operational decisions (ODM5) (Alhawamdeh & Alsmairat, 2019). The survey conducted for the research data collection involved manufacturing companies located on the island of Java, the location of the factories. Researchers conducted direct surveys in the four provinces of East Java, Central Java, West Java, Yogyakarta, and Jakarta. Researchers interviewed several manufacturing companies to obtain insights into practices related to supply chain integration, transparency, and rapid operational decision-making. To obtain a comprehensive overview of practices and implementation within the companies, a questionnaire was distributed using Google Forms. The data collected for a total of 128 manufacturing companies was further analyzed according to criteria.

The respondent profile obtained from the distribution with the composition of male respondents amounted to 82 (64%) and female 46 (36%), the managerial level of respondents in middle management (supervisor and manager) amounted to 52 (41%) and lower management (staff and operator) 76 people (59%), the respondent profile based on length of service between 2 years to 5 years amounted to 46 people (36%), between 5 years to 10 years amounted to 43 people (34%), between 10 years to 15 years amounted to 30 people (23%) and more than 15 years of work experience amounted to 9 people (7%). The respondent profile based on the number of employees 20 to 100 employees as medium-class companies amounted to 102 companies (80%), and the category of large companies with more than 100 employees amounted to 26 companies (20%).

### 4. Analysis and Discussion

Data processing of 128 questionnaires by testing the outer model using PLS to obtain validity and reliability tests is shown in Table 1. Based on the validity and reliability tests in Table 1, it was found that all measurement items met the established requirements. The lowest validity test was found in the supply chain integration variable with the measurement item each department has adequate data access rights (II2) with a value of 0.500 ( $\geq 0.500$ ) which has met the minimum requirements. The reliability test has met the requirements with the lowest value on the Operational decision-making variable with a Cronbach Alpha value = 0.807 ( $\geq 0.700$ ) and Composite Reliability = 0.816 ( $\geq 0.700$ ) so it is said to be reliable.

**Table 1**  
Validity and Reliability Test of Research Measurement Items

Measurement Items of Research	Outer Loading	Mean
<b>Commitment Management</b> (Cronbach Alpha = 0.827; Composite Reliability = 0.844; AVE = 0.590)	-	4.395
Top management is an important part of corporate strategy (CM1)	0.676	4.375
Sustainability views are important to most top management (CM2)	0.759	4.328
Top management fulfills the required resource requests (CM3)	0.824	4.500
Top management supports initiatives improvement efforts (CM4)	0.807	4.398
Management encourages trained employees to solve problems (CM5)	0.765	4.375
<b>Supply Chain Transparency (R-square =0.489)</b> (Cronbach Alpha = 0.866; Composite Reliability = 0.873; AVE = 0.653)	-	4.097
Information available in real time (SCT1)	0.759	4.266
Information is accessible to external partners (SCT2)	0.756	3.586
Business processes are openly explained to partners (SCT3)	0.860	3.984
Business partners can find out the status of company processes (SCT4)	0.852	4.266
Policy supporting information transparency (SCT5)	0.807	4.383
<b>Supply Chain Integration (R-square =0.229)</b> (Cronbach Alpha = 0.904; Composite Reliability = 0.923; AVE = 0.610)	-	4.211
Collaboration between functions is running well (II1)	0.661	4.195
Each department gets adequate data access rights (II2)	0.500	4.055
Sharing information with supplier partners (SI1)	0.892	4.250
The company involves suppliers in planning (SI2)	0.856	4.219
The company involves suppliers in making decisions (SI3)	0.840	4.164
Customer integration with company items sharing information with customer partners (CI1)	0.816	4.297
The company involves customers in planning (CI2)	0.859	4.352
The company involves customers in making decisions (CI3)	0.744	4.156
<b>Operation Decision Making (R-square =0.407)</b> (Cronbach Alpha = 0.807; Composite Reliability = 0.816; AVE = 0.569)	-	4.109
Decision-making using accurate data (ODM1)	0.644	3.852
Decision-making using complete data (ODM2)	0.792	3.953
Decision making considering all different alternatives (ODM3)	0.730	4.281
Involve related units in determining operational decisions (ODM4)	0.873	4.234
Periodic evaluation of operational decisions (ODM5)	0.714	4.227

Respondents' perceptions regarding commitment management as a concrete action taken by top management to consistently and sustainably implement the company's strategy have an average value of 4,395. The mean value of the measurement items for commitment management ranges from 4,328 to 4,500. Commitment management in the company maintains consistency and sustainability in maintaining the company's competitiveness, as indicated by fulfilling human resource demand as needed. Respondents' perceptions of the company's supply chain transparency were obtained with a mean value of 4,097. This condition indicates that the company has strived to build information transparency internally and externally to be able to obtain information in real time. The lowest value was found in the measurement item information can be accessed by external partners 3,586 which is still relatively good. Manufacturing companies in Java still provide access rights to key suppliers to know the company's condition, while customers have been given access to information in the company in real time. Several companies stated that external partners who have been suppliers for more than 2 years are given access rights to company data. Suppliers who are given priority access rights are raw material suppliers, which are needed at any time to be able to adjust to customer demand. Supply chain integration is the process of aligning integrated business processes within a company and with external partners to increase competitiveness. The mean value for the variable supply chain integration score was 4,211; while the mean value for the measurement items ranged from 4,055 to 4,352. This indicates that internal data integration within the company is adequate and aligned with cross-functional and inter-organizational aspects of the supply chain. Internal integration is well-established, and integration with suppliers and customers is involved in product development planning and decision-making. Manufacturing companies in Java have information systems that can be integrated internally and with external partners. Operational decision making is a decision made to align with the company's strategic and tactical decisions. The mean value for operational decision making was 4.109, while the mean value for the measurement items was between 4.109 and 4.109.3.852-4.281. This condition shows that operational decision-making utilizes accurate data and involves all relevant parties. The company also periodically evaluates operational decisions, considering sustainability consequences and the speed of problem resolution.

Table 1 shows the results of data processing followed by an inner model for R-square. To obtain the Q-square value as a form of predictive model,  $Q^2: 1 - [1 - (0.489) \times (1 - 0.229) \times (1 - 0.407)] = 0.7664 = 76.64\%$ . This shows that the model can explain the problems that occur by 76.64%, and commitment management has been able to explain Supply chain integration by 22.9%. Supply chain transparency can be determined by Supply chain integration and commitment management by 48.9%. Data processing was continued to answer the research hypotheses shown in Table 2 and Fig. 2.

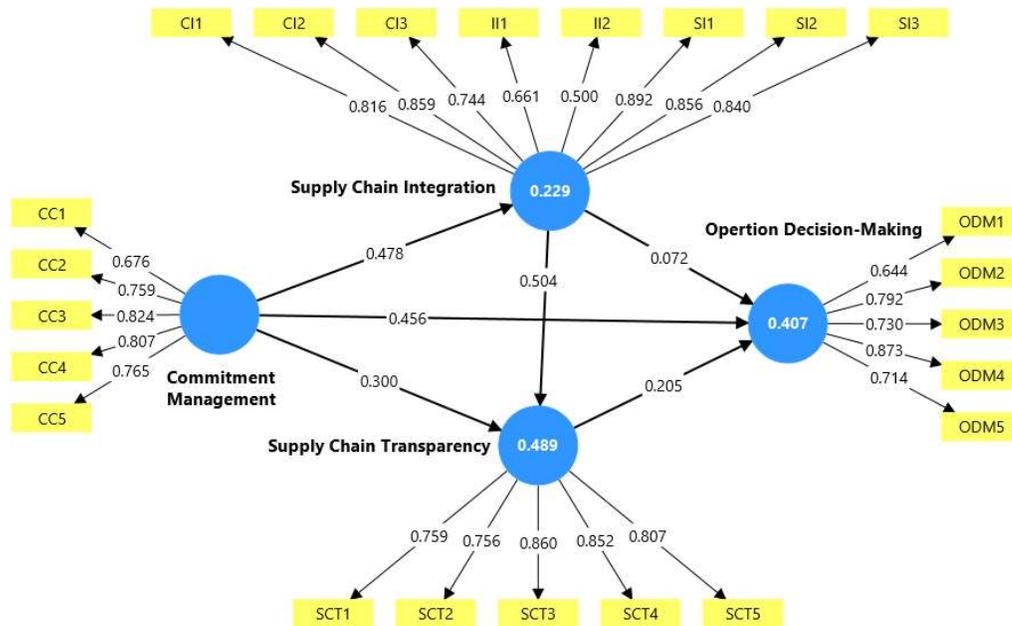


Fig. 2. Results of Path-Coefficient

Table 3  
Results of research testing hypotheses

Direct Effect	Original sample	T-statistics	P values
Commitment Management → Supply Chain Transparency (H1)	0.300	2.778	0.005
Commitment Management → Supply Chain Integration (H2)	0.478	4.770	0.000
Commitment Management → Operation Decision-Making (H3)	0.456	5.335	0.000
Supply Chain Integration → Supply Chain Transparency (H4)	0.504	4.459	0.000
Supply Chain Integration → Operation Decision-Making (H5)	0.072	0.643	0.520
Supply Chain Transparency → operation Decision-Making (H6)	0.205	1.978	0.049
Commitment Management → Supply Chain Integration → Operation Decision-Making (H7)	0.035	0.561	0.575
Commitment Management → Supply Chain Transparency → Operation Decision-Making (H8)	0.061	1.351	0.177
Commitment Management → Supply Chain Integration → Supply Chain Transparency → Operation Decision-Making (H9)	0.049	1.385	0.166

The first hypothesis test (H1) is that the influence of commitment management on supply chain transparency is 0.300, which has a t-statistic/p-value of 2.778/0.005 ( $>1.96/<0.05$ ), so the first hypothesis is accepted. The company's commitment management has the highest loading factor and means on the item top management fulfills the demand for necessary human resources which can have an impact on supply chain transparency. Company employees with their expertise can utilize available information technology to customize the data, allowing internal and external parties to access it as needed.

The second hypothesis test (H2) is that the influence of commitment management on supply chain integration is 0.478, which has a t-statistic/p-value of 4.770/0.000 ( $>1.96/<0.05$ ), so the second hypothesis is accepted. Commitment management in meeting the demand for necessary resources and encouraging trained employees to address issues can improve supply chain integration by establishing effective inter-functional collaboration and involving external partners in planning and decision-making. The third hypothesis test (H3) shows that the influence of commitment management on operational decision-making is 0.456, which has a t-statistic/p-value of 5.335/0.000 ( $>1.96/<0.05$ ), so the third hypothesis is accepted. Strong commitment management can have an impact on operational decision-making. Involving relevant units in determining operational decisions and decision-making using complete and accurate data allows the company to achieve the strategic and tactical levels determined by top management.

The fourth hypothesis test (H4) is that the effect of supply chain integration on supply chain transparency is 0.504, which has a t-statistic/p-value of 4.459/0.000 ( $>1.96/<0.05$ ), so the fourth hypothesis is accepted. Supply chain integration that is formed in companies with sharing information with supplier partners and involving suppliers in planning and decision-making can improve the supply chain transparency. This condition allows internal and external parties to access data transparently. Real time and know the status of the company's processes. The fifth hypothesis test (H5) shows that the influence of supply chain integration on operational decision-making is 0.072, which has a t-statistic/p-value of 0.643/0.520 ( $<1.96/>0.05$ ), so the fifth hypothesis is rejected. Supply chain integration that is formed in companies involving external partners in planning cannot have an impact on adequate operational decision-making. This situation is caused by some companies' decision-making regarding operational issues being determined by top management, due to its close relationship with operational costs.

Integration with external partners is determined in detail by lower managers, but decision-making remains at the middle and top levels.

Hypothesis testing conducted by indirect effect found that the intervening variable is not significant. Testing the sixth hypothesis (H6) the influence of supply chain transparency on operational decision-making by 0.205 which has a t-statistic/p-value of 1.978/0.049 ( $>1.96/<0.05$ ) so that the sixth hypothesis is accepted. Testing the seventh hypothesis (H7) Commitment management influences operational decision-making through supply chain integration by 0.035 which has a t-statistic/p-value of 0.561/0.575 ( $<1.96/>0.05$ ) so that the seventh hypothesis is rejected. Testing the eighth hypothesis (H8) the influence of commitment management influences operational decision-making through supply chain transparency by 0.061 which has a t-statistic/p-value of 1.351/0.177 ( $<1.96/>0.05$ ) so that the eighth hypothesis is rejected. The ninth hypothesis test (H9) shows that commitment management influences operational decision-making with supply chain integration of 0.049 which has a t-statistic/p-value of 1.385/0.166 ( $<1.96/>0.05$ ) so that the ninth hypothesis is rejected. The results of the H7-H9 test do not significantly influence commitment management on operational decision-making through supply chain transparency and integration because in manufacturing companies on the island of Java, the manager and top management levels tend to determine decisions. Lower managers always ask for opinions and informal approval from middle or top managers regarding operational decisions made. This condition results in the magnitude of the influence of commitment management having a direct effect on operational decision-making of 0.456 significantly.

Manufacturing companies in Java have a strong management commitment to implementing information technology to build supply chain transparency and integration as a support for operational decision-making. Top management needs to strengthen leadership training for lower management to enable them to make operational decisions quickly and empower them to make them, ensuring timely resolution of any operational issues. Supply chain transparency within the company can be gradually improved to ensure adequate and sustainable collaboration with external partners. The research's practical contribution is that high management commitment directly impacts the quality of operational decision-making. Therefore, it is crucial for top management to provide resources, training, and systems that support rapid, data-driven decisions. An integrated and real-time information system is needed to support supply chain transparency and integration. These findings provide practical guidance for companies in selecting and implementing digital technology to make internal and external coordination processes more responsive. One obstacle to effective decision-making is the dominance of top management in operational decision-making. Therefore, training and empowerment are needed for middle and lower management to provide autonomy and speed in directly addressing operational issues. The theoretical contribution of this research confirms that commitment management not only impacts strategic aspects but also has a significant direct contribution to the operational decision-making process. This enriches the literature by explaining the direct and indirect pathways from managerial commitment to operational performance. By leveraging operational decision-making with transparency and digital-based supply chain integration, this research contributes to the digital supply chain literature, particularly in the context of the digital transformation of the Indonesian manufacturing industry.

## 5. Conclusion

Era of global competition and accelerated digitalization, manufacturing companies are required to make operational decisions quickly, accurately, and based on data. Top management involvement and information system optimization are crucial in building an efficient and responsive supply chain. The study's findings indicate that commitment management has a significant direct impact on three key aspects: supply chain integration, supply chain transparency, and operational decision-making. Actively involved top management in providing resources, supporting initiatives, and encouraging employee training has been shown to foster more synchronized and collaborative work processes, both internally across departments and externally with business partners. This commitment also creates a work environment that enables faster and more accurate decision-making, as each part of the organization has a clear direction and adequate resources.

Supply chain integration emphasizes the importance of synergy between a company's internal functions and external partners. Effective coordination enables planning alignment, real-time information exchange, and joint involvement in product development and problem-solving. The analysis shows that the effect of supply chain integration on operational decision-making is not statistically significant. This is due to the decision-making structure in Indonesian manufacturing companies, which remains highly centralized at the middle and upper management levels. Lower-level employees or supervisors tend not to be given full decision-making authority, so the established integration does not have a direct impact on accelerating the operational decision-making process. Conversely, supply chain transparency has been shown to significantly contribute to operational decision-making. Transparency in the form of open data and information across functions and with external partners allows companies to have complete visibility into operational processes. Real-time information on inventory conditions, production capacity, and delivery status enables lower managers to make decisions quickly. Accurate and accessible data also enables more precise demand planning. Supply chain integration and transparency do not significantly mediate the relationship between commitment management and operational decision-making. In other words, the influence of management commitment on operational decisions is predominantly direct. This again indicates that strategic and operational decision-making is still very dependent on the initiative and authority of top management, not solely the result of existing collaboration systems or mechanisms.

These findings provide important insights that building strong commitment management is a key foundation for creating an agile and responsive organization. This commitment needs to be realized in tangible ways, such as providing information technology that supports data integration, leadership training for middle and lower management, and a more flexible decentralized policy for operational decision-making. Manufacturing companies need to encourage involvement at all levels of the organization in the decision-making process by providing accurate data and integrated systems. Utilizing digital technology in supply chain management and operational reporting not only increases efficiency but also creates a competitive advantage in facing market dynamics. Gradually building transparency also needs to be accompanied by robust data security policies to prevent strategic information leaks to competitors.

## Acknowledgments

The authors would like to thank **Director of Research and Community Service, Higher Education Indonesia** for providing the grant ID **128/C3/DT.05.00/PL/2025**, and Research and Community Outreach Petra Christian University with contract number 002/LL7/DT.05.00/PL/2025, 007/PFR/LPPM-UKP/2025, and collaboration agreement between Petra Christian University-UiTM with number 0284/UKP/2025

## References

- Alhawamdeh, H. M., & Alsmairat, M. A. K. (2019). Strategic decision making and organization performance: A literature review. *International Review of Management and Marketing*, 9(4), 95–99. <https://doi.org/10.32479/irmm.8161>
- Dhaigude, A. S., Kapoor, R., Gupta, N., & Padhi, S. S. (2021). Linking supply chain integration to supply chain orientation and performance – a knowledge integration perspective from Indian manufacturing industries. *Journal of Knowledge Management*, 25(9), 2293–2315. <https://doi.org/10.1108/JKM-01-2020-0064>
- Jajja, M. S. S., Chatha, K. A., & Farooq, S. (2018). Impact of supply chain risk on agility performance: Mediating role of supply chain integration. *International Journal of Production Economics*, 205, 118–138. <https://doi.org/10.1016/j.ijpe.2018.08.032>
- Jia, F., Li, K., Chen, L., Nazrul, A., & Yan, F. (2024). Supply chain transparency: A roadmap for future research. *Industrial Management & Data Systems*, 124(9), 2665–2688. <https://doi.org/10.1108/IMDS-11-2023-0840>
- Kabir, M. A., Khan, S. A., Gunasekaran, A., & Mubarik, M. S. (2025). Multi-criteria decision making to explore the relationship between supply chain mapping and performance. *Decision Analytics Journal*, 15, 100577. <https://doi.org/10.1016/j.dajour.2025.100577>
- Kitsis, A. M., & Chen, I. J. (2021). Do stakeholder pressures influence green supply chain Practices? Exploring the mediating role of top management commitment. *Journal of Cleaner Production*, 316, 128258. <https://doi.org/10.1016/j.jclepro.2021.128258>
- Leewis, S., Smit, K., Van Den Boom, B., & Versendaal, J. (2025). Improving operational decision-making through decision mining-utilizing method engineering for the creation of a decision mining method. *Information and Software Technology*, 179, 107627. <https://doi.org/10.1016/j.infsof.2024.107627>
- Lo, H.-W., Pai, C.-J., & Deveci, M. (2025). A multi-objective model for integrated supplier order allocation and supply chain network transportation planning decision-making. *Information Sciences*, 689, 121487. <https://doi.org/10.1016/j.ins.2024.121487>
- Munir, M., Jajja, M. S. S., Chatha, K. A., & Farooq, S. (2020). Supply chain risk management and operational performance: The enabling role of supply chain integration. *International Journal of Production Economics*, 227, 107667. <https://doi.org/10.1016/j.ijpe.2020.107667>
- Nguyen, T. T., Le, A. N. H., Johnston, W. J., & Cheng, J. M. S. (2025). When learning from limited experience takes off: Linear/curvilinear relationships between decision-making comprehensiveness and sustainable supply chain performance under contingent conditions. *Omega*, 134, 103285. <https://doi.org/10.1016/j.omega.2025.103285>
- Nishad, S. K., Sahu, A., Sahu, A. K., & Singroul, S. (2025). Investigation of capillary tools to reinforce the decision-making capabilities for transforming SCM into smart supply chain management (SSCM). <https://doi.org/DOI.10.1108/MS CRA-07-2024-0029>
- Opoku, R. K., Issifu, R., Ofori, D., Wafa, S., & Asiedu, A. (2025). Lean sustainability and triple bottom line performance of manufacturing industries in a developing economy: Does top management commitment matter? *International Journal of Quality & Reliability Management*, 42(3), 941–962. <https://doi.org/10.1108/IJQRM-05-2024-0164>
- Oubrahim, I., & Sefiani, N. (2025). An integrated multi-criteria decision-making approach for sustainable supply chain performance evaluation from a manufacturing perspective. *International Journal of Productivity and Performance Management*, 74(1), 304–339. <https://doi.org/10.1108/IJPPM-09-2023-0464>
- Patil, A., Srivastava, S., Paul, S.K., Dwivedi, A., (2024). Digital twins' readiness and its impacts on supply chain transparency and sustainable performance. *Industrial Management & Data Systems*, 124(8), 2532–2566. <https://doi.org/10.1108/IMDS-10-2023-0767>
- Pirmanta, P., Tarigan, Z. J. H., & Basana, S. R. (2021). The effect of ERP on firm performance through information quality and supply chain integration in Covid-19 era. *Uncertain Supply Chain Management*, 9(3), 659–666. <https://doi.org/10.5267/j.uscm.2021.5.004>

- Pourhejazy, P., Sarkis, J., & Zhu, Q. (2020). Product deletion as an operational strategic decision: Exploring the sequential effect of prominent criteria on decision-making. *Computers & Industrial Engineering*, *140*, 106274. <https://doi.org/10.1016/j.cie.2020.106274>
- Shahzad, S. K., Masudin, I., Zulfikarijah, F., Nasyiah, T., & Restuputri, D. P. (2024). The effect of supply chain integration, management commitment, and sustainable supply chain practices on non-profit organizations performance using SEM-FsQCA: Evidence from Afghanistan. *Sustainable Futures*, *8*, 100282. <https://doi.org/10.1016/j.sfr.2024.100282>
- Sharma, M., & Joshi, S. (2023). Digital supplier selection reinforcing supply chain quality management systems to enhance firm's performance. *The TQM Journal*, *35*(1), 102–130. <https://doi.org/10.1108/TQM-07-2020-0160>
- Shi, R., Yin, Q., Yuan, Y., Lai, F., & Luo, X. (Robert). (2024). The impact of supply chain transparency on financing offerings to firms: The moderating role of supply chain concentration. *International Journal of Operations & Production Management*, *44*(9), 1568–1594. <https://doi.org/10.1108/IJOPM-08-2023-0674>
- Siagian, H., Palumian, Y., Basana, S. R., Tarigan, Z. J. H., & Doron, R. O. (2025). The human-machine interface enables collaborative decision-making and supply chain flexibility to boost operational performance. *Decision Science Letters*, *14*(2), 493–506. <https://doi.org/10.5267/j.dsl.2024.12.006>
- Siagian, H., & Tarigan, Z. J. H. (2021). The central role of IT capability to improve firm performance through lean production and supply chain practices in the COVID-19 era. *Uncertain Supply Chain Management*, *9*(4), 1005–1016. <https://doi.org/10.5267/j.uscm.2021.6.012>
- Su, H., Fang, S., & Young, C. (2013). Influences of relationship transparency from intellectual capital reporting on supply chain partnerships with suppliers: A field experiment. *Supply Chain Management: An International Journal*, *18*(2), 178–193. <https://doi.org/10.1108/13598541311318818>
- Tarigan, Z. J. H., Siagian, H., & Jie, F. (2020). The role of top management commitment to enhancing the competitive advantage through ERP integration and purchasing strategy. *International Journal of Enterprise Information Systems*, *16*(1), 53–68. <https://doi.org/10.4018/IJEIS.2020010103>
- Tarigan, Z. J. H., Tanuwijaya, N. C., & Siagian, H. (2020). Does top management attentiveness affect green performance through green purchasing and supplier collaboration? *Academy of Strategic Management Journal*, *19*(4), 1-10
- Uvet, H. Park, A., Dickens, J., Oh, J. & Hazen, B. (2025). How blockchain technology utilization influences corporate social responsibility through supply chain transparency and the role of supplier risk. *The International Journal of Logistics Management*, *36* (4), 1195–1221. <https://doi.org/10.1108/IJLM-04-2024-0245>
- Virmani, N., Raut, R., & Kumar, M. (2025). Prioritizing risk mitigation strategies of adopting digital supply chain management: A decision-making framework. *Journal of Enterprise Information Management*, <https://doi.org/10.1108/JEIM-07-2023-0367>
- Vivaldini, M., & De Sousa, P. R. (2024). Have new post-pandemic perspectives affected collaboration, sharing and risk decision-making in the supply chain? *Benchmarking: An International Journal*. <https://doi.org/10.1108/BIJ-02-2024-0169>
- Weerasekara, S., & Bhanugopan, R. (2023). The impact of entrepreneurs' decision-making style on SMEs' financial performance. *Journal of Entrepreneurship in Emerging Economies*, *15*(5), 861–884. <https://doi.org/10.1108/jee-03-2021-0099>
- Xu, H., Liu, J., Xu, X., Chen, J., & Yue, X. (2024). The impact of AI technology adoption on operational decision-making in competitive heterogeneous ports☆. *Transportation Research Part E: Logistics and Transportation Review*, *183*, 103428. <https://doi.org/10.1016/j.tre.2024.103428>
- Yuan, Y., Liu, L., & Liu, L. (2022). How does information integration enhance SMEs' credit quality: The mediating role of supply chain capabilities. *Industrial Management & Data Systems*, *122*(2), 544–561. <https://doi.org/10.1108/IMDS-10-2020-0621>



© 2025 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/>).