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Peran Manajemen Operasional Dalam Peningkatan Kinerja Rantai Pasok

The Role of Operational Management in Improving Supply Chain Performance

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Abstrak

Rantai pasok telah menjadi pondasi penting dalam operasional perusahaan pada era globalisasi, mendukung seluruh proses bisnis dari pengadaan bahan baku hingga pengiriman produk kepada konsumen. Penelitian ini bertujuan untuk menganalisis peran manajemen operasional dalam meningkatkan kinerja rantai pasok pada perusahaan manufaktur berskala menengah. Manajemen operasional berfungsi mengelola proses produksi, pengendalian persediaan, distribusi, serta penggunaan sumber daya secara efisien. Dalam konteks rantai pasok, koordinasi antar unit dan mitra bisnis menjadi kunci kelancaran aliran barang, informasi, dan keuangan. Penelitian ini menggunakan pendekatan kualitatif deskriptif melalui studi kasus pada perusahaan manufaktur, dengan teknik pengumpulan data berupa wawancara, observasi, dan studi dokumentasi. Hasil penelitian menunjukkan bahwa penerapan manajemen operasional yang baik berkontribusi secara signifikan terhadap efisiensi biaya, ketepatan waktu pengiriman, dan kepuasan pelanggan. Oleh karena itu, manajemen operasional menjadi elemen penting dalam membentuk kinerja rantai pasok yang unggul.

Kata Kunci: Manajemen Operasional, Perusahaan Manufaktur, Kinerja Rantai Pasok

Abstract

The supply chain has become an important foundation in the company's operations in the era of globalization, supporting the entire business process from the procurement of raw materials to the delivery of products to consumers. This study aims to analyze the role of operational management in improving supply chain performance in medium-scale manufacturing companies. Operational management functions to manage the production process, inventory control, distribution, and efficient use of resources. In the context of supply chains, coordination between units and business partners is the key to the smooth flow of goods, information, and finance. This study uses a descriptive qualitative approach through case studies in manufacturing companies, with data collection techniques in the form of interviews, observations, and documentation studies. The results show that the implementation of good operational management contributes significantly to cost efficiency, delivery timeliness, and customer satisfaction. Therefore, operational management is an important element in shaping superior supply chain performance.

Keywords*: Operational Management, Manufacturing Companies, Supply Chain Performance*

INTRODUCTION

Manufacturing companies in the current era of globalization face increasingly fierce competition. As technology advances, all businesses operating in the same industry compete with each other or participate in fierce competition (Subagyono, 2023). Operational management is one of the main

pillars that supports the success of an organization in achieving a competitive advantage. The role of operational management is critical in managing production, distribution, and logistics processes, all of which are integral parts of the supply chain system. A supply chain is a network between companies, suppliers, distributors, and customers that are interconnected to flow products, information, and funds. The effectiveness of the supply chain depends heavily on how well the company's operations can be managed. Common problems such as delivery delays, excess or underinventory, and inefficiencies in the production process can cause supply chain disruptions and reduce the company's competitiveness.

Operations management according to Daft (In Rusdiana, 2019:19) is a field that focuses on the production of goods, as well as the use of special tools and techniques to solve problems. Effective operational management allows companies to minimize waste, increase productivity, and respond to market demands more quickly. Information technology is also an important part of supporting modern operations and facilitating integration between units in the supply chain. Therefore, a deep understanding of the relationship between operational management and supply chain performance is essential for strategic decision-making. In today's digital age, companies face new challenges in supply chain management, including the need to meet dynamic market demands, reduce logistics costs, and maintain delivery speed and accuracy. This demands more sophisticated and integrated operational management. Companies can no longer rely solely on conventional methods, but need to adopt more cutting-edge technology and operational strategies to be able to compete in the global market.

In this context, the role of operational management has become increasingly strategic because it directly touches on the aspects of efficiency, quality, speed, and flexibility of business processes. Every stage in the supply chain, from production planning, raw material procurement, manufacturing process, to final distribution to customers must be carefully managed to achieve optimal synchronization. A failure at one point in the operational system can have an impact on the overall performance of the supply chain and cause financial losses as well as the company's reputation. Furthermore, in practice, operational management includes not only technical and mechanistic aspects, but also strategic and human aspects. Decisions related to production capacity, facility location, work methods, technology use, and employee training all contribute to a smooth supply chain. Therefore, a holistic approach that considers all elements in the operating system becomes important to implement.

Digital transformation has had a major impact on the way companies run their operations. Technologies such as big data, cloud computing, Internet of Things (IoT), and artificial intelligence (AI) have drastically changed the landscape of operational management. Companies are now able to monitor processes in real-time, conduct predictive analysis of market demand, and automate routine processes. This certainly has a direct impact on improving the efficiency and effectiveness of the supply chain. However, not all companies are able to adopt this technology easily. There are various obstacles such as limited resources, lack of internal competence, and resistance to change that often hinder the transformation process. In this case, the role of operational management is key in bridging business needs with the implementation of technology appropriately. Companies that have adaptive and visionary operational management will be better prepared to face future challenges.

According to Kompri (2020:2), Performance is an overview of the level of achievement in the implementation of an activity or policy program in realizing the targets, goals, vision, and mission of the organization outlined through the strategic planning of an organization. That way, the company's performance can be interpreted as the level of achievement, implementation, and work results by the people involved in it as a benchmark in creating long-term added value for the company.

Operational management has a very important influence in shaping good and optimal company performance. Companies certainly use various strategies to improve their business, especially to improve the quality of their workforce. With good labor quality, planned operational management can run smoothly. This will trigger the movement of the company's performance to be more optimal. Another metric that can measure a company's performance is operational strategy. Operational strategy is the beginning of operational management that occurs. A well-thought-out operational strategy results in optimal overall operational management planning.

(Fendy Cuandra et al., 2022) Defining a supply chain as a procedure that consists of various activities such as planning, composition, and supervision of a company's resources. Starting from human resources, activities, data, and others. Manufacturing companies rely on supply chains in their production processes. An efficient supply chain is the key to achieving a competitive advantage, more than just the logistics process that runs within a company. High-quality products and the ability to effectively manage the supply chain are two factors that determine the success of a manufacturing company.

The supply chain consists of all parties involved directly or indirectly in meeting customer needs (Oktalia et al., 2022). Thus, companies with strong supply chains can compete with other companies in many aspects, from price, quality, to the speed of deliveries. They can optimize processes, reduce increased waste, production productivity, and through proper supply chain management. Based on this, the supply chain is very important because it can connect everyone involved in the production process, from raw material sources, factories, warehouses, distributors, to end customers.

According to (Jones, 2022), a supply chain is a collaboration between companies that work together for product delivery. All parties involved in this supply chain flow play an important role in the production process of a company until the distribution of products reaches the end consumer. Thus, the performance of the supply chain in manufacturing companies is one of the factors that determines how effectively the process of a product is produced. Although this process involves many stages in it, companies will be able to manage it well when they manage each stage of each of the aspects involved.

Manufacturing companies can ensure the timely availability of raw materials, and improve production efficiency by optimally managing the flow of raw materials, semi-finished products, and finished products through effective supply chain integration. In an increasingly dynamic era of globalization, it is important for companies to predict and anticipate changes in demand and manage the risk of supply chain disruptions by optimally managing supply chain processes. The more effective the process of integrating the supply chain flow that a company has, the more effective the production process will be.

This research was conducted to provide a deeper understanding of how operational management can contribute to improving supply chain performance. The research focus is directed at identifying the best practices applied by companies in managing operations and their impact on the smooth and efficient supply chain. Thus, this research is expected to make a theoretical and practical contribution in the development of effective operational strategies in various industrial sectors. The problems examined in this study include: how the relationship between operational management and supply chain performance is linked, the key factors of operational success that impact supply chain efficiency, and the extent to which technology supports the integration of the two. Through a case study approach, this study seeks to provide a concrete picture of real implementation in the field.

From a practical perspective, the results of this research are expected to be a reference for operational managers, logistics practitioners, and policy makers in formulating strategies to increase the efficiency and competitiveness of the

company through strengthening operational functions. This research is also relevant to academics and students as a scientific literature in the field of operations management and supply chain management. Overall, the urgency of this research is very high considering the importance of the role of operations in supporting business sustainability in the midst of an ever-changing environment. By understanding the role of operational management more comprehensively, companies can be better prepared to face challenges and take advantage of opportunities in increasingly complex global supply chains

RESEARCH METHODS

This study uses a descriptive qualitative approach with a case study method. This approach was chosen because it can provide an in-depth understanding of the phenomenon being researched, namely the role of operational management in improving supply chain performance. Case studies allow researchers to comprehensively explore the internal dynamics of companies and identify the factors that affect operational effectiveness in the context of supply chains.

Location and Subject

The research was conducted on medium-scale manufacturing companies engaged in the production of consumer goods in Central Sulawesi. The company was chosen because it has a fairly complex supply chain system and has implemented a number of modern operational management practices. The key informants in this study consisted of operational managers, heads of logistics divisions, warehouse staff, and external distribution partners.

Data Types and Sources

This study uses primary and secondary data. Primary data is collected through in-depth interviews and field observations, while secondary data is obtained from internal company documents, annual reports, logistics performance reports, production SOPs, and related literature sources.

Data Collection Techniques

1. **In-Depth Interviews**: Conducted on key informants using semi-structured interview guides. The interviews focused on operational management practices, constraints in implementation, and their impact on the supply chain.
2. **Observation**: Direct observation is carried out on operational activities in warehouses, production lines, and distribution. This observation aims to validate the information obtained from the interviews as well as understand the workflow empirically.
3. **Documentation Studies**: Analysis of operational documents, efficiency reports, and distribution and delivery records is carried out to support data triangulation.

Research Instruments

The main instrument in this study is the researcher himself (human instrument), supported by interview guidelines, observation sheets, and documentation data collection formats. The validity of the instrument is maintained through instrument testing and consultation with operational management experts.

Data Analysis Techniques

Data analysis was carried out with a thematic approach. The analysis steps include:

1. **Data Reduction**: Filter and select relevant data according to the focus of the research.
2. **Categorization**: Groups data into themes such as production planning, inventory management, distribution, technology use, and supply chain coordination.
3. **Conclusion Drawn**: Compile a narrative of research results based on themes and relate them to relevant theories.

Data Validity Test

To ensure validity and reliability, data triangulation (source, method, and time), member check (confirmation of results to informants), and trail audit (detailed documentation of the research process). In addition, the researcher conducts continuous

reflection to ensure objectivity in the interpretation of the data.

RESULTS AND DISCUSSION

Based on the results of interviews, observations, and documentation studies conducted in manufacturing companies that are the object of the research, a number of key findings were found that illustrate the significant role of operational management in improving supply chain performance. These findings are grouped into five main themes: (1) production planning and control, (2) inventory management, (3) distribution efficiency, (4) information technology use, and (5) coordination between divisions and supply chain partners.

1. **Production Planning and Control**
   The company has a fairly systematic production planning system using a demand forecasting approach based on sales history. With proper planning, the company is able to reduce the level of idle time and bottlenecks on the production line. Production control is carried out periodically by measuring performance based on cycle time and raw material use efficiency. Information from the interview stated that after the implementation of an integrated production planning system, the company managed to reduce the delivery delay rate by 15% in the last 12 months.
2. **Inventory Management**
   Inventory management is a major focus in the company's operational management practices. The inventory control system used adopts a Just-In-Time (JIT) approach which aims to reduce storage costs and minimize the risk of obsolescence of goods. Warehouse staff mentioned that through real-time monitoring and the use of barcodes, inventory recording errors decreased drastically. In addition, the inventory turnover rate increased from 5 times a year to 8 times a year, which indicates efficiency in stock management.
3. **Distribution and Logistics Efficiency**
   The distribution of products to customers is carried out through a combination of internal fleet and third-party logistics services. After the implementation of the transportation management system (TMS), companies can plan more optimal delivery routes. The results of the documentation show a 12% reduction in logistics costs and an increase in delivery accuracy from 82% to 94%. This has a direct impact on customer satisfaction and a decrease in complaints about delivery delays.
4. **Use of Information Technology**
   Technology plays a key role in improving coordination and operational efficiency. The company's implemented ERP (Enterprise Resource Planning) system allows data integration between production, logistics, finance, and marketing divisions. Field observations reveal that the use of ERP reduces administrative time and speeds up decision-making. The operational manager mentioned that before the use of ERP, communication between divisions was often delayed, but now the process has become more transparent and efficient.
5. **Coordination and Partnerships in the Supply Chain**

   Research found that companies forge strategic partnerships with major suppliers and regional distributors. This relationship is built through regular communication, real-time exchange of request data, and clear SLAs (Service Level Agreements). With this collaborative approach, companies are able to reduce the lead time of raw material supply and increase flexibility in responding to surging demand. The head of the logistics division said that trust between business partners is an

important foundation in creating supply chain synergy.

Analysis of Findings

In general, the results of the study show that systematic and data-driven operational management practices have a significant impact on supply chain performance. Cost efficiency, punctuality, and delivery accuracy are the main indicators that have improved. Technology integration and collaborative approaches help strengthen the responsiveness and flexibility of the company's supply chain.

Viewed from a theoretical framework, these findings support the concept of lean operations that prioritizes the elimination of waste and increased customer value. In addition, the results of the study also strengthen the argument in supply chain integration theory, that integration between functions and business partners contributes to long-term competitive advantage.

Practical Implications

The findings of this study have practical implications for the management of manufacturing companies and other business people. First, the importance of building a data- and technology-based operational planning system to answer market demand dynamics. Second, inventory management and distribution need to be adjusted to the principles of efficiency and accuracy to reduce costs and increase customer satisfaction. Third, investment in information technology such as ERP and TMS is crucial to strengthen data connectivity between divisions. Finally, building strategic partnerships that are based on trust can create stability and responsiveness in the supply chain.

Thus, the results of this study not only make an academic contribution in understanding the relationship between operational management and supply chain, but also provide real recommendations for the industrial world.

CONCLUSION

Based on the results of the research that has been conducted, it can be concluded that operational management plays a very crucial role in improving supply chain performance. The implementation of effective production planning and control has helped companies reduce lead times and improve the efficiency of the production process. Just-In-Time (JIT)-based inventory management has been successful in lowering storage costs and increasing item rotation, while the use of ERP and TMS systems contributes to the integration of information between divisions and more accurate distribution planning.

Information technology is the main enabler in supporting responsive and adaptive operational management. With an integrated information system, companies can plan and make decisions quickly and accurately based on actual data. This also supports flexibility in responding to changes in market demand and supply dynamics.

In addition, the results of the study also show the importance of coordination and cooperation between companies and partners in the supply chain. Trust-based relationships, open communication, and clear SLA agreements contribute to improved overall supply chain performance, including reduced lead times and improved delivery accuracy.

From a theoretical perspective, the results of this study support the principles of lean operations and supply chain integration as relevant approaches to improve the competitiveness of companies. Good operational management practices not only improve internal efficiency, but also strengthen external collaboration, which ultimately creates added value for customers.

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