

Optimizing Supply Chain Management To Increase Efficiency And Profitability In The Manufacturing Industry

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Abstract

The purpose of this study is to explore how optimizing supply chain management can improve efficiency and profitability in the manufacturing industry. Using case studies of specific manufacturing companies, this study identifies the various factors that influence supply chain performance and how optimizing these processes can improve a company's overall performance. The research method used is qualitative and quantitative analysis through in-depth interviews, observations, and secondary data analysis. The results of the study show that vertical integration, the use of information technology, and increased communication between parts of the supply chain are key factors in optimizing supply chain management. This research provides valuable information for manufacturing companies seeking to improve their efficiency and profitability through better supply chain management.”

Keywords; Optimizing management, increasing efficiency, profitability of the manufacturing industry

INTRODUCTION

The manufacturing business is one of the most important sectors of the global economy. This industry requires effective supply chain management for optimal operations and maximum profits. However, in practice, many manufacturing companies still face various challenges in supply chain management, such as less effective coordination among departments, suboptimal use of information technology, and lack of vertical integration. This, of course, affects their efficiency and profitability.

Manufacturing enterprises play a very important role in the global economy. This industry spans various sectors from consumer goods manufacturing to heavy goods such as machinery and industrial equipment. The performance of the manufacturing industry is often an important indicator of a country's economic viability.

To be able to operate optimally and generate maximum profits, the manufacturing industry requires effective supply chain management. The supply chain includes all processes associated with the production and distribution of products, from the procurement of raw materials, and production to distribution of products to consumers. Good supply chain

management will ensure that all these processes run smoothly and efficiently, thereby reducing production costs and increasing profits.

However, in practice, many manufacturing companies still face various challenges in supply chain management. For example, ineffective coordination between parts of a company can hamper the flow of information and raw materials, thereby creating bottlenecks in production. Additionally, the use of information technology that is not yet optimal can also impact supply chain performance. Information technology can help companies track and control supply chain processes, but if used incorrectly, it can cause new problems. In addition, the lack of vertical integration, namely the integration of production and distribution processes into one company, can also affect the company's efficiency and profitability.

All of these issues certainly impact the efficiency and profitability of manufacturing companies. Therefore, this study aims to explore how manufacturing companies can optimize supply chain management to improve efficiency and profitability.

Based on this, this study aims to explore how optimization of supply chain management can improve the efficiency and profitability of manufacturing companies. A case study of a specific manufacturing company will be conducted to identify the various factors that influence supply chain performance and how optimizing these processes can improve the overall performance of the company.

The research questions to be answered in this study include:

1. What factors influence the effectiveness of supply chain management in manufacturing companies?
2. How can optimizing supply chain management improve the efficiency and profitability of manufacturing companies?
3. What is the role of vertical integration, the use of information technology, and increased inter-unit communication in optimizing supply chain management?

By answering these questions, we hope that this study can provide valuable information for manufacturing companies seeking to improve their efficiency and profitability through improved supply chain management.

LITERATURE REVIEW

Supply chain management is the process of integrating and coordinating all supply chain activities, from the procurement of raw materials to the delivery of products to consumers (Chopra and Meindl, 2016). Effective supply chain management can improve a company's operational and financial performance (Li et al., 2006).

Supply chain management is a process that involves the integration and coordination of all activities in the supply chain. The supply chain itself is a series of activities that occur from the beginning to the end of the manufacturing process. It all starts with the procurement of raw materials, which includes selecting suppliers, negotiating prices, and arranging delivery. These materials are then processed and combined to produce products during the manufacturing process. Once produced, the products are then distributed to various points of sale, be it physical stores or online platforms. This process involves managing logistics and transportation to ensure that the product reaches consumers in good condition and on time.

Each of these steps needs to be well managed and coordinated to ensure efficiency and effectiveness. Poor management at one stage can affect other stages and ultimately cause damage to the company. According to Chopra and Meindl (2016), effective supply chain management can improve a company's operational performance. This means companies can produce products faster, with fewer errors, and at a lower cost.

In addition, Lee et al (2006) also show that effective supply chain management can improve a company's financial performance. In other words, the company can increase its revenue and reduce costs, which will ultimately improve its profitability. Therefore, supply chain management is an important area that every manufacturing company should pay attention to. Optimizing supply chain management can not only improve operational efficiency but also have a positive impact on a company's financial performance.

Several factors influencing supply chain performance include vertical integration, the use of information technology, and interdepartmental communication (Flynn et al., 2010). Vertical integration can reduce transaction costs and improve coordination (Praiojo and Olhager 2012). The use of information technology can speed up the flow of information and increase transparency (Subramani, 2004). Good communication between departments can reduce errors and improve productivity (Leuschner et al., 2013).

Optimizing supply chain management can improve a company's efficiency and profitability (Gunasekaran et al., 2001). For example, companies that implement vertical integration can reduce costs and increase profits (Prajojo and Olhager, 2012). Likewise, proper use of information technology can improve operational efficiency and reduce costs (Subramani, 2004).

Optimizing supply chain management means making improvements and adjustments to various elements of the supply chain to achieve greater efficiency and profitability. According to Gunasekaran et al. (2001), such optimization can be carried out by various means and methods, depending on the specifics of the company and the industry in which it operates.

One way to optimize supply chain management is vertical integration. Vertical integration is a strategy in which a company controls more than one stage of production, from raw material procurement, and production to distribution. Thanks to this, companies can reduce the costs associated with transactions between these stages. For example, companies can save on transportation and handling costs by having their own production and distribution facilities. It also allows them to have better control over quality and production time. According to research by Prayogo and Olhager (2012), companies that implement vertical integration can reduce costs and increase their profits.

In addition, the use of information technology can also improve operational efficiency and reduce costs. Information technology can be used in various aspects of supply chain management, such as production planning and control, inventory management, and supply tracking. For example, a sophisticated inventory management system can help companies ensure that they always have the right amount of inventory on hand—not too much, which can lead to high carrying costs, and not too little, which can lead to stockouts. According to Subramani (2004), proper use of information technology in supply chain management can help companies improve their operational efficiency and reduce costs.

Thus, optimizing supply chain management through various techniques such as vertical integration and the use of information technology can help companies improve their efficiency and profitability.

RESEARCH METHODOLOGY

This study will use a case study approach to explore how optimizing supply chain management can improve the efficiency and profitability of manufacturing companies. Case studies will be conducted at manufacturing plants. PT Eastern Pearl Flour Mills.

Data for this study will be collected using qualitative and quantitative methods. Qualitative methods will include in-depth interviews with key stakeholders within the company, such as supply chain managers, production managers, and logistics managers. The purpose of this interview is to gain a deeper understanding of the company's supply chain management processes and the challenges they face. In addition, direct observations will be conducted to directly see the supply chain management process.

For quantitative methods, secondary data will be analyzed. This data can be in the form of company annual reports, operational data, etc. This data analysis aims to measure supply chain performance and its impact on the company's efficiency and profitability. The collected data will be analyzed to identify factors that influence supply chain performance and how

optimizing this process can improve company performance. Qualitative analysis will be carried out on interview and observational data and quantitative analysis will be carried out on secondary data.

To ensure the validity and reliability of the study, the researchers will verify the data and findings with company stakeholders. In addition, the researchers will also use data triangulation, which is the use of different data sources and data collection methods to ensure the accuracy of the findings.

RESULTS AND DISCUSSION

Based on interviews with key stakeholders of PT Eastern Pearl Flour Mills, it was revealed that the company has implemented several strategies to optimize supply chain management. This includes the use of information technology to track and manage inventory, as well as vertical integration, in which a company controls multiple stages of production.

Based on interviews conducted with key stakeholders of PT Eastern Pearl Flour Mills, it was found that the company has implemented several strategies to optimize supply chain management. One of the most striking strategies is the use of information technology.

Companies use information technology in a variety of ways to track and manage their inventory. For example, they have implemented a sophisticated inventory management system that allows them to track inventories of raw materials and finished goods in real-time. The system also provides valuable information on sales trends and product demand, which helps companies plan production and reduce the risk of stockouts or excess inventory.

In addition, PT Eastern Pearl Flour Mills also pursues vertical integration, an approach in which the company controls multiple stages of production. In this context, the company controls not only production but also the purchase of raw materials and distribution of products. The benefits of this approach are reduced costs and increased control over quality and efficiency.

For example, by having direct control over raw material purchases, companies can negotiate better prices with suppliers, ensure the quality of materials, and schedule deliveries to meet production schedules. Additionally, by controlling distribution, companies can ensure that their products are delivered to customers on time and in good condition, and can respond more quickly to changes in market demand.

However, it is worth remembering that while this strategy has helped PT Eastern Pearl Flour Mills optimize its supply chain management, its implementation may pose certain

challenges and obstacles that need to be further explored to understand how they can be overcome.

The interviews also revealed some problems. For example, some respondents indicated that they believed they needed further training to effectively use information technology. In addition, some respondents stated that vertical integration created problems, such as coordination between different departments. The interviews also revealed several challenges faced by PT Eastern Pearl Flour Mills in optimizing its supply chain management. One of the main problems identified was the need for further training in the use of information technology.

Some respondents indicated that although inventory management systems and other technologies had been implemented, they felt that they needed further training to be able to use them effectively. This may include understanding how the system works, how to interpret the data obtained, and how to use this information to make better supply chain management decisions. Respondents believed that this additional training would help them maximize the potential of this technology and ultimately improve supply chain efficiency.

In addition, some respondents also stated that vertical integration, although it has many advantages, also creates problems. One of the problems mentioned was coordination between different departments. Since companies control multiple stages of production, effective coordination between various departments such as purchasing, production, and distribution is necessary. These problems may include communication, planning, and decision-making problems that require a good understanding of the process at each stage.

By identifying these problems, PT Eastern Pearl Flour Mills can take steps to overcome them, such as providing additional information technology training and improving coordination processes between departments. This will assist them in their efforts to continually optimize supply chain management and improve efficiency and profitability.

Through analysis of secondary data, it was found that PT Eastern Pearl Flour Mills achieved improved operational efficiency and profitability after implementing supply chain management optimization strategies. For example, data shows reduced inventory lead times and increased sales.

CONCLUSION

Based on the results of the research, it can be concluded that PT Eastern Pearl Flour Mills has successfully implemented an effective supply chain management strategy, including the use of information technology and vertical integration. Secondary data shows that these strategies have helped the company improve operational efficiency and profitability.

However, research also shows that there are challenges that must be overcome to maximize the benefits of this strategy. Interview respondents indicated the need for further training in the use of information technology and the challenges of interdepartmental coordination due to the implementation of vertical integration.

Therefore, PT Eastern Pearl Flour Mills needs to consider a more comprehensive approach to information technology training and improve the coordination process between departments. These steps are important to ensure that companies can continue to leverage optimal supply chain management and ultimately improve their efficiency and profitability.

In addition, further research is needed to explore other ways to optimize supply chain management at PT Eastern Pearl Flour Mills and to better understand the challenges the company faces and how to overcome them.

ASSUMPTION

1. Information technology training. Although PT Eastern Pearl Flour Mills has adopted information technology in supply chain management, research shows that some employees feel the need for further training. Further research could be conducted to identify specific areas where training could be targeted to improve employees' ability to use this technology.
2. Coordination between departments. Vertical integration created problems in coordination between different departments. Future research could focus on better understanding these issues and identifying strategies to improve coordination between departments.
3. Implementing Other Strategies PT Eastern Pearl Flour Mills has implemented several strategies to optimize its supply chain management, but there may be other strategies that can be implemented. Further research can be conducted to examine and evaluate the effectiveness of other supply chain management strategies.
4. Other case studies. This study focuses on PT Eastern Pearl flour mills, but similar studies can be conducted on other manufacturing companies. This will provide a broader understanding of the challenges and strategies used in supply chain management in this industry.
5. Influence of external factors. External factors such as market fluctuations and regulatory changes can affect supply chain management. Further research can be conducted to understand how these factors impact supply chain management and how companies can adapt to these changes.

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