

IMPLEMENTATION OF SUPPLY CHAIN MANAGEMENT TO REDUCE PRODUCTION COSTS

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ABSTRACT

Supply Chain Management has become a crucial element in optimizing production and distribution processes. By implementing this concept effectively, companies can achieve operational efficiency, reduce waste, and ultimately reduce production costs. This research aims to explore and analyze the application of Supply Chain Management as a strategy to reduce production costs in a specific industrial context. This research uses a qualitative approach with descriptive methods. The research results show that implementing supply chain management with a focus on cost reduction strategies, operational optimization and sustainable practices has a positive impact on company efficiency and sustainability. The adoption of technology such as inventory management software and transportation management systems successfully automates processes, reduces errors and simplifies supply chain operations. Lean strategies, such as reducing overproduction and lead times, also play a role in improving operational efficiency. Additionally, sustainable practices, including waste reduction and use of renewable energy sources, not only support environmental sustainability, but also result in long-term cost savings.

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1. INTRODUCTION

Supply chain is a concept that involves an entire network of entities, from companies to individuals and resources involved, in every aspect of the creation and delivery of a product or service (Pongoh, 2016). As the product moves through the stages from raw materials to the hands of the final customer, the supply chain includes various crucial activities, including production, transportation, and distribution of goods or services (Anwar, 2013). Beyond the physical aspect, the supply chain also includes close coordination in the exchange of information and financial flows between participating parties. This includes the sharing of data regarding supply, demand, and production processes, as well as the flow of funds that ensure the smooth running of the entire network (Martono, 2019).

In the era of global business and ever-increasing complexity, supply chain success is a key factor for a company's sustainability, efficiency and competitiveness (Calystania et al, 2022). Digital transformation, as an integral part of business evolution, further strengthens the role of supply chains by increasing engagement and transparency. Companies can quickly respond to market changes and build operational resilience through information and communication technology innovation (Tritularsih & Sutopo, 2017). Therefore, a deep understanding of each element in the supply chain, including the role of information and finance, becomes imperative for companies that want to maximize their operations and meet customer expectations in a dynamic business environment (Firmansyah & Saepuloh, 2022).

With an increasing emphasis on the use of technology and digital excellence, companies can optimize their supply chains to achieve greater resilience and efficiency (Zhang, 2022). The application of integrated information systems and data analytics can provide deep insights, enabling smarter decision making and rapid adaptation to market changes. Successful companies not only understand the physical dynamics of the supply chain, but also harness the power of technology to create a responsive and highly competitive ecosystem (Erwin et al., 2023).

Supply chain management has the main aim of optimizing the entire flow of goods, services and information in order to fulfill customer demands efficiently and effectively (Wijaya et al, 2021). Basically, the main goal of supply chain management is to create a responsive and flexible system, able to accommodate changing market dynamics. By understanding customer needs and managing the process

from raw materials to finished products, companies can avoid imbalances between supply and demand, which can result in waste and unnecessary costs (Suwanda, 2023).

Steps in supply chain management include inventory monitoring and management, efficient production planning, and timely coordination of transportation and distribution. In addition, information technology integration plays a key role in achieving this goal (Zulkarnain et al, 2020). By using integrated information systems and data analytics, companies can identify potential improvements, reduce lead time, and increase visibility of the entire supply chain (Handayani, 2013). Thus, supply chain management functions as a strategic foundation for companies in responding to market demands, increasing competitiveness, and achieving sustainable customer satisfaction (Pasaribu & Widjaja, 2022).

Cost reduction has a central role in supply chain management because of its direct impact on a company's profitability and competitiveness. When production, storage and distribution costs can be reduced, companies have the potential to increase their profit margins significantly (Suwanda, 2018). This not only makes a direct contribution to profitability, but also creates financial space that can be allocated for business development, product innovation, or investment in technology that can improve operational efficiency (Pratama & Widodo, 2018).

Cost reduction also has direct implications for a company's competitiveness in the market. With lower costs, companies can offer more competitive prices for their products or services, attract more customers, and increase market share (Wuwung, 2013). Additionally, the financial freedom gained from cost reductions can give companies the flexibility to invest in other areas of the supply chain, such as improving product quality, better customer service, or environmental sustainability. Therefore, smart and integrated cost reduction strategies in supply chain management not only create financial advantages, but also strengthen the company's position in increasingly fierce competition (Wibawa et al., 2015).

Cost reduction in supply chain management not only brings benefits in the form of increased profitability and competitiveness, but also opens up opportunities for obtaining additional benefits. One of these benefits is improved customer service (Bismala et al, 2018). By optimizing operations and minimizing costs, companies can provide services that are more efficient and responsive to customer needs. Companies that are able to provide products or services at lower costs tend to have the flexibility to offer competitive prices, which in turn can increase customer satisfaction and strengthen long-term relationships (Suhaeni, 2018).

Additionally, reduced costs can provide additional flexibility to companies. By having lower operational costs, companies can more easily adapt to market, technological or regulatory changes. This opens up opportunities for investment in innovation, new product development, or business expansion without having to increase financial burdens significantly (Ardiansyah, 2023). In addition, better risk management is also a positive impact of cost reduction, because companies can respond more quickly to supply chain disruptions or crisis situations, reducing potential losses and negative impacts on operations (Kusmantini et al, 2021).

Cost reduction in supply chain management is not only a strategy to increase profitability, but also plays an important role in supporting a company's sustainability goals. By optimizing operations, companies can reduce waste, increase resource efficiency, and significantly reduce the environmental impact of their entire supply chain (Solehudin et al, 2023). These steps create a more sustainable operational environment, which not only benefits the planet, but also meets the expectations of customers and stakeholders who are increasingly concerned about environmentally friendly business practices (Putri et al, 2023). By integrating sustainability practices into supply chain management, companies can achieve balanced financial and ecological sustainability, strengthening their position as responsible businesses in an increasingly environmentally conscious era.

2. METHOD

This research adopts a qualitative approach with the aim of understanding the meaning of implementing supply chain management to reduce production costs. Data collection methods involve observation, in-depth interviews, and documentation studies. Data analysis was carried out descriptively by following the steps proposed by Huberman & Miles, which include data collection, data reduction, data presentation, and drawing conclusions (Sugiyono, 2011). By focusing on interpreting the meaning of the data, this research seeks to gain an in-depth understanding of the dynamics of political communication and the image of political parties, by utilizing a qualitative approach in presenting and analyzing data.

3. RESULTS AND DISCUSSION

Supply chain management can play a significant role in reducing production costs through several integrated strategies and practices. Here are some cost reduction strategies in supply chain management.

Inventory Management

Effective inventory management plays a crucial role in supply chain management by accommodating inventory needs and optimizing storage and handling costs. One of the main aspects of effective inventory management is reducing inventory carrying costs. By minimizing excessive inventory levels, companies can avoid additional storage costs that include warehouse space rental, insurance, and security. Careful inventory monitoring and planning is key to achieving optimal inventory levels.

Additionally, effective inventory management can also help minimize the risk of stock outs. By using an accurate demand forecasting strategy, companies can identify customer purchasing trends and patterns, so they can anticipate inventory needs in a more timely manner. Implementing order management software is also a critical step in ensuring that orders are placed and processed efficiently, reducing the risk of stock shortages that can hinder smooth production and delivery.

In addition to optimizing storage costs and reducing the risk of out-of-stocks, effective inventory management also has a direct impact on warehousing and handling costs. By managing inventory in such a way, companies can minimize costs associated with shifting and managing goods in the warehouse. Proper placement of goods and selecting an efficient storage system can speed up the process of picking and sending goods, reducing labor costs and increasing productivity.

Overall, a thorough and integrated inventory management strategy is the key to achieving efficiency in the supply chain. By understanding and responding appropriately to inventory needs, companies can reduce carrying costs, minimize the risk of stockouts, and optimize warehousing and handling costs. Additionally, implementing technology such as order management software can help improve accuracy and responsiveness in inventory management, having a positive impact on a company's overall efficiency and profitability.

Transportation

Optimizing transportation costs is a strategic step in supply chain management that companies can take. One effective way is to optimize delivery routes. By using a sophisticated, technology-based route planning system, companies can determine the shortest and most efficient path to distribute products to their final destination. This not only saves time, but also reduces fuel costs and other operational costs associated with long-distance travel.

In addition, choosing an efficient transportation mode can have a significant impact on reducing transportation costs. Companies can choose a mode of transportation that suits product characteristics and customer needs, such as using land, sea or air transportation. Understanding the advantages and disadvantages of each mode of transportation helps companies tailor options to be more cost efficient and add value to the supply chain.

Consolidating shipments is also an effective strategy in reducing transportation costs. By combining multiple deliveries to the same destination, companies can optimize vehicle capacity and reduce the number of trips required. This process not only cuts fuel costs and carbon emissions, but also improves overall operational efficiency.

By implementing these strategies in an integrated manner, companies can reduce their transportation costs significantly. This not only contributes to efficiency and profitability, but also supports companies' efforts to create sustainable and environmentally friendly supply chains. Along with this, companies can build a good reputation in terms of social and environmental responsibility, which is increasingly appreciated by consumers and stakeholders.

Supplier Relations

Building solid and mutually beneficial relationships with suppliers is a strategic step in supply chain management that can provide various benefits for the company. One of the main benefits is related to the financial aspect, where good relationships can lead to better prices. By establishing open communication and close partnerships, companies can negotiate to obtain more competitive prices, which in turn can help optimize production costs and increase profitability.

Apart from that, good relationships with suppliers can also improve delivery times. By deeply understanding supplier needs and processes, companies can build more efficient schedules and minimize delays in the supply chain. Better delivery times not only help companies maintain product availability, but also increase customer satisfaction by delivering on more consistent delivery promises.

The importance of long-term contracts and partnerships with key suppliers cannot be ignored either. Long-term contracts provide stability and certainty in the supply chain, reducing the risk of

uncertainty that can arise due to fluctuations in price or availability of raw materials. Solid partnerships with key suppliers also open up opportunities to collaborate on innovation, improving product quality and increasing operational efficiency together.

Overall, building strong relationships with suppliers is not just about gaining financial benefits, but also creating sustainable synergies. By prioritizing transparency, honesty and collaboration, companies can ensure that they have reliable supplies, competitive prices and sustainable partnerships that support long-term business growth.

Lean principles

Applying lean principles in supply chain management is a strategic approach to eliminate waste and increase efficiency holistically. Lean principles, which originate from the Toyota production system, focus attention on improving processes and eliminating activities that do not add value. One key strategy is to reduce excess production, which can minimize unnecessary inventory and optimize resource use. In this way, companies can reduce storage costs and obsolescence risk, while increasing responsiveness to changes in demand.

Additionally, reducing lead time is a key element in lean principles. By identifying and addressing factors that cause lead times throughout the supply chain, companies can improve workflow and reduce lead times. This not only impacts operational efficiency, but can also provide a competitive advantage through faster product delivery and better response to the market.

Process flow optimization is another strategy that is closely related to lean principles. By deeply understanding all workflows in the supply chain, companies can identify and eliminate bottlenecks and waste that occurs. These process improvements can include improving product quality, reducing production costs, and increasing overall productivity.

Overall, applying lean principles in supply chain management is not just about reducing waste, but also leads to improving overall efficiency and quality. By focusing on reducing overproduction, lead times, and optimizing process flows, companies can achieve these goals while increasing competitiveness and responsiveness to changing market dynamics.

Technology

The use of technology in supply chain management has a significant impact on the efficiency and effectiveness of company operations. The use of inventory management software allows automation in inventory monitoring and management. With the integration of this technology, companies can monitor stock in real-time, identify demand trends, and optimize inventory levels without constant human intervention. This not only reduces the risk of human error, but also allows companies to respond to market changes more quickly and accurately.

Transportation management systems also play an important role in streamlining supply chain operations. Through the use of this technology, companies can automate the route planning process, manage deliveries more efficiently, and monitor delivery status in real time. Automation in transportation management not only improves delivery accuracy, but also helps optimize transportation costs by selecting the most efficient modes and routes.

Supplier management systems are another technology solution that can provide great benefits. By using this technology, companies can monitor supplier performance, manage orders, and optimize the overall purchasing process. Using a supplier management system speeds up workflow, reduces communication errors, and improves collaboration with supplier partners.

Overall, leveraging technologies such as inventory management software, transportation management systems, and supplier management systems enables efficient automation in the supply chain. By reducing human involvement in routine operational tasks, companies can increase accuracy, efficiency and responsiveness to market dynamics, thereby creating a more adaptive and resilient supply chain.

Continuity

Implementing sustainable practices in the supply chain is a strategic step that not only supports corporate social responsibility but can also result in cost savings in the long term. One of the main strategies is reducing waste, which involves managing production waste or unused materials more efficiently. By minimizing waste, companies not only contribute to environmental conservation but can also reduce waste management costs and their negative impact on environmental health.

Packaging optimization is also an important factor in sustainable practices. By designing more efficient packaging, companies can reduce material use and storage space, thereby reducing production and distribution costs. Additionally, lighter packaging can reduce shipping costs, minimize carbon footprints and improve overall transportation efficiency.

Utilizing renewable energy sources is also a sustainable strategy that can result in cost savings. Switching to renewable energy, such as solar or wind, can reduce long-term energy costs and have a positive impact on a company's image as an environmentally conscious entity.

By implementing these sustainable strategies, companies not only fulfill their social responsibilities, but can also achieve operational efficiencies and cost savings in the long term. In addition, sustainable practices are increasingly appreciated by consumers who are increasingly concerned about the environment, opening up opportunities for increasing market share and sustainable brand image.

4. CONCLUSION

Effective and sustainable supply chain management plays a key role in increasing efficiency, reducing costs and creating added value for companies. Applying supply chain management principles such as the use of technology, lean strategies, and good partnerships with suppliers can result in more responsive, predictable, and efficient operations. Reducing production costs can be achieved through various means, including optimizing inventory, selecting efficient transportation modes, and good risk management. The importance of adopting sustainable practices in the supply chain cannot be ignored either. Efforts to reduce waste, optimize packaging, and switch to renewable energy sources not only support environmental sustainability, but can also result in long-term cost savings. These practices not only meet the expectations of increasingly environmentally conscious consumers, but also help companies achieve sustainable operational efficiency. In this context, holistic and forward-looking supply chain management is key to achieving sustainability and business success. Companies that are able to integrate technological innovation, lean strategies, good partnerships and sustainable practices in their supply chains can face market challenges more resiliently, increase competitiveness and create long-term value.

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