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Analysis of Vegetable Supply Chain Management at PT. Bumi Nyiur Swalayan Palu

Elmi Jusmelya¹⁾, Suryadi Hadi²⁾, Sulaeman Miru³⁾, Cici Rianty⁴⁾

^{1, 2, 3, 4)} Faculty of Economics and Business Tadulako University

e-mail: elmijusmelya@gmail.com

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ARTICLE INFO	ABSTRACT
<p>Article History: Submitted: 29 September 2023 Reviewed: 19 December 2023 Revision: 27 December 2023 Accepted: 28 January 2024 Publish: 27 March 2024</p> <p>Keywords: : supply chain management, SCOR, Cold Chain Logistics, fresh retail, operational efficiency, vegetable products.</p> <p>Corresponding Author: Elmi Jusmelya email: elmijusmelya@gmail.com</p>	<p>This study aims to understand the supply chain management practices in the fresh retail sector, especially at PT. Bumi Nyiur Swalayan Palu City, Central Sulawesi. The main focus of this study is on the supply chain management of vegetable products that have perishable characteristics and require special handling such as Cold Chain Logistics (CCL). Using a qualitative descriptive approach, data were collected through direct observation and in-depth interviews with three key informants involved in supply chain management. The results of the study indicate that the application of the Supply Chain Operations Reference (SCOR) method contributes significantly to increasing operational efficiency and customer satisfaction. The five main elements of SCOR - planning, procurement, production, delivery, and returns - are implemented in an integrated manner to maintain product quality and freshness.</p> <p>This study also found that the success of the supply chain is determined by the coordination and collaboration between local farmers, market collectors, and hydroponic producers. PT. Bumi Nyiur Swalayan implements a management control system based on managerial functions in managing the flow of products, finances, and information in the supply chain. The flow of products is carried out from upstream to downstream, while the flow of finances and information moves reciprocally to ensure transparency and timeliness of delivery. FIFO techniques and quality monitoring are carried out to maintain the freshness and quality of products. This study concludes that structured and adaptive supply chain management is key to maintaining the competitiveness of fresh retail businesses amidst the challenges of dynamic consumer demand.</p>

INTRODUCTION

In today's modern era, business competition increasingly requires consumers to be more selective in choosing products. Companies need to innovate and develop new strategies to increase their productivity, efficiency, and competitiveness (Monnagaaratwe & Motatsa, 2021). Research shows that good supply chain performance contributes to a company's success in achieving higher profits, with good integration between each part of the supply chain including suppliers, manufacturers, and retailers (Leuschner et al., 2013; Singh et al., 2014). This is in line with the presentation by Frohlich and Westbrook (2001) which emphasizes the importance of connectivity in the supply chain to meet consumer needs (Omoruyi et al., 2022).

Companies that are smart in supply chain management can utilize strategies such as the Supply Chain Operations Reference (SCOR) model to effectively measure their operational performance (Ambe, 2012). SCOR model consists of five core processes: planning, procurement, production, delivery, and returns. All of these steps are important in ensuring quality products, competitive prices, and satisfactory service to customers (Leuschner et al., 2013; Monnagaaratwe & Motatsa, 2021).

From the consumer side, there is a strong tendency to look for quality products at affordable prices and fast service (Khare & Khare, 2012). This phenomenon requires all elements of the supply chain, from suppliers to retailers, to increase collaboration and efficiency in serving market demand. Difficulties in managing product storage and distribution, especially vegetables that have a shorter shelf life, require the implementation of an appropriate logistics system such as Cold Chain Logistics (CCL) (Monnagaaratwe & Motatsa, 2021). CCL is a system that ensures the freshness of agricultural products by maintaining appropriate temperature and humidity during transportation and storage (Stolze et al., 2018).

Competition in the retail sector in areas such as Central Sulawesi, especially Palu City, shows the dynamics between older and new stores. Stores such as PT. Bumi Nyiur Swalayan have developed various strategies to attract consumers by offering a variety of products, but they must continue to adapt to changing trends brought by new competitors (Singh et al., 2014; Sodhi & Tang, 2021). In this context, it is important to understand how these companies carry out their supply chain management, especially in terms of cost efficiency and the quality of service provided to customers (Nel & Badenhorst-Weiss, 2011).

Research on supply chain management in the retail and fast food industry provides valuable insights into how supply chain strategies can be implemented and optimized to improve efficiency and customer satisfaction (Leuschner et al., 2013; Nam et al., 2010). Therefore, further research in the retail sector such as PT. Bumi Nyiur Swalayan is expected to provide a deeper picture of best practices in supply chain management and how it can meet the ever-changing needs of consumers.

RESEARCH METHODOLOGY

The location of this research focuses on PT. Bumi Nyiur Swalayan, located at Jl. Letjen S. Parman No.44, Besusu Tengah, East Palu, Palu City, Central Sulawesi 94111. The research was conducted for four days in December 2023. The type of research used is descriptive qualitative, which aims to collect and analyze data based on direct observation and interaction with informants. Qualitative methods focus on observing humans in their social context and interactions using language and terms they know. This research will take steps including data collection, data reduction, data presentation, and drawing conclusions, in accordance with the qualitative research approach that has been recognized in the literature (Govind et al., 2017).

The primary data used in this study were obtained directly through in-depth interviews and observations with relevant informants who play a role in supply chain management. Primary data is important because it provides direct insight into the dynamics and challenges faced in the supply chain (Ambe & Badenhorst-Weiss, 2011). As a process, the researcher recruited three supply chain actors to be used as samples or main informants. The first informant is the store manager of the

fresh food department in the company, who is expected to provide detailed information on fresh product management. The second informant is the main store manager from the previous store area, while the third informant is the main store manager from the current store area, in order to gain a comprehensive perspective on the history and changes in supply chain management (Ambe, 2012; Hofer et al., 2022).

Through interviews with these informants, researchers not only collect quantitative data, but also qualitative data that provide context in the management of product storage and distribution (Ambe, 2012). This research is important to understand the strategies used by PT. Bumi Nyiur Swalayan in managing various challenges in the retail sector, especially in terms of customer satisfaction and operational efficiency in the supply chain of vegetables that have a shorter shelf life (Akkermans et al., 2019).

RESULTS AND DISCUSSION

Retail companies, like other types of companies, strive to always maintain the smooth running of their supply chain management process activities so that they can achieve their business goals effectively and efficiently. In general, this process can be carried out with good and appropriate management functions. To further explore the effectiveness and efficiency of supply chain management, it is important for companies to pay attention to the implementation of the SCOR (Supply Chain Operations Reference) method which has been proven useful in improving the performance and integration of the supply chain (Durocher-Yvon et al., 2019).



Figure 1: Management Function Process

Source: Vistasusiyanti, 2017

In Figure 1, PT. Bumi Nyiur Swalayan appears committed to maintaining and controlling its supply chain management by ensuring the delivery of quality vegetable products from suppliers to consumers. This is important because it is directly related to customer satisfaction, which is one of the key success factors in the retail industry (Stolze et al., 2018). This study is based on interviews with competent informants, who provide in-depth insights into how the company carries out the management process, especially in terms of planning, organizing, implementing, and monitoring all activities in the supply chain.

Figure 2 shows how PT. Bumi Nyiur Swalayan controls its supply chain management to ensure the delivery of high-quality vegetable products. In this process, determining suppliers who meet certain quality standards is very important. Prediction of consumer needs is done by considering average daily sales, display rack capacity, and the amount of stock available (Blackhurst et al., 2018).

PT. Bumi Nyiur Swalayan manages the procurement process from ordering goods starting with estimating needs to the time of receiving the product. An agreement on delivery time with suppliers is important so that the product arrives in accordance with the specified quantity and time, and in

good condition (Omoruyi et al., 2022). In addition, the company also needs to have an agreement on product quantity tolerance depending on the situation of product availability from farmers and the harvest season (Li, 2022).

In the procurement process, PT. Bumi Nyiur Swalayan prepares an order form that includes the type of vegetables and the amount needed. After the product arrives, a check is carried out to ensure that the quantity and quality of the product are in accordance with the order. Through the FIFO (First In First Out) technique, the company can maximize sales and maintain product freshness for consumers (Blackhurst et al., 2018).

Strict supervision is needed at every stage of the process to ensure the efficiency and effectiveness of the managerial steps taken. Thus, control activities include all activities from planning to implementation must be evaluated to ensure that the company meets the standards that have been set, so that the products sold to consumers are truly as expected (Dixit et al., 2022; Stolze et al., 2018).

Based on the results of interviews and direct observations conducted by researchers during the research process at PT. Bumi Nyiur Swalayan, a description of the supply chain flow model for vegetable products in the fresh product sector was obtained. Figure 3 shows the supply chain of vegetable products at PT. Bumi Nyiur Swalayan, which consists of various actors in the supply chain. These actors include farmers from the Biromaru and Binangga areas, Inpres market traders, and hydroponic producers who supply vegetable product needs.



Figure 2: Supply Chain Operations Reference Method

Source: Zuraidah, 2021

From Figure 3, it can be seen that there are three types of flows in the supply chain, namely product flow, financial flow, and information flow. The product flow flows from upstream to downstream, starting from vegetable seeds planted by farmers to being harvested into fresh vegetables sent to PT. Bumi Nyiur Swalayan and other collectors. Good product flow management is very important so that the quality of vegetables is maintained until they reach consumers (Birkel & Müller, 2020).

The financial flow in this supply chain moves from downstream to upstream, where end consumers pay for vegetables purchased at PT. Bumi Nyiur Swalayan and its branches. This process ensures that the company earns enough income to continue purchasing vegetables from farmers and traders (Nel & Badenhorst-Weiss, 2011). On the other hand, the payment system between suppliers and retail companies uses cash and transfer mechanisms to streamline the process (Posey & Bari, 2009).

Meanwhile, the flow of information flows in two directions between upstream and downstream actors, which includes information on prices, product quality, and required inventory.

This information helps PT. Bumi Nyiur Swalayan in making the right decisions regarding purchasing and product stock management (Zhang et al., 2015). In addition, good communication between purchasing staff and suppliers is essential so that market demand can be met effectively (Ketchen et al., 2021).

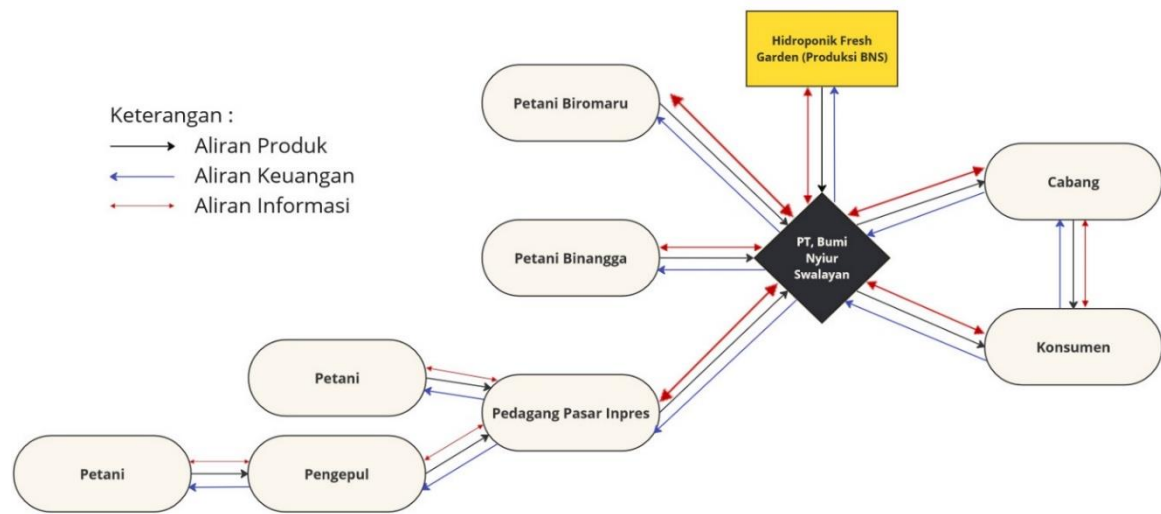


Figure 3: Supply Chain of Vegetable Products of PT. Bumi Nyiur Swalayan

Source: Interview analysis results

PT. Bumi Nyiur Swalayan is also ready to implement an efficient supply chain strategy. One of the approaches used is the SCOR (Supply Chain Operations Reference) method, which is useful in measuring and improving supply chain performance. In this way, the company can quickly respond to changes in market demand and optimize vegetable procurement and delivery steps (Birkel & Müller, 2020).

At the ordering stage, the company ensures effective communication to determine customer needs and preferences. This is followed by careful product management to maintain the freshness of vegetables until they reach consumers (Kocabasoglu-Hillmer et al., 2023). Product stock handling also involves proper packaging processes and product display management to attract consumer interest, ensuring that all steps taken meet established presentation standards (Miller et al., 2020).

Thus, PT. Bumi Nyiur Swalayan has succeeded in building an efficient and coordinated vegetable supply chain. The performance of this supply chain management is built through the application of the SCOR methodology, as well as attention to all aspects of management and operations that ensure the availability of high-quality products in supermarkets (Yang et al., 2021).

CONCLUSION

Based on the research results at PT. Bumi Nyiur Swalayan, it can be concluded that the effectiveness and efficiency of supply chain management are very important in ensuring the sustainability of the retail business, especially for fresh products such as vegetables that have a short shelf life. By implementing the Supply Chain Operations Reference (SCOR) model, the company is able to carry out management functions systematically, from planning, procurement, production, delivery to returns. Strategies such as determining quality suppliers, planning based on daily sales data, and implementing the FIFO system show the company's serious efforts in maintaining product quality and consumer satisfaction. All of this is done with strict supervision and evaluation to ensure that each stage in the supply chain runs according to established standards.

In addition, this study emphasizes the importance of integration in the flow of products, information, and finance in the supply chain. PT. Bumi Nyiur Swalayan manages the flow of products from farmers to display shelves, and ensures the timeliness and quality of delivery through close

cooperation with suppliers. Accurate and timely information flow allows for better decision-making, while organized financial flow ensures smooth payments to upstream producers. Overall, this study shows how planned and integrated supply chain management can improve competitiveness and customer satisfaction, especially in a highly competitive retail sector such as in Palu City.

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