SUPPLY CHAIN MANAGEMENT PERFORMANCE ANALYSIS USING THE SCOR METHOD AT PT. HATTEN BALI TBK: AN EVALUATION AND OPTIMIZATION STUDY

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Abstract: Supply Chain Management (SCM) involves the integration and coordination of various activities within the supply chain to enhance operational efficiency and customer satisfaction. This study aims to identify the performance and challenges faced by the company, such as demand fluctuations and delivery delays. The research analyzes SCM performance at PT. Hatten Bali Tbk, an alcoholic beverage distributor, using the Supply Chain Operation Reference (SCOR) model based on the attributes of Reliability, Responsiveness, Cost, and Asset Management through a quantitative descriptive approach. Data were collected through interviews and direct observation. The results show that the POF (Perfect Order Fulfillment) metric reached 96.25%, and the OFCT (Order Fulfillment Cycle Time) metric had an average order fulfillment time of 2 days. However, the COGS (Cost of Goods Sold) was relatively high at 54.47%, and the CTCCT (Cash-to-Cash Cycle Time) reached 106 days, indicating a need for improvement in cost efficiency and asset management. This study enhances the company's understanding of its SCM performance and provides strategic recommendations to improve efficiency and competitiveness in the market..

Keywords: Performance Measurement, Supply Chain Management, Supply Chain Operation Reference (SCOR)

INTRODUCTION

The rapid development of today's business world has driven globalization and international trade, which not only expands markets but also increases the level of competition between companies. This increasing competition is evident in the emergence of many new companies in the same industrial sector, offering similar products. As a result, competition is not only individual but also involves networks between companies. This means that the competition that occurs involves coordination between various businesses within a supply chain.(Tanaka & Nurcaya, 2018)Similarly, in the alcoholic beverage industry, many new players are entering the market. In such a situation, companies cannot focus solely on their own strategy and performance; they also need to actively collaborate and integrate with partners in the supply chain. Cooperation between all elements of the supply chain is crucial for improving service quality and mitigating potential risks (Winarno et al., 2024).

The alcoholic beverage industry is heavily influenced by changing trends and consumer demand, and often experiences volatile demand. This fluctuating demand

poses challenges, particularly in accurately projecting demand, which can lead to errors in production planning, raw material procurement, and inventory management, impacting operational efficiency and excessive operating costs. In this context, measuring Supply Chain Management (SCM) performance is crucial for companies to effectively address these challenges and optimize supply chain management. This is supported by the opinion of Sanjaya & Purnawati (2023), who stated that it is crucial for every company to measure and evaluate its performance to win the competition. The importance of improving performance extends not only to internal companies but also to other parties involved in the company, who work together to create and deliver products to end users, namely consumers. All these parties come from various business functions, from raw material procurement by suppliers, production and warehousing by manufacturers, product distribution by distributors, and end-consumer service by retailers, all of which are integrated into a single supply chain network.

According to Chopra & Meindl (2016:13), a supply chain is a network of companies that work together to create and deliver a product to the end user. Meanwhile, Supply Chain Management (SCM), according to Rahardjo (2021:4), is the integration and coordination across departments and companies and the flow of materials, information, and finances to transform and use resources in the most rational way along the value chain, from raw material suppliers to customers. Good Supply Chain Management can provide opportunities for the supply chain network to achieve customer satisfaction and competitive advantage, thereby increasing profits for all parties in the supply chain. Wulandari et al., (2016) stated that the better a company manages its supply chain, the better its operational performance will be. This means that Supply Chain Management has a positive effect on a company's operational performance. This is in line with research conducted by Siburian et al., (2022); Hafi (2021); Lathifa & Takaya (2025); and Prabowo & Nasito (2023).

To effectively manage and control Supply Chain Management performance, a performance measurement system with appropriate indicators is required. According to Sriwana et al. (2021), supply chain performance measurement refers to the process of identifying, collecting, analyzing, and evaluating the extent to which supply chain performance achieves predetermined goals, objectives, or standards. In this regard, supply chain management performance measurement aims not only to assess performance but also to identify indicators that require improvement and support decision-making regarding the supply chain strategy that should be adopted by the company (Sriwana et al., 2021). By conducting an in-depth analysis of its performance, companies can develop more effective and innovative strategies and determine whether the company is performing well according to standards (Harwati & Yunita Pettalolo, 2019). Ultimately, an effective supply chain can improve customer satisfaction, reduce costs, increase revenue, and utilize assets more efficiently (Wibowo & Sri, 2022).

One approach that can be used to evaluate a company's supply chain performance is the Supply Chain Operation Reference (SCOR) method. The SCOR model offers a methodology, analytical tools, and benchmarking tools that support organizations in making rapid improvements to supply chain processes (APICS, 2017). Pujawan & Mahendrawathi (2024:278) explain that the SCOR model encompasses all supply chain

management functions, from planning, procurement, production, distribution, to returns. This model uses five attributes to measure performance: Reliability, Responsiveness, Agility, Cost, and Asset Management. Thus, SCOR does not focus solely on one specific aspect but provides a comprehensive overview of the entire supply chain. The attributes Reliability, Responsiveness, and Agility focus on customer-related performance, while Cost and Asset Management emphasize internal aspects (Pujawan & Mahendrawathi, 2024:280). The SCOR model's ability to provide a detailed overview of performance measurements from upstream to downstream makes it superior to other measurement methods, which generally focus only on internal company aspects (Chotimah et al., 2018). Furthermore, the SCOR model can facilitate benchmarking within the same industry, enabling companies to analyze, improve, and evaluate their performance more effectively (Makkarennu et al., 2020).

The SCOR model has been used in several studies measuring Supply Chain Management performance. Prasetyo et al. (2021) found that overall Supply Chain Management performance was marginal. Sinaga et al. (2021) showed that supply chain performance was inefficient and required improvements in terms of perfect order fulfillment and customer order fulfillment times. Saragih et al. (2021) found that supply chain performance fell into the moderate category and required improvements in the responsiveness and financial cycle sectors. A study by Jayanti & Nurcaya (2024) found that the company's Supply Chain Management performance was quite good but required improvements in asset management. These studies indicate that, on average, the company's supply chain performance was quite good. However, several metrics still fell short of targets and required improvement. Therefore, companies need to conduct regular evaluations to identify existing problems and improve overall Supply Chain Management performance.

This research was conducted at PT. Hatten Bali Tbk, a producer and distributor of alcoholic beverages headquartered in Denpasar, Bali. Hatten's product customers include hotels, restaurants, cafes, and retailers spread throughout Bali, as well as several major cities in Indonesia such as Jakarta, Surabaya, Makassar, and Lombok. Based on observations and interviews with management, PT. Hatten Bali Tbk has implemented the Supply Chain Management concept with a supply chain network involving suppliers, expedition parties, internal company, as well as retailers and customers. Although PT. Hatten Bali Tbk has implemented the Supply Chain Management concept for a long time, the company still often faces various challenges and obstacles in its implementation.

Based on pre-research conducted through direct observation and interviews with the operational manager of PT. Hatten Bali Tbk, it was found that in implementing Supply Chain Management, the company is often hampered by unpredictable demand fluctuations. This uncertainty in demand makes it difficult for the company to manage inventory and schedule deliveries. As a result, the company has experienced stockouts on several products, making it unable to meet consumer demand. On the other hand, there are also product overstocks, which have the potential to disrupt the company's cash cycle. Furthermore, the company often experiences delivery delays due to scheduling that is not prepared to deal with sales fluctuations. This certainly has a negative impact on customer satisfaction and the company's operational efficiency.

Based on this phenomenon, PT. Hatten Bali Tbk requires a specific evaluation and measurement of Supply Chain Management performance using methods that can provide in-depth analysis so the company can identify problems that need to be fixed and optimize its Supply Chain Management performance. By paying attention to Supply Chain Management performance, the company can improve customer satisfaction. Furthermore, through benchmarking, the company can develop a competitive strategy by maximizing the performance of each element in the supply chain.

METHOD

This study is a quantitative descriptive research aimed at evaluating the performance of Supply Chain Management (SCM) at PT. Hatten Bali Tbk using the Supply Chain Operations Reference (SCOR) approach. The SCOR model is employed to assess SCM performance based on four main dimensions: Reliability, Responsiveness, Cost, and Asset Management. The research was conducted directly at PT. Hatten Bali Tbk, an alcoholic beverage distribution company in Bali. The company was chosen because it has not previously conducted a systematic performance evaluation of its supply chain, despite implementing SCM practices—leading to issues such as stock mismatches and delivery delays (Rahyuda, 2020; Paul, 2014).

Data were collected through structured interviews with company managers and direct observation of supply chain activities. These were complemented with quantitative data such as order volume, delivery time, inventory levels, and production costs. The data were classified into primary and secondary sources, with primary data obtained directly from company staff, and secondary data sourced from official company documents and website. The aim of this data collection method is to obtain in-depth information about the actual SCM conditions, which can then be linked to SCOR metrics such as Perfect Order Fulfillment (POF), Order Fulfillment Cycle Time (OFCT), Cost of Goods Sold (COGS), and Cash-to-Cash Cycle Time (CTCCT) (Sugiyono, 2019; Setiawan & Muhardi, 2021).

The data analysis process involved three main stages: performance measurement using the SCOR Card, benchmarking with peer companies in the alcoholic beverage industry, and gap analysis using Lost Opportunity Measurement (LOM) to identify potential revenue losses due to suboptimal performance. The final stage included a fishbone analysis to identify the root causes of low performance in specific metrics, examining factors such as human resources, methods, machinery, raw materials, and the environment. This combination of quantitative methods and visual analysis is expected to provide a comprehensive overview and strategic improvement solutions for the SCM system at PT. Hatten Bali Tbk (Daniel et al., 2020; Sudarni et al., 2023).

RESULTS AND DISCUSSION
Results of Data Analysis
Reliability

Table 1. Defective Product Data of PT. Hatten Bali Tbk in 2024

Period	Returns/Problem Orders (Pcs)	Retur/Problem Orders (Rp)
January	375	40.919.547
February	10013	1.103.985.860
March	9521	1.050.289.656
April	8325	915.998.083
May	8051	874.303.233
June	7577	815.695.571
July	7018	757.865.558
August	5868	629.367.207
September	4516	482.655.398
October	3984	426.852.365
November	2160	230.262.846
December	1434	150.306.658
Total	68842	7.478.501.982

Source: Return Report of PT. Hatten Bali Tbk, 2024

Problematic Product Data at PT. Hatten Bali Tbk in 2024 shows that a total of 68,842 product units were returned by customers. The reliability of the Supply Chain Management, measured using the Perfect Order Fulfillment (POF) metric, can be calculated as follows:

$$POF = \frac{\text{Total orders} - \text{Problematic orders}}{\text{Total orders}} x 100\%$$

Table 2. Perfect Order Fulfillment Calculation Results for 2024

Period	Sales (Pcs)	Returns/Problematic Orders (Pcs)	POF (%)
January	117,865	375	99.68%
February	113,660	10,013	91.19%
March	128,139	9,521	92.57%
April	131,389	8,325	93.66%
May	170,784	8,501	95.02%
June	140,488	7,571	94.61%
July	180,546	7,018	96.11%
August	195,739	6,500	96.68%

Period	Sales (Pcs)	Returns/Problematic Orders (Pcs)	POF (%)
September	167,688	4,516	97.31%
October	161,132	3,484	97.84%
November	141,372	2,160	98.47%
December	178,531	1,424	99.20%
Overall total	1,836,044	68,842	96.25%

Source: Processed Data, 2025

Based on the calculation of the Perfect Order Fulfillment (POF) metric in 2024, PT. Hatten Bali Tbk demonstrated a strong ability to fulfill customer orders perfectly, achieving a success rate of 96.25%. This figure reflects the company's performance in delivering products on time, with the correct quality, and in the correct quantity. The remaining 3.75% represents failures in perfect order fulfillment, as 68,842 product units were returned out of a total of 1,836,044 units sold throughout the year 2024.

Responsivnes

The Order Fulfillment Cycle Time (OFCT) metric is used to measure performance in terms of responsiveness. Considering that PT. Hatten Bali Tbk is a distribution company and not involved in the production process, the calculation of this metric was conducted by measuring the cycle time from the receipt of an order until the product is received by the customer during the 2024 period.

Table 3. Order Fulfillment Cycle Time Calculation for 2024

Proces	Process Details	Time
Delivery Cycle Time	Order received and entered into system	1 Day
Delivery Cycle Time	Loading and product delivery	1 Day
Total		**2 Days**

Source: Interview with the Operations Manager of PT. Hatten Bali Tbk

The order fulfillment cycle time at PT. Hatten Bali Tbk takes an average of 2 days, starting from the receipt of an order either directly from customers through the sales division or from retailers. The process of receiving and inputting the order into the system takes approximately 1 day, while the loading and delivery of goods by the driver team also requires an average of 1 day.

Cost

The Cost of Goods Sold (COGS) metric is used to measure performance related to the cost attribute. The data used for this measurement includes finished goods purchasing data, beginning inventory, and ending inventory for the year 2024.

Table 4. Inventory and Finished Goods Purchase Data in 2024

Periode	Beginning Inventory (Rp)	Ending Inventory (Rp)	Net Purchases (Rp)
2024	32.725.431.871	42.232.428.435	164.187.958.965

Source: Financial Report of PT. Hatten Bali Tbk, 2024

COGS = Beginning Inventory + Cost of Goods Manufactured – Ending Inventory

COGS (Rp) = 32.725.431.871+ 164.187.958.965 – 42.232.428.435

COGS (Rp) = 154.680.962.401

$$COGS\ (\%) = \frac{COGS}{Revenue} x100\%$$

$$COGS\ (\%) = \frac{154.680.962.401}{283.975.763.805} x100\%$$

COGS = 54,47%

Based on the calculation of the Cost of Goods Sold (COGS) metric at PT. Hatten Bali Tbk, the result was 54.47%. This figure represents the proportion of costs incurred to acquire the goods sold by the company in relation to the total revenue generated from sales.

Asset Management

The Cash-to-Cash Cycle Time (CTCCT) metric is used to assess asset management performance by calculating Days of Inventory (DOI), Days of Accounts Receivable (DAR), and Days of Accounts Payable (DAP). The following presents the accounts payable and receivable data of PT. Hatten Bali Tbk for the year 2024, along with the CTCCT calculation.

Table 5. Accounts Payable and Receivable Data of PT. Hatten Bali Tbk in 2024

Period	Accounts payable (Rp)	Accounts receivable (Rp)
2024	16,166,754,288	34,595,139,908

Source: PT. Hatten Bali Tbk Financial Report 2024

The following is the Cash-to-Cash Cycle Time (CTCCT) calculation for PT. Hatten Bali Tbk, based on 2024 data

$$\text{Sales value per day} = \frac{\text{Sales}}{\text{Number of days}}$$

$$= \frac{\text{Rp } 283{,}975.763{,}805}{366}$$

$$= \text{Rp}775{,}890{,}065$$

$$\text{Accounts Receivable(days)} = \frac{\text{Accounts Receivable}}{\text{Sales per Day}}$$

$$= \frac{\text{Rp } 34{,}595{,}139{,}908}{\text{Rp } 775{,}890{,}065}$$

$$= 45\ Days$$

$$\text{Cost of Sales per day} = \text{COGS (\%) x Sales per day}$$

$$= 54.47\%\ \text{x Rp}775{,}890{,}065$$

$$= \text{Rp. } 442{,}627{,}318$$

$$\text{Account Payable(days)} = \frac{\text{Accounts Payable}}{\text{Cost of Sale per day}}$$

$$= \frac{\text{Rp } 16{,}166{,}754{,}288}{\text{Rp } 442.627.318}$$

$$= 39\ Days$$

$$\text{Inventory Days of Supply} = \frac{\text{Ending Inventory}}{\text{Cost of Sale per day}}$$

$$= \frac{\text{Rp } 42{,}232{,}428{,}435}{\text{Rp } 442{,}627{,}318}$$

$$= 100\ Days$$

CTCCT = Inventory days of supply + Account receivable – Account payable

CTCCT = 45 Days + 100 Days – 39 Days

CTCCT = 106 Days

Based on the calculation of the Cash-to-Cash Cycle Time (CTCCT) metric, the result is 106 days. This figure represents the amount of time PT. Hatten Bali Tbk requires to convert its investment in inventory and accounts receivable into cash.

Table 6. Results of the Calculation of Actual Data on PT. Hatten Bali Tbk's Supply Chain Performance in 2024

No.	Performance Attributes	Metric	Actual Data
1	Reliability	POF	96.25%
2	Responsiveness	OFCT	2 days
3	Cost	COGS	54.47%
4	Asset Management	CTCCT	106 Days

Source: Processed data, 2025

Based on the 2024 supply chain performance measurement results of PT. Hatten Bali Tbk, as presented in Table 6, the performance metrics are as follows: Perfect Order Fulfillment (POF) at 96.25%, Order Fulfillment Cycle Time (OFCT) at 2 days, Cost of Goods Sold (COGS) at 54.47%, and Cash-to-Cash Cycle Time (CTCCT) at 106 days.

Benchmarking Results and GAP Analysis

Table 7. Comparison of Actual Data and Benchmark Data

No.	Performance Attributes	Metric	Actual Data	Benchmark Data		
				Superior	**Advantage**	**Parity**
1	Reliability	POF	96.25%	97%	95.69%	82.11%
2	Responsiveness	OFCT	2 days	2 days	3 days	> 3 Days
3	Cost	COGS	54.47%	30.58%	38.08%	53.14%
4	Asset Management	CTCCT	106 Days	-11 Days	45 Days	870 Days

Source: Processed data, 2025

The results presented in Table 7 show that the POF metric falls between the advantage and superior performance levels, the OFCT metric is positioned at the superior level, the COGS metric is at the parity level, and the CTCCT metric falls between parity and advantage.

Each metric has a defined performance target based on benchmark data. Both the POF and OFCT metrics are targeted to achieve superior performance, in line with the company's mission to deliver high-quality products and ensure customer satisfaction. Meanwhile, the COGS and CTCCT metrics are also targeted to reach the superior level in order to enhance the company's competitive advantage.

After setting the performance targets, the next step is to conduct a gap analysis to measure the difference between the current condition and the desired target. This gap analysis is carried out using the Lost Opportunity Measurement (LOM) method, which focuses on measuring revenue-related metrics, such as POF and COGS (Daniel et al., 2020). This method is effective as it can illustrate the financial impact of lost revenue opportunities. Revenue losses or gains can be calculated directly using data such as estimated lost sales or realized potential revenue.

Table 8. Opportunity Calculation for POF Metric

Description	Calculation	
Total Revenue	Rp	283,975,763,805
Actual POF		96.25%
Target POF		97.04%
Total Revenue × ((100 - Actual POF)/100)(a)	Rp	10,649,091,143
Total Revenue × ((100 - Target POF)/100)(b)	Rp	8,405,682,609
Difference between (a) and (b)	Rp	2,243,408,534
Gross Profit		42%
Gross Profit × Difference between (a) and (b)	Rp	946,323,658

Source: Data processed in 2025

Based on Table 8, the opportunity calculation for the POF metric indicates that the company could achieve an additional revenue of Rp 946,323,658 if it meets the targeted performance level. The next section presents the opportunity calculation for the COGS metric, comparing actual data with the target benchmark.

Table 9. Opportunity Calculation for COGS Metric

Description	Calculation
Total Revenue	Rp 283,975,763,805
Actual COGS	54.47%
Target COGS	30.58%
Total Revenue × Actual COGS (a)	Rp 154,681,598,545
Total Revenue × Target COGS (b)	Rp 86,839,788,572
Difference between (a) and (b)	Rp 67,841,809,973
Gross Profit	42%
Gross Profit × Difference between (a) and (b)	Rp 28,493,560,189

Source: Data processed in 2025

Based on Table 9, the opportunity calculation for the COGS metric shows a potential value of Rp 28,493,560,189 if the company is able to achieve the targeted performance level. The following table presents the opportunity calculation comparing the company's actual data with the targeted performance benchmark.

Table 10. Gap Analysis of Actual Data with Target Performance

Performance Attribute	Metric	Actual Data	Target Data	Gap Analysis	Opportunity
Supply Chain Reliability	POF	96.25%	97.04%	0.79%	Rp 946,323,658
Supply Chain Responsiveness	OFCT	2 Days	2 Days	0	Maintaining distribution performance
Supply Chain Cost	COGS	54.47%	30.58%	23.89%	Rp 28,493,560,189
Supply Chain Asset Management	CTCT	106 Days	-11 Days	117 Days	Improving asset management performance

Source: Processed data, 2025

Cause and Effect Analysis (Fishbone)

Based on interviews with key informants and direct observations, several factors were identified as contributing to the high COGS (Cost of Goods Sold) at PT. Hatten Bali Tbk. The following are the main causes:

1) Material
   a. An increase in raw material prices from suppliers has raised the total cost per product, thereby increasing the COGS.
   b. Uncertainty in the supply of goods, particularly when suppliers fail to deliver as ordered, leads to poor inventory management. Unnecessary items become slow-moving inventory, accumulating in the warehouse and increasing storage costs. This raises the cost per unit sold and consequently inflates the COGS.

2) Human (People)
   a. Human errors, such as incorrect data input, inaccurate stock counting, or mishandling of goods, can lead to product damage, loss, or over-purchasing. These issues result in waste and additional costs, thereby increasing COGS.
   b. Low employee motivation leads to slower work, lack of attention to detail, and indifference to quality or efficiency. This results in more mistakes, product damage, and inefficient processes, all of which raise unit production costs and increase COGS.
   c. Lack of training causes employees to misunderstand work procedures, product handling standards, and proper inventory management. This increases the risk of errors and inefficiencies in operations, resulting in wasted costs, time, and labor, and directly contributing to higher COGS.

3) Environment
   a. Regulatory changes implemented in 2023 require customers purchasing more than 8 liters of alcoholic beverages to possess an NPPBKC license. Since many customers do not yet have this license, PT. Hatten Bali Tbk must split orders over 8 liters into multiple invoices, each showing less than 8 liters. This causes delays in shipment preparation and later delivery times, ultimately increasing operational costs and COGS.
   b. Market instability makes product pricing and customer demand unpredictable, leading to poor inventory control, higher storage costs, and increased procurement and operational expenses. These factors all contribute to elevated COGS.

4) Method
   a. Inefficient inventory control, due to reliance on a limited number of suppliers, leads to poor demand planning. This results in receiving goods that do not match actual needs, causing overstock or stockouts.
   b. An ineffective distribution system, characterized by a lack of delivery tracking, suboptimal route planning, and poor delivery scheduling.

Inadequate coordination among the distribution team often leads to mistakes and delivery delays. These inefficiencies increase distribution costs and the likelihood of product returns, thereby raising the company's overall COGS.

Discussion of Research Findings

1) The average POF value recorded was 96.25%, which is categorized as good and consistent throughout each month. The lowest value occurred in February 2024 with 91.19%, during which the highest number of returned products (10,013 pcs) was recorded. The highest POF value was achieved in January 2024, reaching 99.68%. Returns were generally caused by packaging damage during shipment, order input errors, misdelivery due to human error in packaging, or product quality issues. The company accepts product returns only when supported by proper documentation and prior agreement. Products damaged due to customer negligence cannot be processed. A high POF value reflects the company's ability to fulfill customer requirements, particularly in terms of on-time delivery, accurate quantities, and satisfactory quality. Higher POF values indicate better supply chain reliability and positively influence customer satisfaction (P. Setiawan & Muhardi, 2021). It is expected that the company continues to improve its reliability performance in supply chain operations.

Based on the gap analysis, the POF metric gap was found to be 0.79%, indicating that the company's performance is already close to the targeted benchmark. This result aligns with findings by Wulandari & Nurcaya (2023) and Sinaga et al. (2021), which show that many companies have not yet reached their targeted POF values, highlighting the need for ongoing evaluation and improvement in order fulfillment processes.

2) The calculation results show that the average cycle time from order receipt to delivery is 2 days. The process begins with order intake and input into the system, either directly from consumers through the sales team, e-commerce platforms, or retailers. Order intake and entry take approximately 1 day, and order preparation and delivery take an additional 1 day on average. While 2 days is the average fulfillment time, variations may occur depending on shipment conditions. For out-of-town deliveries, shipments are scheduled four times a week using third-party logistics providers.

According to benchmark data, the gap for the OFCT metric is 0 days, meaning the company has successfully achieved the targeted performance and should continue to maintain this level. These findings are consistent with studies conducted by Wulandari & Nurcaya (2023) and Prasetyo & Aspiranti (2021), which also reported companies meeting their OFCT targets.

3) The average COGS was calculated at 54.47% of total sales in 2024. Several factors influenced this metric, particularly inventory and purchase costs. Based on interviews with the operations manager, the rise in purchase costs is largely attributed to the increased price of wine raw materials from suppliers. Additionally, the company must optimize inventory storage costs to reduce overall COGS.

The current COGS value is considered relatively high compared to competitors, indicating that a large proportion of revenue is spent on the cost of goods sold, thereby reducing profit margins. A lower COGS percentage reflects a company's ability to control production costs more effectively (Wulandari & Nurcaya, 2023).

According to the gap and opportunity analysis, the gap for the COGS metric is recorded at 23.89%, suggesting that the company missed an opportunity to generate additional revenue of Rp 28,493,560,189 due to underperformance against the target. Therefore, PT. Hatten Bali Tbk's supply chain cost performance, as reflected by the COGS metric, has not yet met the desired benchmark. These findings are in line with previous research by Jayanti & Nurcaya (2024), Wulandari & Nurcaya (2023), and Prasetyo & Aspiranti (2020)).

Based on the cause-and-effect (fishbone) analysis, which was derived from interviews and direct observations, several factors were identified as contributing to the high Cost of Goods Sold (COGS) at PT. Hatten Bali Tbk, including the following:

a. Material
   - Increase in raw material prices
   - Uncertainty in the supply of goods

b. Man (Human)
   - Human error
   - Low employee motivation
   - Lack of training

c. Environment
   - Regulatory changes
   - Market instability

d. Method
   - Inefficient inventory control
   - Ineffective distribution system

To reduce the high Cost of Goods Sold (COGS) at PT. Hatten Bali Tbk, the company needs to implement an integrated and strategic approach by negotiating with suppliers to obtain more competitive raw material prices, establishing partnerships with multiple vendors to stabilize supply and prevent overstocking, enhancing employee training to minimize human errors and ensure proper understanding of operational procedures, improving work motivation through incentive programs to boost productivity and quality, educating customers regarding the NPPBKC license requirements while adopting a more flexible delivery system to expedite order preparation, and optimizing inventory control and distribution systems through the implementation of advanced monitoring technologies and efficient route planning, so that through these comprehensive efforts, PT. Hatten Bali Tbk can effectively reduce production costs and significantly lower its COGS.

4) Based on the calculation, the performance value of supply chain asset management using the Cash-to-Cash Cycle Time (CTCCT) metric is 106 days. This metric comprises three calculation components: an inventory days of supply of 100 days, which indicates the average time the company can operate using its current inventory; accounts payable of 39 days, which reflects the average time the company takes to pay its suppliers; and accounts receivable of 45 days, which represents the average time the company takes to receive payments from its customers. The result of this metric indicates that the

average time required by the company to convert its cash investment back into cash is 106 days.

The gap analysis for the CTCCT metric showed a value of 117 days, indicating that the company has not achieved its performance targets. Therefore, an evaluation of the company's asset management is necessary, particularly in improving inventory efficiency. This finding aligns with research by Jayanti & Nurcaya (2024), Sinaga et al. (2021), and Nurhasanah & Aspiranti (2020), which also indicated that performance targets have not been met.

CONCLUSION

Based on the data analysis using the Supply Chain Operations Reference (SCOR) model and the discussion in the previous chapter, several conclusions can be drawn from this study:

1) The supply chain reliability performance of PT. Hatten Bali Tbk, as measured by the Perfect Order Fulfillment (POF) metric, reached 96.25%, placing the company between the advantage and superior categories in comparison with benchmark data. With a relatively small gap of 0.79% from the set target of 97.04%, this result indicates that the company's reliability performance is strong and approaching the desired standard. Nonetheless, there remains room for improvement to achieve optimal performance and fully meet the set target.

2) The company's supply chain responsiveness, measured by the Order Fulfillment Cycle Time (OFCT), recorded an average order fulfillment time of 2 days, from the moment an order is received to the point it is delivered to the customer. This performance aligns with the superior category and confirms that the company has successfully achieved the responsiveness target. Moving forward, it is important for PT. Hatten Bali Tbk to maintain this performance to ensure continued customer satisfaction.

3) The supply chain cost performance, assessed through the Cost of Goods Sold (COGS) metric, stood at 54.47%, which places the company at the parity level compared to benchmark data. However, with a target performance of 30.58%, there remains a significant gap of 23.89%. A fishbone analysis identified several contributing factors to the high cost, including increased raw material prices, human error, regulatory changes, and inefficient inventory control methods. To address this issue, PT. Hatten Bali Tbk should prioritize cost efficiency improvements to move closer to its target.

4) Finally, the supply chain asset management performance, measured by the Cash to Cash Cycle Time (CTCCT), showed a result of 106 days, which falls between the advantage and parity categories. However, with a target benchmark resulting in a gap of 117 days, the company has not yet met the desired performance level. This long cycle is attributed to delayed receivables and excessive inventory holding periods, which hinder cash conversion. Therefore, improving the efficiency of asset utilization and enhancing the overall asset management process is crucial for PT. Hatten Bali Tbk to achieve better performance in this area.

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