

# Implementation of the Just-in-Time System to Improve Inventory Efficiency at PT Unilever Indonesia Tbk

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The author(s) declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

## ABSTRACT

**Purpose:** This study aims to describe the characteristics of inventory management and operating cash flow at PT Unilever Indonesia Tbk based on an analysis of its financial statements.

**Research Method:** This study employs a descriptive quantitative approach using a documentary study method. Secondary data were obtained from the Interim Financial Reports of PT Unilever Indonesia Tbk for the periods ending March 31, 2024, and March 31, 2025, as well as the 2024 Annual Report. The analysis was conducted using the Inventory Turnover Ratio (ITO), Days Sales of Inventory (DSI), trend analysis, and a review of inventory accounting policies.

**Results and Discussion:** The results show that inventory value increased by 12%, the Inventory Turnover Ratio decreased from 3.20 to 2.67 times, and Days Sales of Inventory increased from 28.1 to 33.7 days. In addition, cash and cash equivalents increased by 61%, while net cash flow from operating activities turned from negative to positive in the first quarter of 2025. These findings illustrate changes in inventory management and operating cash flow based on financial statement data.

**Implications:** Financial ratio analysis can serve as a starting point for evaluating inventory management practices, but it requires operational data to support a more comprehensive interpretation.

**Originality:** This study integrates an analysis of inventory ratios, operating cash flow, and inventory accounting policies at FMCG companies in Indonesia using data from publicly available financial statements.

**Keywords:** Just-in-Time; inventory management; inventory turnover; operating cash flow; FMCG.

## 1. Introduction

In this competitive era of globalization, the manufacturing industry must operate more dynamically to maintain its business relevance in the market. Rapid shifts in consumer preferences and global economic fluctuations force companies to adapt continually, particularly in managing production cycles (Wicaksono, 2025). One crucial aspect that determines a company's competitive advantage is responsive supply chain management. Failure to respond quickly to these market dynamics often leads to a decline in competitiveness and the loss of potential market opportunities (Simanjuntak *et al.*, 2025). In the context of operational management, inventory management plays a vital role in a company's financial stability. Insufficient inventory risks causing stockouts, which can disappoint customers and reduce brand loyalty (Hilalia & Jumriani, 2025). Conversely, excessive inventory buildup in warehouses ties up



working capital unnecessarily. These stockpiles also have the potential to increase storage and insurance costs, as well as heighten the risk of damage or expiration before the goods can be brought to market.

To address this dilemma in conventional inventory management, many global companies are shifting from the traditional Just-in-Case method toward a Just-in-Time (JIT) strategy. The Just-in-Time (JIT) philosophy, popularized by the Japanese manufacturing industry, emphasizes eliminating various forms of waste throughout the production process (Annaafi *et al.*, 2024). Through this system, raw materials and finished goods are supplied in the required quantities, at the required time, and in accordance with the needs of the subsequent production process. Various studies indicate that implementing JIT can improve inventory management efficiency by reducing waste, optimizing material flow, and controlling inventory costs. However, its effectiveness is influenced by each company's operational characteristics (Kusumawati, 2009). Although it offers potential for efficiency, implementing Just-in-Time (JIT) is not without challenges, particularly in the Fast-Moving Consumer Goods (FMCG) sector. The FMCG industry is characterized by high sales volumes, rapid product turnover, and dynamic consumer demand patterns (Putri & Amaliah, 2025). These conditions require companies to balance inventory availability and logistics cost efficiency through effective supply chain coordination and the ability to respond promptly to demand changes; thus, inventory management becomes a critical aspect in supporting the continuity of a company's operations (Alwi *et al.*, 2026).

Several previous studies have examined the implementation of Just-in-Time (JIT) in various manufacturing companies in Indonesia, with results generally indicating the potential for improved inventory management efficiency. Susanti & Arief (2021) reported that JIT implementation increased inventory cost efficiency by 75–83% compared to conventional systems. Furthermore, Monica Pasaribu and Rosman Siregar (2024) demonstrated that implementing JIT can reduce total inventory costs from Rp32.4 million to Rp8.9 million by controlling order quantities and the frequency of raw material procurement. Research by Andriono *et al.*, (2025) also reported that implementing JIT across various manufacturing companies contributed to a reduction in operating costs of up to approximately 30%. These findings indicate that JIT has the potential to improve inventory management efficiency. However, the results of its implementation are significantly influenced by operational characteristics, industry type, and the availability of data used in each study.

On the other hand, research on PT Unilever Indonesia Tbk still tends to focus more on general operational management aspects rather than evaluating inventory management characteristics related to the JIT concept. The study by Alamsyah *et al.*, (2023), for example, analyzed the operational management of PT Unilever Indonesia Tbk during the periods before, during, and after the COVID-19 pandemic, including aspects of inventory management. However, that study did not specifically evaluate inventory efficiency indicators or relate them to the characteristics of the JIT system based on the company's financial statement data. Furthermore, most previous studies used internal company operational data as the basis for analysis; consequently, empirical evidence utilizing public financial information to describe inventory management characteristics at national-scale FMCG companies remains relatively limited.

Although various previous studies have shown that the Just-in-Time (JIT) approach has the potential to improve inventory management efficiency at various manufacturing companies in Indonesia, most of these studies used companies' internal operational data—such as production data, raw material orders, inventory costs, and procurement processes—as the basis for their analysis. In contrast, studies on Fast-Moving Consumer Goods (FMCG) companies that utilize public financial

statement data to describe inventory management characteristics remain relatively limited. Research on PT Unilever Indonesia Tbk has also not specifically examined how inventory indicators available in financial statements can be used to provide insights into inventory management characteristics—which the literature often associates with the Just-in-Time (JIT) concept. Therefore, there remains an empirical gap regarding the use of publicly available financial information as a basis for descriptive analysis in evaluating inventory management characteristics at FMCG companies in Indonesia.

Based on this gap, this study seeks to answer the research question: how can the inventory management characteristics of PT Unilever Indonesia Tbk be described through an analysis of inventory ratios based on published financial statement data? Consequently, this study aims to describe PT Unilever Indonesia Tbk's inventory management characteristics through an analysis of inventory ratios and trend analysis based on the company's publicly available financial statements. This study is not intended to verify the implementation of the Just-in-Time (JIT) system or to test the causal relationship between JIT and inventory efficiency, but rather to provide a descriptive interpretation of inventory indicators based on information available in the company's financial statements. The novelty of this study lies in the use of a descriptive approach based on publicly available financial statements to describe the characteristics of inventory management at an Indonesian FMCG company, thereby offering a different perspective from previous studies, which generally rely on internal operational data.

The remainder of this paper is organized as follows. Section 2 provides a literature review and hypothesis development. Section 3 presents the research method and design. Section 4 provides the results and discussion. Section 5 presents Concluding Remarks and Recommendations.

## 2. Literature Review and Hypothesis Development

### 2.1 Just in time

Just-in-Time (JIT) is an operations management philosophy focused on supplying raw materials, components, and finished products in the required quantities, at the required time, and in accordance with the needs of the production process. This concept first emerged in Japanese production systems as an approach to reducing various forms of waste, such as excess inventory, waiting time, non-value-added activities, and inefficient use of resources (Pristianingrum, 2017). Unlike conventional approaches, which tend to maintain high inventory levels to anticipate demand uncertainty, JIT emphasizes optimal inventory control by synchronizing procurement, production, and distribution activities. Thus, the primary goal of JIT is not merely to reduce inventory levels but to create a more efficient material flow that enhances productivity and reduces a company's operating costs. Over time, the implementation of JIT has also been viewed as part of a strategy to improve process quality, which requires cross-functional coordination, consistent operational standards, and information systems capable of providing accurate and timely information (Mahajan *et al.*, 2023; Silva *et al.*, 2025).

Implementing JIT requires close integration between the company and its suppliers, production systems, and distribution mechanisms to ensure materials are available as needed without causing shortages or inventory buildup. Therefore, the success of JIT implementation depends not only on a company's ability to control inventory levels but is also influenced by supplier reliability, delivery schedule accuracy, demand stability, and the organization's ability to respond to changes in the business environment. Various studies indicate that implementing JIT can yield benefits such as reduced storage costs, improved inventory turnover, reduced waste, and increased resource efficiency when supported



by effective supply chain coordination (Prasetio & Tunjang, 2024). However, implementing JIT also presents challenges, particularly when companies face supply uncertainties, logistical disruptions, demand fluctuations, or supplier capacity constraints. These conditions require companies to balance inventory efficiency with operational flexibility to ensure the production process continues seamlessly. In this context, JIT is no longer viewed merely as an inventory control technique but as an operations management approach that requires comprehensive organizational readiness (Balkhi *et al.*, 2022). Various recent studies also indicate that the effectiveness of JIT implementation depends heavily on industry characteristics, supply chain complexity, and a company's ability to manage operational risks. In companies with high levels of demand uncertainty, implementing JIT requires more intensive coordination with suppliers as well as the support of information systems capable of generating real-time data to support decision-making. Conversely, in organizations with limited resources, weak supplier coordination, or inadequate operational control systems, JIT implementation often faces various obstacles, preventing the expected benefits from being fully realized (Farahita & Pi, 2025). Therefore, evaluating inventory management characteristics is essential to determine the extent to which a company's operational practices reflect the efficiency principles outlined in the JIT literature.

## 2.2 Supplier Relationship Management

Supplier Relationship Management (SRM) is a strategic approach to supply chain management that focuses on developing collaborative relationships between companies and suppliers to create shared value, improve operational efficiency, and support the sustainability of business processes (Fitriasyah *et al.*, 2024). Unlike conventional transactional relationships that are solely price- and procurement-oriented, SRM positions suppliers as strategic partners who contribute to improving quality, on-time delivery, supply flexibility, and risk management within the supply chain. The implementation of SRM encompasses supplier selection, performance evaluation, ongoing communication, information exchange, and the development of trust and long-term commitment. This approach enables companies to achieve better coordination in procurement activities, thereby reducing supply uncertainty and improving responsiveness to changes in market demand (Andersen, 2022). Furthermore, SRM also plays a role in building collaborative relationships that support improved operational performance and supply chain sustainability through synergies between companies and suppliers (Bag *et al.*, 2022). In manufacturing companies, the effective implementation of SRM has been reported to contribute to improved organizational performance through strengthened procurement coordination, increased supplier reliability, and operational process efficiency (Darmawangsyah *et al.*, 2024).

Over time, SRM has come to be viewed not only as a supplier management tool but also as part of a strategy to enhance a company's competitiveness in the face of global supply chain dynamics. Integrated relationships with suppliers enable companies to obtain information more quickly, increase supply chain flexibility, and accelerate decision-making processes in the event of supply disruptions or changes in production needs (ALHusban & Hardan, 2024). Several studies also indicate that SRM practices supported by supplier performance evaluations, measurements of collaborative relationships, and continuous improvement can help reduce procurement lead time, increase delivery reliability, and improve procurement process efficiency (Rashid, 2024). On the other hand, the success of SRM implementation remains influenced by organizational readiness, communication quality, supplier performance measurement systems, and the level of trust built between both parties (Ahistasari, 2021). Therefore, SRM is viewed as one of the key foundations for creating a responsive and sustainable supply

chain. In the context of this study, the concept of SRM is used as a theoretical foundation for understanding the importance of a company's relationship with suppliers in supporting the effectiveness of inventory management. However, this study does not aim to evaluate PT Unilever Indonesia Tbk's SRM practices directly; rather, it uses this concept as a conceptual framework for interpreting the results of an analysis based on publicly available financial statements.

## 2.3 Supply Chain Management

Supply chain management (SCM) is a strategic approach that integrates all activities related to planning, procurement, production, storage, distribution, and the delivery of products to end customers in a coordinated manner. The concept of SCM focuses not only on the efficiency of the flow of goods but also encompasses the management of information and financial flows, as well as coordination among organizations involved in a supply chain network. Thus, SCM is viewed as an integrated system aimed at creating value for customers through the synchronization of business processes from raw material suppliers to end consumers. According to Jodlbauer *et al.*, (2023), the evolution of the SCM concept reflects a shift from an operational approach focused on logistics efficiency toward a strategic approach that emphasizes collaboration, process integration, and cross-organizational decision-making. In line with this, Yusuf & Soediantono (2022) explain that the effectiveness of supply chain management is determined by a company's ability to coordinate procurement, production, distribution, and inventory control activities in an integrated manner, thereby enhancing operational efficiency and ensuring the continuity of business processes. Adaptive, collaborative, and integrated supply chain management that is aligned with marketing strategy enables companies to improve responsiveness to changing consumer needs, strengthen coordination among supply chain members, and create sustainable competitive advantages in an increasingly dynamic business environment (Dzreke & Dzreke, 2025).

The increasingly dynamic business environment is driving companies to develop supply chain systems that are more adaptive, collaborative, and sustainability-oriented. Various studies indicate that the success of SCM is significantly influenced by the involvement of various stakeholders, including suppliers, manufacturers, distributors, governments, and consumers, who collectively form a value network within the supply chain (Siems *et al.*, 2022). Furthermore, sustainability is increasingly an integral part of modern supply chain management. Companies are not only required to achieve cost efficiency and distribution speed but must also consider environmental, social, and governance aspects in all their operational activities (Okeke, 2024). Current research also emphasizes that digital transformation, information transparency, and strengthened cross-organizational collaboration are key factors in enhancing the resilience and sustainability of supply chains amid the growing complexity of global markets (Arabshahi & Garza-Reyes, 2025). Empirical findings also indicate that effective coordination among supply chain actors plays a vital role in maintaining distribution stability, ensuring supply availability, and improving the effectiveness of supply chain management across various strategic sectors (Azhaara *et al.*, 2026). In this context, SCM has evolved into an approach that integrates operational efficiency with long-term value creation through better coordination among supply chain members.

The implementation of SCM across various industrial sectors demonstrates that effective coordination among organizations plays a vital role in maintaining the smooth flow of materials, reducing supply uncertainty, and enhancing a company's flexibility in responding to changes in market demand. Recent literature emphasizes that strengthening cross-sector partnerships, information



integration, and relationship management among supply chain actors are key foundations for building a sustainable supply chain system (Bouchery *et al.*, 2016). Furthermore, cross-sector collaboration enables companies to gain access to resources, technologies, and innovations that support improved operational performance while also achieving sustainability goals (Balaisyte *et al.*, 2024). In consumer product sectors, the effectiveness of SCM is also influenced by a company's ability to understand changes in consumer preferences and coordinate distribution processes quickly and accurately (Dong & Rashkova, 2024).

### 3. Research Method

This study employs a descriptive quantitative approach using a documentary study method. This approach was chosen to describe the characteristics of inventory management based on an analysis of the company's published financial data; therefore, it is not intended to test causal relationships or verify the operational implementation of the Just-in-Time (JIT) system. The research subject is PT Unilever Indonesia Tbk. The data sources consist of secondary data obtained from the First Quarter Interim Financial Statements as of March 31, 2024, and March 31, 2025; the 2024 Annual Report; and the Notes to the Financial Statements (CaLK) published by the company. The observation period was consistently selected using data from the first quarter of 2024 and 2025 to avoid differences in reporting periods that could potentially introduce seasonal bias in the analysis process. Data collection was conducted through a documentary study by identifying, recording, and classifying information related to inventory, cost of goods sold, and other supporting information available in the company's financial statements.

Data analysis was conducted through financial ratio analysis and trend analysis. The ratios used include the Inventory Turnover Ratio (ITO) and Days Sales of Inventory (DSI) as indicators to describe inventory turnover characteristics during the observation period. The Inventory Turnover Ratio is calculated using the cost of goods sold as presented in the company's income statement; therefore, supplier payments are not used as a proxy for the cost of goods sold. Furthermore, trend analysis is used to compare changes in financial indicators across observation periods based on data available in the financial statements. The results of the analysis are interpreted descriptively with reference to inventory management concepts and the literature on Just-in-Time (JIT), without concluding that the company has implemented a JIT system or specific operational mechanisms not supported by empirical evidence. Data validity is ensured through source triangulation by comparing the information contained in the statement of financial position, income statement, cash flow statement, Notes to the Financial Statements (CaLK), and the Annual Report of PT Unilever Indonesia Tbk to ensure the consistency of the data used in the analysis process.

### 4. Results and Discussion

#### 4.1 Analysis Results

The results of the descriptive analysis are based on secondary data obtained from PT Unilever Indonesia Tbk's Interim Financial Statements as of March 31, 2025, the Interim Financial Statements as of March 31, 2024, and the 2024 Annual Report. The analysis focuses on changes in current assets, inventory



turnover ratio, operating cash flow, and inventory accounting policies, based on information available in the company's financial statements.

**Table 1.** Changes in Current Assets of PT Unilever Indonesia Tbk

| Financial Accounts<br>(Current Assets) | March 31, 2025 (in<br>millions of rupiah) | December 31, 2024 (in<br>millions of rupiah) | Changes |
|----------------------------------------|-------------------------------------------|----------------------------------------------|---------|
| Cash and Cash Equivalents              | 1.080.574                                 | 671.180                                      | Up 61%  |
| Current Assets                         | 2.809.691                                 | 2.505.852                                    | Up 12%  |
| Total Current Assets                   | 6.809.267                                 | 5.280.548                                    | Up 29%  |

**Source:** PT Unilever Indonesia Tbk's 2025 Financial Statements, compiled by the researcher.

Based on the data in Table 1, there were changes in several components of PT Unilever Indonesia Tbk's current assets during the observation period. The value of cash and cash equivalents increased from Rp671,180 million as of December 31, 2024, to Rp1,080,574 million as of March 31, 2025, or approximately 61%. During the same period, inventory increased from Rp2,505,852 million to Rp2,809,691 million, or by 12%, while total current assets increased from Rp5,280,548 million to Rp6,809,267 million, or by approximately 29%.

These results indicate an increase in cash, inventory, and total current assets during the observation period. Based on the financial statement data used in this study, these changes reflect the company's financial condition at the end of the reporting period. However, the data does not provide information regarding the operational policies underlying these changes; therefore, it cannot be used to conclude the implementation of specific operational systems or strategies.

**Table 2.** Inventory Turnover Ratio of PT Unilever Indonesia Tbk

| Indicator                               | Q1 2025 (31 March<br>2025) | Q4 2024 (31 Dec 2024) | Changes     |
|-----------------------------------------|----------------------------|-----------------------|-------------|
| Inventory Value (in millions of rupiah) | 2.809.691                  | 2.505.852             | Up 12%      |
| Harga Pokok Penjualan (COGS) (Rp Juta)  | 7.105.519                  | 7.886.446             | Down 9.9%   |
| Rata-rata Persediaan (Rp Juta)          | 2.657.771                  | 2.463.948             | Up 7.9%     |
| Inventory Turnover Ratio (ITO)          | 2.67 times                 | 3.20 times            | Down 16.6%  |
| Days Sales of Inventory (DSI)           | 33.7 days                  | 28.1 days             | Up 5.6 days |

**Source:** PT Unilever Indonesia Tbk's 2025 Financial Statements, compiled by the researcher.

Based on the data in Table 1b, PT Unilever Indonesia Tbk's inventory value increased from Rp2,505,852 million as of December 31, 2024, to Rp2,809,691 million as of March 31, 2025, representing a 12% increase. During the same period, the cost of goods sold (COGS) used in calculating the inventory turnover ratio stood at Rp7,105,519 million in the first quarter of 2025, lower than the Rp7,886,446 million recorded at the end of the comparable period. Additionally, the average inventory value increased from Rp2,463,948 million to Rp2,657,771 million.

The calculation results show that the Inventory Turnover Ratio (ITO) changed from 3.20 times to 2.67 times during the observation period. Meanwhile, the Days Sales of Inventory (DSI) increased from 28.1 days to 33.7 days. Based on these results, inventory turnover decreased, accompanied by an increase in the average inventory holding period during the observation period. Based on the available data, the changes in the ITO and DSI values reflect changes in inventory turnover characteristics during the observation period. However, these indicators cannot be used directly to conclude the level of

inventory management efficiency or the implementation of the Just-in-Time (JIT) system without being supported by operational data, inventory policies, or relevant industry benchmarks.

**Table 3.** Changes in Operating Cash Flow of PT Unilever Indonesia Tbk

| Components of Operating Cash Flow       | March 31, 2025 (in millions of rupiah) | March 31, 2024 (in millions of rupiah) | Changes                           |
|-----------------------------------------|----------------------------------------|----------------------------------------|-----------------------------------|
| Revenue from Customers                  | 9.695.918                              | 9.206.115                              | Up 5.3%                           |
| Payments to Suppliers                   | (7.105.519)                            | (7.886.446)                            | Down 9.9%                         |
| Net Cash Flow from Operating Activities | 1.100.707                              | (184.469)                              | Turning from negative to positive |

**Source:** PT Unilever Indonesia Tbk's 2025 Interim Financial Report, compiled by the researcher.

Based on the data in Table 3, cash receipts from customers increased from Rp9,206,115 million as of March 31, 2024, to Rp9,695,918 million as of March 31, 2025, or approximately 5.3%. During the same period, payments to suppliers decreased from Rp7,886,446 million to Rp7,105,519 million, or by approximately 9.9%. Additionally, net cash flow from operating activities shifted from a negative Rp184,469 million as of March 31, 2024, to a positive Rp1,100,707 million during the same period in 2025. These results indicate changes in the components of operating cash flow during the observation period. An increase in cash receipts from customers, coupled with a decrease in payments to suppliers, contributed to the change in the net cash position from operating activities. However, the cash flow statement data only illustrates changes in the company's cash flow during the reporting period and cannot be used as direct evidence regarding the implementation of a pull system, procurement process efficiency, or the implementation of a Just-in-Time (JIT) system without being supported by more specific operational data.

**Table 4.** PT Unilever Indonesia Tbk's Inventory Accounting Policy

| Inventory Policy Aspects                         | Terms and Conditions of PT Unilever Indonesia Tbk                                                                                                              | Description                                                                                                        |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Inventory Valuation Methods                      | Using the Moving Average Method                                                                                                                                | Used as the basis for determining inventory values in accordance with the company's accounting policies.           |
| Inventory Cost Components                        | Consists of purchase costs, conversion costs, and other costs that can be directly attributed to bringing the inventory to its current condition and location. | Presented in the Notes to the Financial Statements as the basis for measuring inventory costs.                     |
| Allowance for Obsolete and Slow-Moving Inventory | Determined based on estimates of future usage or sales of each type of inventory.                                                                              | Used by companies to adjust the carrying value of inventory in accordance with estimates of its economic benefits. |

**Source:** Notes to the 2024 Financial Statements of PT Unilever Indonesia Tbk, compiled by the researcher.

Based on the information presented in Table 4, PT Unilever Indonesia Tbk uses the moving average method (Moving Average) as the basis for inventory valuation, as explained in the Notes to the Financial Statements. In addition, the cost of inventory consists of purchase costs, conversion costs, and other costs that can be directly attributed to bringing the inventory to its current condition and location. The company also discloses its policy for establishing provisions for obsolete and slow-moving inventory based on estimates of future usage or sales for each type of inventory.

This information is part of the inventory accounting policies disclosed by the company in its financial statements. It provides an overview of the basis for recognizing, measuring, and valuing inventory during the reporting period. Based on the available data, these policies cannot be used as direct evidence regarding the implementation of specific operational systems but rather as accounting information that supports the interpretation of the results of the inventory ratio analysis in this study.

## 4.2 Discussion

### 4.2.1 Interpretation of Inventory Management Characteristics Based on Ratio Analysis

Interpretation of Inventory Management Characteristics Based on Ratio Analysis. The results of the study show that PT Unilever Indonesia Tbk's inventory value increased by 12% during the observation period, accompanied by a decrease in the Inventory Turnover Ratio (ITO) from 3.20 times to 2.67 times and an increase in Days Sales of Inventory (DSI) from 28.1 days to 33.7 days. Descriptively, these changes indicate that the average inventory holding period became longer compared to the previous period. In the context of financial ratio analysis, changes in the ITO and DSI reflect shifts in inventory turnover characteristics during the observation period. However, these changes cannot be directly interpreted as indicators of the success or failure of implementing the Just-in-Time (JIT) system because financial ratios reflect only the final results of operational activities, as shown in financial statements, and do not provide information about the underlying operational processes.

Conceptually, Just-in-Time (JIT) is an operations management approach aimed at aligning material flow with production needs by reducing waste, lowering inventory levels, and improving the efficiency of resource utilization (Kumar *et al.*, 2023; Silva *et al.*, 2025). Nevertheless, the literature also explains that the success of JIT implementation is not only measured by low inventory levels but also by a company's ability to maintain smooth production processes, on-time delivery, and coordination with suppliers and distribution systems (Prasetio & Tunjang, 2024). Therefore, evaluating JIT implementation generally requires operational information such as lead time, order frequency, service level, production schedules, and inventory control policies—data not available in public financial statements. Consequently, the ITO and DSI indicators in this study are more appropriately used as tools to describe inventory management characteristics rather than as direct evidence of JIT implementation within a company.

The results of this study show that a decrease follows an increase in inventory value in inventory turnover. This finding differs from some previous studies, which reported that JIT implementation tends to be followed by an increase in inventory turnover frequency and a decrease in inventory holding time (Balkhi *et al.*, 2022; Prasetio & Tunjang, 2024). However, this discrepancy does not imply that PT Unilever Indonesia Tbk does not apply efficiency principles in its inventory management. Rather, the findings suggest that changes in financial ratios can be influenced by various factors not identifiable solely through financial statements, such as shifts in market demand, production strategies, procurement policies, raw material supply conditions, or seasonal factors (seasonality). Therefore, using financial ratios as the sole basis for evaluating JIT implementation has limitations in comprehensively explaining a company's operational processes.

These findings also reinforce the argument that financial indicators must be interpreted with caution. A decrease in the Inventory Turnover Ratio and an increase in Days Sales of Inventory do not necessarily indicate inefficiencies in inventory management, just as an increase in inventory does not

always reflect excessive stockpiling. Rather, these indicators should be understood as representations of the company's financial condition during a specific period, which still require support from operational information to provide a more comprehensive explanation. Thus, the results of this study do not support the use of financial statement data as the sole basis for concluding that a company has implemented a Just-in-Time (JIT) system; rather, they indicate that financial statements can provide an initial overview of the dynamics of inventory management, which must then be further explored through operational data and more detailed managerial information.

These findings imply that inventory ratio analysis retains value in evaluating changes in a company's inventory management characteristics, particularly when research utilizes publicly available secondary data. However, the interpretation of the analysis results must take into account the scope of the data used so that the conclusions drawn do not exceed the available empirical evidence. This approach is also consistent with the descriptive nature of this study, which aims to describe the characteristics of inventory management based on information in financial statements, rather than testing causal relationships or verifying the implementation of specific operational systems.

#### **4.2.2 Interpretation of Operating Cash Flows and Inventory Accounting Policies**

An analysis of operating cash flow shows that cash receipts from customers increased by 5.3%, while payments to suppliers decreased by 9.9% during the observation period. In addition, net cash flow from operating activities shifted from a negative position as of March 31, 2024, to a positive position as of March 31, 2025. Descriptively, these changes indicate an improvement in the company's operating cash flow position compared to the previous period. However, these changes cannot be directly attributed to the implementation of the Just-in-Time (JIT) system or the pull system mechanism, as the cash flow statement presents only information on cash receipts and disbursements and does not explain the operational policies that caused these changes.

From an operations management perspective, the JIT system is often associated with a company's ability to reduce waste, accelerate operational cycles, and improve working capital efficiency through more effective inventory management (Kumar *et al.*, 2023). However, the success of JIT implementation is generally evaluated using operational indicators such as lead time, order fulfillment rate, delivery frequency, actual inventory levels, and coordination with suppliers—not merely through changes in the company's cash flow (Prasetio & Tunjang, 2024). Therefore, the increase in operating cash flow found in this study is more appropriately understood as a change in the company's financial condition during the observation period rather than as direct evidence of the success of JIT implementation. Other factors, such as increased sales, changes in operational financing strategies, efficiency in accounts receivable management, or payment policies toward suppliers, can also influence the changes in cash flow reflected in financial statements.

These findings indicate that changes in cash flow must be interpreted with caution because the cash flow statement cannot explain the cause-and-effect relationship between operational policies and changes in financial performance. Thus, this study does not conclude that changes in operating cash flow are a direct consequence of implementing the JIT system; rather, it shows that these changes occurred concurrently with changes in inventory management characteristics during the observation period. Such an interpretation is more consistent with the descriptive research design used, in which the research results are intended to describe phenomena based on available data, rather than to test causal relationships between variables.



Furthermore, the analysis of inventory accounting policies reveals that PT Unilever Indonesia Tbk uses the moving average method in inventory valuation and determines inventory acquisition costs based on purchase costs, conversion costs, and other costs directly attributable to bringing the inventory to its current condition and location. The company also discloses the establishment of provisions for obsolete and slow-moving inventory based on estimates of future usage or sales. This policy is part of the company's application of financial accounting standards in preparing financial statements and provides information regarding the basis for measuring and valuing inventory.

From an accounting perspective, the use of the Moving Average method ensures consistency in measuring inventory value when price fluctuations occur during the reporting period. However, the existence of this inventory valuation method cannot be taken as evidence that the company has implemented a JIT system or specific operational mechanisms. Similarly, the policy of establishing provisions for obsolete inventory is an accounting practice aimed at presenting inventory values fairly, in accordance with estimates of their economic benefits. It does not directly indicate the application of the zero defect or quality at the source concepts, nor specific inventory control strategies.

Therefore, the inventory accounting policies in this study are more appropriately viewed as supporting information that helps in understanding the results of the inventory ratio analysis, rather than as an indicator of JIT implementation.

## 5. Concluding Remarks and Recommendation

This study aims to describe the characteristics of PT Unilever Indonesia Tbk's inventory management based on financial ratio analysis and trend analysis using secondary data sourced from the Interim Financial Statements for the periods ending March 31, 2024, and March 31, 2025, as well as the 2024 Annual Report. The analysis was conducted using the Inventory Turnover Ratio (ITO), Days Sales of Inventory (DSI), changes in current asset components, operating cash flow, and inventory accounting policies. The results indicate a 12% increase in inventory value, a decrease in the Inventory Turnover Ratio from 3.20 times to 2.67 times, and an increase in Days Sales of Inventory from 28.1 days to 33.7 days during the observation period. In addition, cash and cash equivalents increased by 61%. In contrast, net cash flow from operating activities shifted from a negative position in the previous period to a positive one in the first quarter of 2025. These findings provide insight into changes in the company's inventory management characteristics and operating cash flow conditions based on information available in publicly disclosed financial statements.

This study makes a theoretical contribution by demonstrating that financial ratio analysis can serve as an initial approach to describing a company's inventory management characteristics based on published secondary data. From a practical perspective, the study's results can serve as supporting information for academics, investors, and practitioners in understanding a company's inventory dynamics and operating cash flow through financial indicators available in financial statements. This study also emphasizes the importance of caution in interpreting financial ratios, as changes in financial indicators cannot be directly used to conclude the implementation of an operational management system without being supported by more comprehensive empirical evidence.

This study has several limitations. First, the study uses only secondary data derived from publicly available financial statements; therefore, it does not provide information regarding a company's operational policies, such as inventory control systems, procurement processes, relationships with



suppliers, or production activities. Second, the observation period is limited to data from the first quarter of 2024 and 2025; consequently, the study's findings do not yet reflect long-term inventory management patterns and may still be influenced by seasonal factors (seasonality). Third, the study did not use comparative data from other companies in the same industry; thus, the analysis results cannot yet illustrate PT Unilever Indonesia Tbk's relative position compared to its peers. Therefore, future research is recommended to use a longer observation period, combine financial data with operational data using a mixed methods approach, and conduct a comparative analysis with other companies in the Fast-Moving Consumer Goods (FMCG) industry to gain a more comprehensive understanding of the company's inventory management practices.

## Statement of Use of Generative AI

During the preparation of this work, the author used generative artificial intelligence tools to support the scientific writing process. Grammarly was used to check grammar, refine writing style, and improve clarity in scientific writing. All interpretations, analyses, and conclusions presented in this study are the sole responsibility of the author.

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