

## Analysis of Inventory Turnover in Improving Profitability at PT Artindo Pratama Sejahtera

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### Abstract

This study aims to analyze inventory turnover, profitability measured through the gross profit margin, comparisons with industry standards, and the role of inventory turnover in increasing profitability at PT Artindo Pratama Sejahtera during the 2020–2024 period. The study evaluates the relationship between inventory turnover and profitability, as well as compares the company's performance with industry standards. The company's financial statements are used as secondary data in this quantitative descriptive research. The analysis is conducted through the calculation of inventory turnover and gross profit margin ratios, which are then compared with industry standards to assess the company's performance. The results of the study show that the company's inventory turnover fluctuates and is mostly below industry standards, except in 2023 when the inventory turnover exceeded the standard. Meanwhile, the company's profitability shows stable performance and remains consistently above industry standards throughout the research period. The conclusion of this study indicates that inventory turnover plays a role in supporting increased profitability but is not the only determining factor. The contribution of this research is expected to serve as a reference for management evaluation in improving the efficiency of inventory management, as well as a reference for future research in the manufacturing industry sector.

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### Keywords:

*Inventory Turnover;*  
*Profitability;*  
*Gross Profit Margin;*  
*Inventory Management*

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## INTRODUCTION

In recent years, the paint industry in Indonesia has grown rapidly. This development is driven by increasing infrastructure development and the property sector, which continues to expand across various regions. Data from the Indonesian Paint Producers Association (APCI) show that national paint consumption has reached around 1.3 million metric tons, or approximately 4.2 kg per capita in recent years, reflecting high domestic demand (Mediaindonesia.com, 2025). Furthermore, industry research estimates that the paint and coatings sector in Indonesia will grow at a Compound Annual Growth Rate (CAGR) of around 6.5% during the 2025–2032 period (Mediaindonesia.com, 2025).

Along with the increase in development activities, people's lifestyle trends have also undergone significant changes. The development of interior and exterior design trends has encouraged an increasing demand for decorative paints. People are now paying greater attention to aesthetic aspects, where the choice of paint color not only functions as a building protector but also as a decorative element that highlights the character of a space (Jaglarz 2023; Pylypchuk et al. 2022; Shcherbanyuk et al. 2023). This phenomenon can be seen from the increasing public interest in “beautiful” and “instagrammable” colors, especially for photo

spots at home, cafés, and public spaces. These lifestyle changes have driven the demand for decorative paints with a wide variety of colors and attractive finishes to continue increasing every year.

One of the companies engaged in the paint industry is PT Artindo Pratama Sejahtera, a company that focuses on the production and distribution of quality paints in Indonesia. The company is headquartered in Tangerang and has several distribution branch warehouses located in Karawang, Purwokerto, Solo, and Lampung. In its operations, maintaining profitability stability is important. Profitability reflects a company's ability to generate profits as well as the effectiveness of its resource utilization (Álvarez et al. 2021; Brulhart et al. 2017; Krstić et al. 2023). One of the main factors that has the potential to affect profitability is inventory management. Based on the company's operational conditions, there are still obstacles in the form of overstock due to inaccurate demand planning and stockouts that cause delays in the delivery of goods to customers. Overstock can increase storage costs and the risk of damage to goods, while stockouts have the potential to reduce service levels and cause lost sales (Sari, 2022). This phenomenon shows that the efficiency of inventory management has not yet been achieved optimally. Research by Ocravia et al. (2024) shows that high demand fluctuations require companies to implement efficient inventory management, such as the use of FIFO systems and safety stock, to maintain the availability of goods and ensure smooth operations. In relation to the concept of operational efficiency, this condition can be measured through inventory turnover, which reflects how quickly a company can sell and replace its inventory within a relatively short period of time (Siswanto, 2021). A low inventory turnover value indicates that the company's working capital is tied up for too long in the form of inventory, which can ultimately affect the company's profitability level.

Research by Linawati et al. (2024) confirms that sufficient and well-managed inventory can facilitate the production process and help produce quality products. In addition, research by Lestari et al. (2025) shows that efficient inventory management is essential in dealing with market fluctuations. To provide an overview of the condition of profitability and inventory management, Table 1 presents the inventory turnover and profitability (gross profit margin) data of PT Artindo Pratama Sejahtera for the 2020–2024 period.

Industrial business activities in Indonesia are regulated in Law Number 3 of 2014 concerning Industry (Republic of Indonesia, 2014). The law emphasizes that industrial companies are required to manage resources effectively and efficiently in order to improve industrial performance and competitiveness. Inventory management is one of the important components in industrial activities because it is directly related to the smooth production process and cost efficiency. Poorly managed inventory can cause waste and negatively impact a company's profitability. Therefore, inventory turnover analysis as an indicator of inventory management efficiency is important to be carried out in industrial companies (Burawat 2015; Farooq 2019; Kwak 2019).

The results of research by Andreani et al. (2022) on food and beverage companies show that inventory turnover has not been able to increase profitability due to high inventory accumulation and less efficient inventory management. Another study by Saridawati et al. (2024) on agribusiness companies found that inventory turnover and sales have a positive effect on net profit. An increase in inventory turnover is aligned with increases in both sales and company net profit. In the retail sector, research by Adila et al. (2023) revealed that inventory

turnover tends to decrease every year, so inventory turnover has not been able to increase company profitability.

Furthermore, Situmeang et al. (2025) found that a decrease in inventory turnover from 6.44 to 3.07 in multinational companies in Indonesia is an indicator of declining stock management efficiency. Although various previous studies have examined inventory turnover and profitability across different sectors, the results obtained are still mixed and have not shown consistent conclusions. In addition, most of the research focuses on sectors such as food, agribusiness, and retail, while research in the industrial sector of paint companies remains very limited. Thus, this study is important to fill this gap by reviewing how the effectiveness of inventory management can increase profitability at PT Artindo Pratama Sejahtera, which operates in the decorative paint industry.

This study aims to identify, calculate, analyze, and explain inventory turnover, profitability, comparisons of inventory turnover and profitability with industry standards, and the role of inventory turnover in increasing profitability at PT Artindo Pratama Sejahtera during the 2020–2024 period. This research is expected to provide both theoretical and practical benefits. Theoretically, this study contributes to the development of financial management literature, particularly regarding inventory management efficiency and its relationship with profitability in the manufacturing industry, specifically the paint sector, which has rarely been studied. The findings can serve as a reference for future researchers examining similar topics. Practically, this research provides valuable insights for PT Artindo Pratama Sejahtera's management to evaluate and improve inventory management policies, optimize inventory turnover, and maintain cost control strategies to enhance profitability. Additionally, the results can serve as a basis for decision-making in inventory planning and control to achieve more consistent operational efficiency.

## RESEARCH METHOD

This research applies a quantitative descriptive approach. The population in this study is all financial statements of PT Artindo Pratama Sejahtera during 2020–2024. The population includes data related to inventory, cost of goods sold, revenue, and gross profit relevant to the research variables. The research sample was determined using total sampling, which is all data that was used as a sample. Thus, all financial statements for 2020–2024 are used as samples. The sampling technique applied is a non-probability sampling type of total sampling, because the number of population is limited and all data is required in the calculation of financial ratios. The data collection technique is carried out through documentation, which is recording information obtained from the company's financial statements. The source of research data is in the form of secondary data, which is information obtained from the company's financial statement documents. The data analysis technique is carried out through two stages, namely financial ratio calculation and descriptive analysis.

## RESULTS AND DISCUSSION

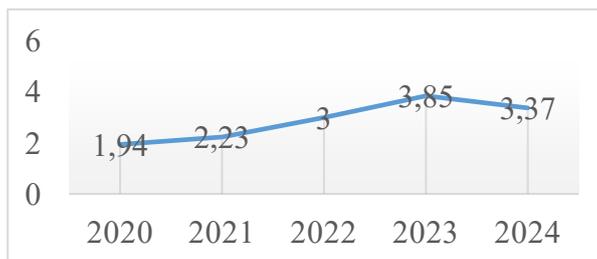
### Inventory Turnover

Based on the calculation results, the *inventory turnover value* of PT Artindo Pratama Sejahtera during the 2020–2024 period was obtained as presented in Table 3 as follows.

**Table 1. Calculation of Inventory Turnover of PT Artindo Pratama Sejahtera**

| Year | Cost of Goods Sold (Rp) | Average Inventory (Rp) | Inventory Turnover | Days Of Inventory |
|------|-------------------------|------------------------|--------------------|-------------------|
| 2020 | 15.844.854.345          | 8.180.326.632          | 1.94 times         | 186 days          |
| 2021 | 20.039.059.200          | 9.002.295.900          | 2.23 times         | 161 days          |
| 2022 | 21.689.530.626          | 7.238.403.668          | 3.00 times         | 120 days          |
| 2023 | 23.347.808.655          | 6.070.998.571          | 3.85 times         | 94 days           |
| 2024 | 24.473.062.408          | 7.252.555.976          | 3.37 times         | 107 days          |

Source: Processed Data (2025)



**Figure 1. Grafik Inventory Turnover**

Source: Processed Data (2025)

Based on Figure 1, it is known that the company's inventory turnover rate fluctuates with a tendency to increase until 2023, then decrease in 2024. In 2020, *inventory turnover* was recorded at 1.94 times, which shows that inventory management efficiency is still low. In 2021, *inventory turnover* increased by 0.29 times to 2.23 times due to an increase in HPP and an increase in average inventory. In 2022, *inventory turnover* increased by 0.77 times to 3.00 times, in line with the increase in HPP and the decrease in average inventory. The increase in *inventory turnover* reached its highest point in 2023 with an increase of 0.85 times to 3.85 times, which was influenced by the increase in HPP and the decrease in average inventory. However, in 2024, *inventory turnover* will decrease by 0.48 to 3.37 times due to an increase in HPP and an increase in average inventory.

**Profitabilitas (*Gross Profit Margin*)**

Based on the calculation results, the *gross profit margin value* of PT Artindo Pratama Sejahtera during the 2020–2024 period was obtained as presented in Table 4 as follows.

**Table 2. Calculation of Gross Profit Margin of PT Artindo Pratama Sejahtera**

| Year | Income (Rp)    | Gross Profit (Rp) | Gross Profit Margin |
|------|----------------|-------------------|---------------------|
| 2020 | 22.926.499.190 | 7.081.644.845     | 30,89%              |
| 2021 | 27.501.830.900 | 7.462.771.700     | 27,13%              |
| 2022 | 30.486.212.714 | 8.796.682.088     | 28,85%              |
| 2023 | 34.876.678.587 | 11.528.869.932    | 33,06%              |
| 2024 | 36.638.616.078 | 12.165.553.670    | 33,20%              |

Source: Processed Data (2025)



**Figure 2.** Gross Profit Margin Chart  
Source: Processed Data (2025)

Based on Figure 2, it is known that the relatively stable level of profitability during the 2020–2024 period is able to be maintained by PT Artindo Pratama Sejahtera. In 2020, *the gross profit margin* was recorded at 30.89%, which shows the company's performance to generate a fairly high gross profit from revenue. In 2021, *gross profit margin* decreased by 3.76% to 27.13%, due to a greater increase in revenue than an increase in gross profit when compared to the previous year. Furthermore, in 2022 *the gross profit margin* increased again by 1.72% to 28.85%, due to an increase in revenue and gross profit which showed an improvement in the company's operational performance. The increase in profitability is increasingly visible in 2023 with an increase in *gross profit margin* of 4.21% to 33.06% which shows that the company is able to maintain profitability stability. In 2024, *the gross profit margin* increased again by 0.14% to 33.20%. This value is the highest value during the research period and reflects the company's effectiveness in managing costs and increasing the added value of its operational activities.

### Comparison of *Inventory Turnover* and Profitability (*Gross Profit Margin*) with Industry Standards

The results of the calculation of *inventory turnover* and *gross profit margin* when compared to industry standards are presented in Table 5 as follows.

**Table 3.** Comparison with Industry Standards

| Racing  | Year | Calculation Results | Industry Standards | Company Health Information |
|---|------|---------------------|--------------------|----------------------------|
| <i>Inventory Turnover</i>                     | 2020 | 1.94 times          | 3.46 times         | Unhealthy                  |
|   | 2021 | 2.23 times          | 3.46 times         | Unhealthy                  |
|   | 2022 | 3.00 times          | 3.46 times         | Unhealthy                  |
|   | 2023 | 3.85 times          | 3.46 times         | Healthy                    |
|   | 2024 | 3.37 times          | 3.46 times         | Unhealthy                  |
| Profitabilitas ( <i>Gross Profit Margin</i> ) | 2020 | 30,89%              | 24,90%             | Healthy                    |
|   | 2021 | 27,13%              | 24,90%             | Healthy                    |
|   | 2022 | 28,85%              | 24,90%             | Healthy                    |
|   | 2023 | 33,06%              | 24,90%             | Healthy                    |
|   | 2024 | 33,20%              | 24,90%             | Healthy                    |

Source: Processed Data (2025)

Based on Table 3, the results of the comparison of *inventory turnover* with industry standards during the 2020–2022 period are still below the industry standard of 3.46 times,

although it shows an increasing trend. In 2023, *inventory turnover* increased to 3.85 times and exceeded industry standards, so the company is in a healthy condition. However, in 2024 the *inventory turnover* value decreased again to 3.37 times and was slightly below the industry standard. Meanwhile, profitability assessed through *gross profit margin* shows consistent performance above the industry average of 24.90% during the 2020-2024 period so that in general the company's profitability condition can be categorized as healthy.

### Inventory Turnover in Increasing Profitability



**Gambar 3. Grafik Inventory Turnover dan Gross Profit Margin**

Source: Processed Data (2025)

Based on Figure 4, the increase in inventory turnover in 2023 which exceeded industry standards is in line with the increase in gross profit margin in the same period. Likewise, in 2022, an increase in inventory turnover was followed by an increase in gross profit margin. However, in a period when inventory turnover is still below industry standards, the company is still able to maintain a healthy level of profitability, reflected in the overall value of gross profit margin that is consistently above the industry average. So the results of the analysis on PT Artindo Pratama Sejahtera for the 2020-2024 period, show that inventory turnover plays a role in increasing profitability, but it is not the only determining factor.

### Inventory Turnover

The results of the study show that PT Artindo Pratama Sejahtera's inventory turnover increased from 2020 to its peak in 2023, then decreased again in 2024. Low inventory turnover in the 2020–2021 period is in line with the theory that low inventory turnover reflects less than optimal inventory management efficiency and has the potential to increase storage costs (Dewi, 2021). The increase in 2022 and 2023 indicates an improvement in inventory management, both in terms of purchasing planning and stock control. However, the decline in 2024 indicates that this efficiency cannot be maintained consistently.

### Profitabilitas (Gross Profit Margin)

The results of the study show that the profitability of PT Artindo Pratama Sejahtera as measured through gross profit margin was in a relatively stable condition during the study period. This condition shows that the company is able to control cost of goods sold well so that it still generates adequate gross profit despite fluctuations in inventory management. The decline in gross profit margin in 2021 indicates an increase in production costs or selling price pressures. However, the increase in the following years shows an improvement in operational efficiency, in line with the theory that reveals that the company's ability to control operational

costs is the main factor in maintaining profit stability (Darmawan, 2020).

### **Comparison of Inventory Turnover and Profitability (Gross Profit Margin) with Industry Standards**

Based on the results of the study, PT Artindo Pratama Sejahtera's inventory turnover in the 2020-2022 period was still below the industry standard of 3.46 times, which shows that the company has not been able to manage inventory optimally compared to the industry average. In 2023, the company's inventory turnover increased and exceeded industry standards. However, in 2024 inventory turnover will decline again. This shows that even though the company has been able to achieve inventory efficiency in a certain period, consistency in maintaining this performance is still a challenge for the company. In contrast to inventory turnover, profitability assessed through gross profit margin shows consistent performance above industry standards of 24.90% during the 2020–2024 period. This condition shows that the company has good performance to generate gross profit from its operational activities. Gross profit margins that are above industry standards reflect the company's effectiveness in controlling cost of goods sold and creating added value through the products produced.

### **Inventory Turnover in Increasing Profitability**

Based on the results of the study, it can be seen that an increase in inventory turnover tends to be followed by an increase in profitability, especially in 2023 when inventory turnover exceeds industry standards and gross profit margins reach high values. This condition shows that efficient inventory management is able to support increased profitability through accelerating the turnover of goods and reducing storage costs. This finding is in line with the research of Saridawati et al. (2024) which states that high inventory turnover can support increased company profits through increased sales and reduced storage costs. However, the results of this study also show that when inventory turnover decreases in 2024, the company's profitability remains in a healthy condition. This indicates that inventory turnover plays a supporting factor in increasing profitability, but is not the only determining factor. Therefore, companies need to maintain a balance between inventory management efficiency and other operational strategies so that increased profitability can be achieved in a sustainable manner.

### **CONCLUSION**

The results of the study show that PT Artindo Pratama Sejahtera's inventory turnover in 2020–2024 is fluctuating and mostly below industry standards, except in 2023. This indicates that the efficiency of inventory management is not consistent. Meanwhile, profitability through gross profit margin is relatively stable and always above standard, so the company is relatively financially healthy. An increase in inventory turnover tends to be in line with profitability, but it is not the only determining factor. This study suggests that companies improve the consistency of inventory management and maintain cost control strategies, and for researchers to further expand variables or research objects for more comprehensive results.

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