

Inventory Turnover as a Conduit: Sales Growth, Capital Structure, and Profitability

Siti Mira Mutiah¹⁾, Siti Mudawanah^{2)*}, Pindonta Nalsal Purba³⁾

¹⁾²⁾³⁾Accounting, Faculty of Economics and Business, La Tansa Mashiro University

Soekarno-Hatta Street Cijoro Lebak Rangkasbitung District, Lebak Regency, Indonesia

¹⁾sitimiramutiah@latansamashiro.ac.id

²⁾sitimudawanah@latansamashiro.ac.id

³⁾pindontanalsalpurba@gmail.com

Article History:

Received 22 April 2026;

Revised 15 May 2026;

Accepted 23 May 2026;

Available Online 15 June 2026

Keywords:

Capital Structure

Food and Beverage Companies

Inventory Turnover

Profitability

Sales Growth

Abstract

This study aims to examine the impact of sales growth and capital structure on profitability, with inventory turnover positioned as a mediating variable, in food and beverage companies listed on the Indonesia Stock Exchange during the 2020–2024 period. Using a quantitative explanatory design, this study applies panel data regression with path analysis to evaluate both direct and indirect relationships among the variables. Model selection was conducted through the Chow test, Hausman test, and Lagrange Multiplier test, while the mediation effect was assessed using the Sobel test. The results show that sales growth has a positive and significant effect on inventory turnover and profitability. In contrast, capital structure has no significant effect on inventory turnover but negatively affects profitability. Inventory turnover is found to negatively affect profitability and does not mediate the relationships between sales growth and profitability or between capital structure and profitability. Theoretically, these findings challenge the conventional assumption that faster inventory turnover necessarily strengthens profitability or serves as an effective transmission mechanism between financial decisions and firm performance. Instead, profitability is more directly influenced by sales expansion and the debt structure. Practically, this study provides insights for financial managers to control leverage, protect profit margins, and align inventory policies with pricing and demand strategies. The findings also assist investors in evaluating firm performance by considering sales growth, capital structure, and operational efficiency simultaneously.

I. INTRODUCTION

Business competition in the era of globalization demands that companies survive and thrive. To face these challenges, companies must manage their resources efficiently to remain competitive. Hendra et al. (2025) state that one of the main indicators of a company's competitiveness is financial performance, as reflected in the level of profitability generated. Profitability is a primary concern for stakeholders because it indicates how effectively management manages the company's assets to generate profits.

One of the profitability-related issues in Indonesia is the food and beverage industry, which faces significant pressure amidst positive growth projections. This industry is projected to grow 7–8% by 2026. Increasing competition and a "market war" pose a real challenge for companies'

profitability. The Ministry of Industry (2022) reported that the non-oil and gas processing industry contributed 37.77% to GDP, with growth of 3.75%. However, despite positive macroeconomic figures, external pressures are eroding companies' financial performance across various fronts.

Dependence on imported raw materials remains a structural challenge for the food and beverage industry, as it can disrupt production continuity, increase cost uncertainty, and weaken operational efficiency. Fluctuations in global commodity prices, changes in trade policy, and supply chain instability can affect the availability and cost of key inputs, thereby slowing inventory turnover and reducing profitability. In addition, regulatory pressures related to product certification, health labeling, and reformulation requirements may increase production costs and influence consumer purchasing decisions. These external pressures indicate that profitability in the food and beverage sector is determined not only by internal financial performance but also by the company's ability to manage supply risks, pricing strategies, and operational adaptability.

These pressures ultimately lead to a decline in company profits, which, in the accounting and financial management literature, is known as profitability. Viyanis et al., (2023) explains that profitability is a key indicator because it reflects the final results of various management policies and decisions. Rivandi & Petra, (2022) states that profitability can be measured through the ability of invested capital to obtain a return on assets.

Based on signaling theory, company management seeks to provide positive signals to investors by increasing profitability. Hutabarat (2022) defines sales growth as an increase in revenue from the previous period, reflecting a company's ability to manage resources optimally. Sales growth is one indicator that influences a company's value, as higher revenues signal a strong outlook for generating returns for investors. Yulimtinan & Atiningsih (2021) Define Capital structure as the combination of all items on the right side of a company's capital resources balance sheet. The definition of capital structure differs from that of financial structure: capital structure is permanent expenditure that reflects the relationship between long-term debt and equity. In contrast, financial structure reflects the balance between all debt and equity (Hamzah, 2021). Capital structure refers to the company's long-term financing to fund investments, often calculated based on the relative sizes of funding sources (Nurkhasanah & Ichsanuddin Nur, 2022).

This is where inventory turnover plays an important role as an indicator of operational efficiency. Dzakiroh et al., (2022) states that inventory is an important component in business operations, where efficient inventory management will affect the smooth flow of income and cost control. Riasning et al., (2023) explains that the higher the inventory turnover, the shorter the average time goods are stored, which indicates efficiency and contributes to profitability.

Several studies have shown inconsistent results regarding the factors influencing profitability. This inconsistent finding indicates the possibility of an understudied indirect influence mechanism, particularly through the mediating role of inventory turnover. In this study, inventory turnover is positioned as a mediating variable. This is based on the logic that sales growth and leverage do not directly affect profitability, but rather through the operational mechanisms of inventory management. High sales growth requires adequate stock availability. High leverage can limit a company's ability to invest in inventory. In other words, inventory turnover acts as a conduit explaining how the effects of sales growth and leverage are transmitted to a company's profitability.

Based on the phenomenon of pressure in the food and beverage industry and the inconsistency of previous research results, this study aims to empirically test the effect of sales growth and

leverage on profitability with inventory turnover as a mediating variable in food and beverage companies listed on the Indonesia Stock Exchange.

II. LITERATURE

Sales growth reflects the success of investments in the previous period and can serve as a basis for estimating future growth. A company's prospects are considered positive if there are indications of sustained growth. Sales growth serves as a measure of market demand and a company's competitiveness within its evolving industry (Maulana et al., 2023). Increasing sales growth indicates strong market demand, which directly accelerates the frequency of goods leaving the warehouse, resulting in higher inventory turnover.

Capital structure is the ratio of debt to equity used to fund a company (Olivia & Hirawati, 2021). Capital structure reflects the balance between long-term debt and equity in financing the company (Hamzah, 2021). Companies with high debt levels face a fixed burden of interest payments, so management tends to be more cautious in allocating funds, including for inventory investment.

Sales growth, which has increased significantly, naturally impacts the company's production volume. Increased production also impacts sales volume (Saputra & Ardiles, 2024). Significant sales growth often enables companies to invest more in research and development. This can lead to new innovations, product development, or increased operational efficiency, ultimately boosting profitability.

Research conducted Setiawan et al., (2025) And Rahmiyati et al., (2023), proving that sales growth has a positive effect on profitability. Conversely, Amalia & Fitrius, (2025) And Miranda et al., (2025) found that sales growth had no significant effect on profitability.

Capital structure describes the balance between debt and equity in a company's financing. An optimal capital structure allows a company to maximize value without excessively increasing financial risk. However, excessive use of debt can incur significant interest expenses, potentially depressing profitability (S. N. Sari & Sisdiyanto, 2024). Capital structure is considered important because it serves as the foundation for meeting the needs of all stakeholders. Furthermore, (Fathoni & Syarifudin, 2021) emphasizes that in practice, company management must utilize capital structure as an instrument to minimize financial risk and accelerate increased profitability.

Research result Setiawan et al., (2025), Rahmiyati et al., (2023), Amalia & Fitrius, (2025), as well as Miranda et al., (2025) shows that capital structure has a significant effect on profitability. Satuhu & Djawoto, (2020) also found an influence, but in a negative direction. Meanwhile Sipayung et al., (2023), revealed that there was no influence between capital structure and profitability. A similar finding was also found in the study Sumarni et al., (2023) which states that there is no influence of capital structure on profitability.

From a financial management perspective, the relationship between sales growth, capital structure, and profitability can be explained through signaling theory and trade-off theory. Signaling theory suggests that higher sales growth may serve as a positive signal to investors and other stakeholders because it reflects market acceptance, business expansion, and the firm's ability to generate future earnings. Therefore, companies with increasing sales growth are expected to show better profitability when revenue expansion is supported by effective cost and asset management. In contrast, trade-off theory explains that capital structure decisions involve a balance between the benefits and costs of debt financing. Although debt can support business expansion and provide tax advantages, excessive reliance on debt may increase interest expenses

and financial risk, thereby reducing profitability. In the context of food and beverage companies, these theoretical perspectives are particularly relevant because sales growth reflects demand-side strength, while capital structure reflects financing decisions that may either support or constrain operational performance. Thus, examining sales growth and capital structure together provides a stronger theoretical basis for understanding how market performance and financing policy influence profitability.

Inventory turnover measures the speed at which a company's stock turns over. A high ratio reflects ease of sales and operational efficiency, which support profitability. A low ratio indicates inefficiencies that could potentially lead to losses due to high inventory holding and maintenance costs, thus depressing the company's profitability (Badria & Indriani, 2023). A high inventory turnover rate reflects a company's ability to optimally manage stock over time. This efficiency can reduce various costs and risks associated with inventory storage, while simultaneously driving increased sales volume, which ultimately increases the company's profitability (Dian et al., 2024).

Findings Fatmawati et al., (2023), Novika & Siswanti, (2022) And Viyanis et al., (2023) states that there is an influence of inventory turnover on profitability. Where as Setiawan et al., (2025) states that inventory turnover does not affect profitability. This is in line with Satuhu & Djawoto, (2020) which reported a positive but not significant effect.

Increasing sales growth encourages companies to stock up. When a company records sales growth, it is usually a positive signal about the competitiveness and market acceptance of its products. Rahmiani, (2024) explained that this growth rate is closely related to the company's opportunity to increase profits in the future. However, the relationship between increased sales and increased profitability is not automatic. Other factors determine the extent of the growth's impact on profits.

One factor that plays a role is inventory turnover. As sales increase, goods leave the warehouse more quickly, resulting in a higher inventory turnover cycle. Dian et al., (2024) states that a high inventory turnover reflects a company's efficiency in managing its stock. This efficiency helps reduce various costs arising from prolonged storage of goods, such as warehousing costs, the risk of damage, or depreciation. Ultimately, this optimal management has a direct impact on increasing company profitability. In other words, inventory turnover serves as a bridge that explains how sales growth can translate into higher profits.

Capital structure, as proxied by the Debt to Equity Ratio (DER), has been proven to have an impact on profitability, where a high proportion of debt actually reduces company profits due to increased interest expenses and financial risks R. Sari & Maharani, (2021). However, this influence is not always direct. Capital structure is also thought to impact a company's operational efficiency, particularly in inventory management. Companies with high debt levels have limited financial flexibility, which can hinder their ability to manage inventory optimally and slow inventory turnover.

Inventory turnover is a variable that explains this linking mechanism. Badria & Indriani, (2023) states that high inventory turnover reflects ease of sales and operational efficiency, which support profitability. Conversely, low inventory turnover indicates inefficiency that can potentially lead to losses due to high storage and maintenance costs, thus depressing company profits. Thus, capital structure is suspected to influence profitability through the inventory turnover mechanism. This means that inventory turnover acts as a link between capital structure and profitability.

Although numerous studies have examined the direct relationships between sales growth, capital structure, inventory turnover, and profitability, the mediating role of inventory turnover remains insufficiently explored. Most previous studies tend to position inventory turnover only as an independent variable affecting profitability, rather than as an operational mechanism that may transmit the effects of sales growth and capital structure to profitability. This limitation creates an important research gap, particularly in the food and beverage sector, where inventory management is closely related to product perishability, pricing strategy, demand fluctuation, and supply chain efficiency. Sales growth may increase profitability directly through higher revenue, but it may also influence profitability indirectly by accelerating inventory movement. Similarly, capital structure may affect profitability directly through interest expenses and financial risk, but it may also influence inventory decisions through financing constraints. Therefore, examining inventory turnover as a mediating variable provides a more comprehensive explanation of whether profitability is shaped merely by financial and sales-related factors or also by operational efficiency mechanisms.

III. RESEARCH METHOD

This research was designed with a quantitative approach through path analysis. The goal was to examine the direct and indirect effects of sales growth and capital structure on profitability, using inventory turnover as a mediator. The study subjects were food and beverage companies consistently listed on the Indonesia Stock Exchange from 2020 to 2024. The data used was secondary data sourced from each company's audited annual financial reports. Data collection was conducted using a documentation method, namely by accessing and downloading financial reports from the official IDX website at www.idx.co.id and the official website of each company.

The population in this study was all food and beverage sector issuers listed on the Indonesia Stock Exchange during the observation period. The sampling technique used was purposive sampling, with specific criteria established to obtain a representative sample.

In this study, there are four main variables grouped into three types: independent variables, mediator variables, and dependent variables. An explanation of each variable, along with its measurement formula, is summarized in the table below:

Table 1. Operational Definition and Measurement of Variables

Variables	Definition	Formula
Sales Growth (X1)	Reflects the increase in sales that occurred from year to year	$\text{Sales Growth} = \frac{\text{Sales}_i - \text{Sales}_{i-1}}{\text{Sales}_{i-1}}$
Capital Structure (X2)	Describes the composition of funding between long-term debt and equity	$\text{DER} = \frac{\text{Total Liabilities}}{\text{Total Equity}}$
Inventory Turnover (Z)	Shows the speed of the company in selling and updating its stock of goods	$\text{Inventory Turnover} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$
Profitability (Y)	Measuring the effectiveness of a company in generating profits from the total assets it owns	$\text{ROA} = \frac{\text{Net Income}}{\text{Total Assets}}$

This study used EViews 14 software with a panel data regression approach. The analysis stage began with the Estimation Model Selection Test through the Chow Test, Hausman Test, and Lagrange Multiplier (LM) Test. In all stages of this testing, the researcher has implemented the White Cross-section option to anticipate the presence of heteroscedasticity from the beginning of model selection. The Chow Test is used to select between the Common Effect Model and the Fixed Effect Model. If the Chow Test indicates the Fixed Effect Model is selected, then the

Hausman Test is continued to choose between the Fixed Effect Model and the Random Effect Model. However, if the Chow Test indicates the Common Effect Model is selected, then the Breusch-Pagan LM Test is performed to determine whether the Common Effect Model is better than the Random Effect Model. The estimation model used will be determined based on the results of these three tests.

After selecting the estimation model, the Classical Assumption Test required for linear regression models with panel data is performed. This test includes normality, multicollinearity, heteroscedasticity, and autocorrelation. If the test finds a violation of the classical assumptions, appropriate measures will be taken based on the characteristics of the panel data.

The next step is hypothesis testing. This test is conducted by examining the t-statistic and p-value of each independent variable against the dependent variable. Hypothesis testing was conducted by examining the coefficient direction, t-statistic, and probability value. A hypothesis was accepted when the p-value was less than 0.05 at the 5% significance level and the coefficient direction was consistent with the proposed relationship. Mediation effect testing is performed using the Sobel test. The Sobel test is used to test the significance of indirect effects by utilizing the path coefficient and standard error obtained from the estimation results in EViews. Calculations are performed using the online Sobel test calculator developed by Daniel Soper.

IV. RESULTS AND DISCUSSION

Based on the planned testing stages, the best estimation model was determined using the Chow Test, the Hausman Test, and the Lagrange Multiplier (LM) Test. The Chow Test was used to select between the Common Effect Model (CEM) and the Fixed Effect Model (FEM).

Table 2. Chow Test Results Line 1 and Line 2

Effects Test	Statistics	df	Prob.
Chow Test Results Line 1			
Cross-section F	41.948075	(15, 62)	0.0000
Cross-section Chi-square	192.906031	15	0.0000
Chow Test Results Line 2			
Cross-section F	5.639359	(15, 61)	0.0000
Cross-section Chi-square	69.593856	15	0.0000

Table 2 presents the results of the Chow test, which shows a significant difference between the fixed effects regression model and the regression model without fixed effects. In the Cross-section F test, the statistic value is 41.948075 with degrees of freedom (df) of (15, 62) and a probability (Prob.) of 0.0000, indicating that the fixed effects model is better than the model without fixed effects, as the probability value is very small (less than 0.05). Additionally, the Cross-section Chi-square test gives a statistic value of 192.906031 with 15 df and a probability of 0.0000, which also indicates a significant difference between the two models. In the next test, the Cross-section F value is 5.639359 with degrees of freedom (15, 61) and a probability of 0.0000, once again showing that the fixed effects model is more appropriate than the model without fixed effects. The Cross-section Chi-square test yields a statistic value of 69.593856 with 15 df and a probability of 0.0000, further indicating a significant difference between the two models. Overall, the Chow test shows that the fixed effects model is more suitable for the analyzed data.

Based on the Chow test results in Table 3, the cross-section F probability value is $0.0000 < 0.05$, thus rejecting the null hypothesis. This indicates that the Fixed Effect Model (FEM) is more appropriate than the Common Effect Model. Model selection is continued with the Hausman Test to choose between the Fixed Effect Model (FEM) and the Random Effect Model (REM).

Table 3. Hausman Test Results Line 1 and Line 2

Test Summary	Chi-Sq. Statistic	Chi-Sq. df	Prob.
Line 1 (Random cross-section)	0.734296	2	0.6927
Line 2 (Random cross-section)	4.512758	3	0.2112

Table 3 presents the results of the Hausman test for two different rows, specifically for Random cross-section. In the first row, the Chi-Square statistic is 0.734296 with 2 degrees of freedom (df) and a probability value (Prob.) of 0.6927, which is greater than 0.05. This indicates that there is no significant difference between the fixed effects model and the random effects model, so the random effects model can be accepted. In the second row, the Chi-Square statistic is 4.512758 with 3 degrees of freedom and a probability value of 0.2112, which is also greater than 0.05. Therefore, it can be concluded that both test results show no strong reason to reject the random effects model, meaning this model is more appropriate to use than the fixed effects model.

The test results in Table 4 show a random cross-section probability value of $0.6927 > 0.05$, thus accepting the null hypothesis. This means that the Random Effects Model (REM) is more appropriate than the FEM. To confirm whether the REM is superior to the CEM, the Breusch-Pagan Lagrange Multiplier (LM) test was performed.

Table 4. LM Test Results Line 1 and Line 2

Method	Cross-section	Time	Both
Breusch-Pagan (Line 1)	1.099867	1.589074	1.115758
	0.0000	0.2075	0.0000
Breusch-Pagan (Line 2)	2.983163	1.275472	3.110710
	(0.0000)	(0.2587)	(0.0000)

Table 4 presents the results of the LM (Lagrange Multiplier) test using the Breusch-Pagan method for three types of tests: Cross-section, Time, and Both. In the first row, for the Cross-section test, the Breusch-Pagan statistic is 1.099867 with a probability value of 0.0000, indicating a significant relationship between the variables tested in the cross-section dimension. The Time test yields a statistic of 1.589074 with a probability of 0.2075, which is greater than 0.05, suggesting no significant relationship in the time dimension. Meanwhile, for the Both test, the Breusch-Pagan statistic is 1.115758 with a probability value of 0.0000, indicating a significant relationship between the variables in both dimensions (cross-section and time). In the second row, for the Cross-section test, the Breusch-Pagan statistic is 2.983163 with a probability value of 0.0000, also indicating a significant relationship. The Time test in the second row has a statistic of 1.275472 with a probability of 0.2587, which is greater than 0.05, suggesting no significant relationship in the time dimension. Meanwhile, the Both test results in a statistic of 31.10710 with a probability value of 0.0000, indicating a significant relationship between the variables in both dimensions.

After selecting the estimation model, classical assumption testing was performed to ensure that the model met the Best Linear Unbiased Estimator (BLUE) criteria. Since both paths used a Random Effects Model (REM) with the Estimated Generalized Least Squares (EGLS) estimation method, the assumptions of homoscedasticity and non-autocorrelation were automatically met through the White Period Standard Errors correction. Therefore, classical assumption testing focused on residual normality and multicollinearity tests.

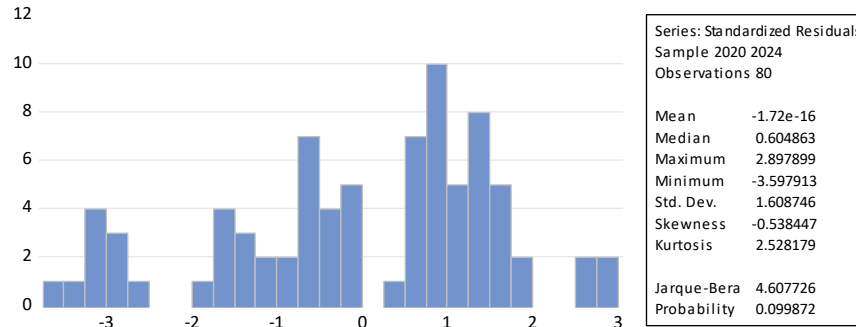


Figure 1. Path 1 Normality Test Results

Based on the test results presented in Figure 1, the probability value obtained was 0.099872. This value is greater than the significance level of 0.05. Therefore, the residuals in the Path 1 model can be concluded to be normally distributed.

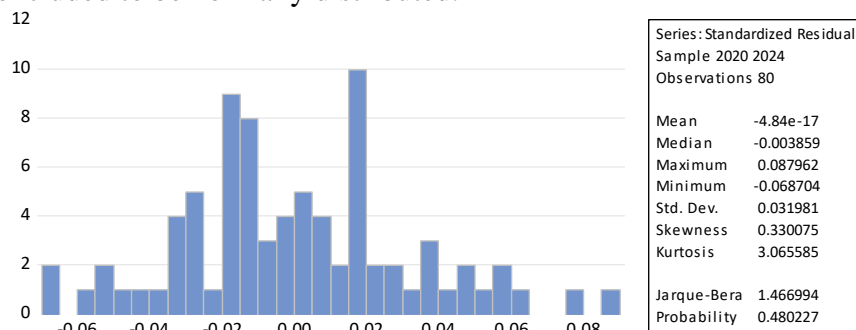


Figure 2. Results of Path 2 Normality Test

Based on the test results presented in Figure 2, the probability value obtained was 0.480227. This value is greater than the significance level of 0.05. Therefore, the residuals in the Path 2 model can be concluded to be normally distributed.

Table 5. Multicollinearity Test Results for Path 1 and Path 2

Path	Variables	r	VIF
Path 1	SG	0.276673	1.082
	DER	0.276673	1.082
Path 2	SG	0.383296	1.172
	DER	0.548182	1.429
	IT	0.548182	1.429

The test results in Table 5 for Paths 1 and 2 show that all variables have VIF values below 10. The correlation coefficients among the variables are also relatively low. Therefore, it can be concluded that the model is free from multicollinearity problems.

The hypothesis testing was conducted using the Random Effect Model (REM). In addition, the Sobel test was applied to examine the mediation effect. The results of these tests are presented in Table 6 below.

Table 6. Hypothesis Test Results

Relationship between variables	Coefficient	Std. Error	t-Statistic	Prob.	Information
Sales growth -> Inventory Turnover	1,5000	0.5008	2.2947	0.0365	Significant
Capital Structure -> Inventory Turnover	1.4525	0.7576	1.9173	0.0600	Not Significant
Sales growth -> Profitability	0.0967	0.0218	4.4400	0.0005	Significant
Capital Structure -> Profitability	-0.0422	0.0131	-3.2261	0.0057	Significant
Inventory Turnover -> Profitability	-0.0077	0.0032	-2.3954	0.0301	Significant
Sales growth -> Inventory Turnover -> Profitability	-0.0115	-	-1.6534	0.0982	Not Significant

Capital Structure -> Inventory Turnover	-0.0111	-	-1.9104	0.0561	Not Significant
-> Profitability					

Based on Table 6, hypothesis testing was conducted using the critical t-table value of 1.96 at $\alpha = 5\%$. The results show that seven hypotheses were proposed in this study. Of these seven hypotheses, four were accepted and three were rejected.

Sales growth is proven to have a positive and significant effect on inventory turnover (coefficient = 1.5000; $t = 2.2947$; $p = 0.0365$) and profitability (coefficient = 0.0967; $t = 4.4400$; $p = 0.0005$), so that H1 and H2 are accepted. Capital structure has a negative and significant effect on profitability (coefficient = -0.0422; $t = -3.2261$; $p = 0.0057$), but it does not have a significant effect on inventory turnover because the p-value is 0.0600, which is greater than 0.05, and the t-statistic of 1.9173 is lower than the critical value of 1.96. Therefore, H3 is rejected and H4 is accepted. Inventory turnover has a negative and significant effect on profitability (coefficient = -0.0077; $t = -2.3954$; $p = 0.0301$), so that H5 is accepted.

Meanwhile, the mediation test shows that inventory turnover does not mediate the effect of sales growth on profitability ($t = -1.6534$; $p = 0.0982$) nor the effect of capital structure on profitability ($t = -1.9104$; $p = 0.0561$), because the t-value is < 1.96 and p-value is > 0.05 . Thus, H6 and H7 are rejected. The research results show that sales growth has a positive and significant effect on inventory turnover. This means that increased sales accelerate inventory turnover due to high market demand.

This finding aligns with Maulana et al., (2023), who stated that sales growth reflects high market demand, which directly accelerates the frequency of inventory exits from the warehouse. Thus, this study fills a gap in the literature, which has primarily examined the effect of both variables on profitability separately, while also strengthening the theoretical argument that increased sales accelerate inventory turnover. Based on the analysis, capital structure was shown to have no significant effect on inventory turnover. This means that the proportion of debt in a company's financing does not directly impact inventory turnover. Theoretically, debt pressure should encourage companies to be more efficient in managing assets, including inventory. Olivia & Hirawati, (2021), state that capital structure is related to a company's financing policy. Meanwhile, Hamzah, (2021) explains that the balance between debt and equity can influence a company's asset management. However, in practice, inventory efficiency is more influenced by strategic factors such as supply chain management and market demand, rather than solely by financing decisions.

This study provides empirical evidence that financing decisions do not always impact inventory management efficiency, complementing the literature that has so far focused more on the direct influence of capital structure on profitability. Test results demonstrate that sales growth has a positive and significant impact on profitability. A positive coefficient indicates that increased sales will be followed by increased company profits. This finding aligns with basic business logic: greater sales volume leads to increased revenue and has the potential to boost profitability as long as costs are controlled.

The results of this study align with the findings of Setiawan et al., (2025) and Rahmiyati et al., (2023), which demonstrated that sales growth positively impacts profitability. This consistent finding indicates that increased sales directly contribute to company profits, particularly when revenue growth is supported by effective cost control and efficient asset utilization. On the other hand, some studies have yielded conflicting findings. Amalia & Fitrius, (2025) and Miranda et al., (2025) found that sales growth had no significant effect on profitability. This discrepancy in results may be due to differences in industry characteristics, observation periods, or economic conditions that influence the relationship between sales and profits. Nevertheless, the findings in

these studies strengthen the argument that sales growth remains a crucial factor in driving increased profitability.

The research results show that capital structure has a negative and significant effect on profitability. This means that a higher proportion of debt in a company's financing actually reduces profits. This finding aligns with the trade-off theory, which states that interest expenses from debt can depress net income. S. N. Sari & Sisdianto, (2024) stated that excessive debt risks depressing profits due to interest expenses. Fathoni & Syarifudin, (2021) also emphasized the importance of capital structure management to minimize risk and increase profitability.

These results align with those of Setiawan et al., (2025) , Rahmiyati et al., (2023), Amalia & Fitrius, (2025), Miranda et al., (2025) , and Satuhu & Djawoto, (2020), who found a significant effect of capital structure on profitability. However, Sipayung et al., (2023) and Sumarni et al., (2023) reported no effect on capital structure. This difference suggests that the influence of capital structure is contextual, depending on company and industry characteristics. The study found that inventory turnover has a negative and significant effect on profitability. This means that faster inventory turnover tends to decrease profitability. This finding contradicts the common logic that states that fast inventory turnover indicates efficiency and should increase profits. In the context of the food and beverage industry, excessively fast inventory turnover can be caused by discount strategies or price reductions to accelerate sales, which ultimately reduce profit margins.

Theoretically, inventory turnover measures the speed at which a company's stock turns over. Badria & Indriani, (2023) state that a high ratio reflects operational efficiency that supports profitability, while a low ratio indicates inefficiency that could potentially lead to losses. Dian et al., (2024) also emphasize that a high inventory turnover can reduce storage costs and drive increased sales volume, leading to higher profits.

The results of this study are inconsistent with the findings of Fatmawati et al. (2023), Novika & Siswanti, (2022), and Viyanis et al., (2023), which stated that inventory turnover had an effect on profitability. However, Setiawan et al., (2025) found that inventory turnover had no effect on profitability, while Satuhu & Djawoto, (2020) reported a positive but insignificant effect. These differences in results indicate that the effect of inventory turnover on profitability can vary depending on industry characteristics and company strategy. The results of the mediation test indicate that inventory turnover does not mediate the effect of capital structure on profitability. This means that capital structure directly influences profitability without going through inventory turnover.

Theoretically, a high capital structure should encourage companies to be more efficient in managing inventory, thereby quickly returning funds to meet debt obligations. However, in this study, inventory efficiency did not prove to be a connecting link. This indicates that debt pressure has a more direct impact on profits through interest expense, while inventory management operates as an independent factor. Inventory turnover is more determined by pricing strategy and supply chain management than financing decisions. Thus, these findings confirm that the effect of capital structure on profitability is direct, and inventory turnover does not act as a mediator in this relationship. The results of the mediation test indicate that inventory turnover does not act as a mediator in the relationship between capital structure and profitability. In other words, capital structure affects profitability directly, not through the mechanism of inventory management efficiency.

Theoretical logic dictates that companies with high debt should be more aggressive in turning over inventory to quickly recover funds to pay off obligations. However, this study's findings do

not support this logic. Financial pressure from debt appears to have a more direct impact on profits through interest expenses, while inventory decisions operate independently of the financing structure. The determinants of inventory turnover are largely determined by operational factors such as pricing strategy, supply chain management, and consumer demand patterns. A company's financing decisions are not sufficiently powerful to influence inventory management efficiency to impact profitability.

V. CONCLUSION

This study concludes that sales growth and capital structure have direct effects on profitability, while inventory turnover does not function as a mediating variable in food and beverage companies listed on the Indonesia Stock Exchange during the 2020–2024 period. Sales growth has a positive and significant effect on profitability, indicating that revenue expansion remains an important driver of firm performance. However, the effect of sales growth on profitability occurs directly rather than through inventory turnover. Capital structure has a negative and significant effect on profitability, suggesting that excessive reliance on debt may reduce firm performance through higher interest expenses and financial risk. Meanwhile, inventory turnover has a negative effect on profitability and does not mediate the relationship between sales growth and profitability or between capital structure and profitability. These findings indicate that profitability in the food and beverage sector is shaped more directly by sales expansion and financing structure than by inventory turnover as an intervening mechanism.

From a managerial perspective, companies should strengthen profitability through three strategic priorities. First, management needs to control the Debt-to-Equity Ratio by maintaining an optimal balance between debt and equity financing. Debt should be used selectively for productive investment, not merely to cover short-term operational pressures, because excessive leverage can increase financial costs and reduce net income. Second, firms should pursue sales growth without sacrificing profit margins. Sales expansion should not rely excessively on price discounts, aggressive promotions, or low-margin strategies, because higher sales volume does not automatically improve profitability when cost control and pricing discipline are weak. Third, inventory turnover should be managed based on efficiency and margin protection, not only speed. Faster inventory movement must be supported by accurate demand forecasting, efficient procurement, appropriate stock levels, and pricing strategies that preserve margins, especially because food and beverage products are vulnerable to perishability, storage costs, and market price fluctuations.

The practical implication of this study is that financial managers should integrate financing decisions, sales strategy, and inventory policy into a unified profitability management framework. Companies with high sales growth need to ensure that revenue expansion is accompanied by cost efficiency and margin control. Companies with high DER should evaluate whether debt financing truly contributes to productive asset utilization and sustainable earnings. At the same time, inventory turnover should be interpreted carefully: high turnover may indicate operational efficiency, but it may also reflect discount-driven sales or margin compression. Therefore, managers should not use inventory turnover as a standalone performance indicator, but should assess it together with gross margin, operating margin, sales growth, and leverage ratios.

This study is limited to food and beverage companies listed on the Indonesia Stock Exchange during the 2020–2024 period and only examines sales growth, capital structure, and inventory turnover as determinants of profitability. Future research should expand the sample to other

sectors, extend the observation period, and include additional variables such as firm size, liquidity, operating costs, inflation, supply chain disruption, and market competition. Further studies may also examine whether inventory turnover plays a stronger role as a moderator rather than a mediator, especially in industries with different inventory characteristics and pricing structures.

VI. ACKNOWLEDGMENTS

The authors would like to express their sincere gratitude to the Faculty of Economics and Business, La Tansa Mashiro University, for the academic support and research environment provided during the preparation of this study. The authors also extend their appreciation to the Indonesia Stock Exchange and the respective food and beverage companies for providing publicly accessible annual financial reports, which served as the secondary data source for this research. Appreciation is also addressed to colleagues, reviewers, and all parties who provided constructive feedback and valuable insights that contributed to the improvement of this manuscript. Any remaining errors or limitations are solely the responsibility of the authors.

VII. SUPPORTING INFORMATION

Additional supporting information for this study is provided in the [Appendix](#). The supplementary materials are intended to strengthen the transparency, traceability, and reproducibility of the research process. These materials serve as complementary documentation and do not alter the main findings, interpretations, or conclusions presented in this article. All data used in this study were obtained from publicly available secondary sources, particularly the audited annual financial reports of food and beverage companies listed on the Indonesia Stock Exchange during the 2020–2024 period. No confidential company data or primary data involving human participants were used in this research. Further information may be made available by the corresponding author upon reasonable request and in accordance with academic publication ethics.

REFERENCES

- Amalia, Y., & Fitrioso, R. (2025). Pengaruh Struktur Modal dan Pertumbuhan Penjualan Terhadap Profitabilitas Pada Perusahaan Otomotif & Komponen Yang Terdaftar di Bursa Efek Indonesia Tahun 2019-2023. *Business UHO: Jurnal Administrasi Bisnis*, 10(1), 112–122.
- Badria, N., & Indriani, P. (2023). Pengaruh Perputaran Kas, Piutang, Persediaan, Dan Pertumbuhan Penjualan Terhadap Profitabilitas. *Jurnal Ecoment Global*, 8(1), 10–20. <https://doi.org/10.35908/jeg.v8i1.2340>
- Dian, I. M., Amiruddin Tawe, Nurman, N., Hety, B., & Aslam, A. P. (2024). Pengaruh Perputaran Kas, Perputaran Piutang dan Perputaran Persediaan Terhadap Profitabilitas. *Jurnal Penelitian Ekonomi Manajemen Dan Bisnis*, 3(4), 233–251. <https://doi.org/10.55606/jekombis.v3i4.4379>
- Dzakiroh, A., Roza, S., & Sriyanti, E. (2022). Pengaruh Perputaran Modal Kerja Dan Perputaran Persediaan Terhadap Profitabilitas Pada Perusahaan Plastik Dan Kemasan Periode 2018-2021 Yang Terdaftar Di Bursa Efek Indonesia (Bei). *Jurnal Publikasi Sistem Informasi Dan Manajemen Bisnis*, 2(1), 92–101. <https://doi.org/10.55606/jupsim.v2i1.796>
- Fathoni, R., & Syarifudin, S. (2021). Pengaruh Struktur Modal Terhadap Profitabilitas dengan Ukuran Perusahaan Sebagai Variabel Moderasi (Studi pada Perusahaan dalam Indeks JII

- Periode 2017-2019). *Jurnal Ilmiah Ekonomi Islam*, 7(03), 1347–1356. <https://doi.org/10.29040/jiei.v7i3.2761>
- Fatmawati, E., Yana, A. N., & Bebasari, N. (2023). Pengaruh Perputaran Kas, Perputaran Piutang Dan Perputaran Persediaan Terhadap Profitabilitas. *Margin: Jurnal Lentera Manajemen Keuangan*, 1(01), 18–25. <https://doi.org/10.59422/margin.v1i01.29>
- Hamzah, E. I. (2021). Pengaruh Ukuran Perusahaan, Struktur Aktiva Dan Profitabilitas Terhadap Struktur Modal (Studi Kasus Pada Perusahaan Manufaktur yang Terdaftar Di Bursa Efek Indonesia). In *Jurnal Ilmu Ekonomi dan Bisnis Islam-JIEBI* (Vol. 3, Number 1).
- Hendra, J., Nurisa, N., Sari, S. F., & Nirwani, S. (2025). Analisis Rasio Keuangan Untuk Menilai Kinerja Keuangan Perusahaan Telekomunikasi di Indonesia. *GEMILANG: Jurnal Manajemen Dan Akuntansi*, 5(2), 294–303. <https://doi.org/10.56910/gemilang.v5i2.2060>
- Hutabarat, M. I. (2022). Pengaruh Likuiditas, Pertumbuhan Penjualan Dan Ukuran Perusahaan Terhadap Profitabilitas. *AKUA: Jurnal Akuntansi Dan Keuangan*, 1(3), 233–241. <https://doi.org/10.54259/akua.v1i3.813>
- Maulana, Y., Wijayanti, T., & Arraniri, I. (2023). Pengaruh Struktur Modal, Perputaran Modal Kerja, Dan Pertumbuhan Penjualan Terhadap Nilai Perusahaan. *Jurnal Riset Keuangan Dan Akuntansi*, 9(2). <https://doi.org/10.25134/jrka.v9i2.9872>
- Miranda, L., Yamasitha, Y., & Muhammad Pondrial. (2025). Pengaruh Keputusan Investasi, Pertumbuhan Penjualan Dan Struktur Modal Terhadap Nilai Perusahaan Dengan Profitabilitas Sebagai Variabel Intervening Pada Perusahaan Manufaktur Sub Sektor Food And Beverages Yang Terdaftar Di Bursa Efek Indonesia Periode 2019 – 2023. *Jurnal Akuntansi, Keuangan, Perpajakan Dan Tata Kelola Perusahaan*, 2(3), 669–690. <https://doi.org/10.70248/jakpt.v2i3.2034>
- Novika, W., & Siswanti, T. (2022). Pengaruh Perputaran Kas, Perputaran Piutang Dan Perputaran Persediaan Terhadap Profitabilitas Pada Perusahaan Manufaktur – Subsektor Makanan Dan Minuman Yang Terdaftar Di Bei Periode Tahun 2017-2019. *JIMA : Jurnal Ilmiah Mahasiswa Akuntansi*, 2(1), 43–56. <https://jom.unsurya.ac.id/index.php/jima/article/view/147>
- Nurkhasanah, D., & Ichsanuddin Nur, D. (2022). Analisis Struktur Modal Pada Perusahaan Food And Beverage Yang Terdaftar Di Bursa Efek Indonesia. *Derivatif: Jurnal Manajemen*, 16(1).
- Olivia, H., & Hirawati, H. (2021). Pengaruh Struktur Aktiva dan Profitabilitas Terhadap Struktur Modal (Penelitian Pada PT. Unilever Indonesia, Tbk). *Business Management Analysis Journal (BMAJ)*, 4(2), 40–53. <https://doi.org/10.24176/bmaj.v4i2.6425>
- Rahmaniar, R. (2024). Perputaran Persediaan dan Pertumbuhan Penjualan: Pengaruh terhadap Profitabilitas. *HEI EMA : Jurnal Riset Hukum, Ekonomi Islam, Ekonomi, Manajemen Dan Akuntansi*, 3(2), 83–94. <https://doi.org/10.61393/heiema.v3i2.243>
- Rahmiyati, N., Mulatsih, L. S., Alfiana, A., Afriyeni, P., & Wibowo, T. S. (2023). The Effect of Firm Size and Sales Growth on Profitability Mediated by Capital Structure. *Kontigensi : Jurnal Ilmiah Manajemen*, 11(1), 105–114. <https://doi.org/10.56457/jimk.v11i1.328>
- Riasning, N. P., Pongga Wikantha, N., & Seri Ekayani, N. N. (2023). Pengaruh Perputaran Kas, Perputaran Piutang, Perputaran Persediaan, Perputaran Modal Kerja Dan Likuiditas Terhadap Profitabilitas. *Jurnal Riset Akuntansi Warmadewa*, 4(2), 37–42. <https://doi.org/10.22225/jraw.4.2.8472.37-42>

- Rivandi, M., & Petra, B. A. (2022). Pengaruh Ukuran Perusahaan, Leverage, Dan Profitabilitas Terhadap Nilai Perusahaan Pada Perusahaan Sub Sektor Makanan Dan Minuman. *Jurnal Inovasi Penelitian*, 2(8).
- Saputra, D., & Ardiles, A. (2024). Pengaruh Leverage, Ukuran Perusahaan, Pertumbuhan Penjualan Dan Aktivitas Terhadap Profitabilitas Perusahaan Sub Sektor Property Dan Real Estate Yang Terdaftar Di Bursa Efek Indonesia. *Jurnal GeoEkonomi*, 15(1.2024), 71–80. <https://doi.org/10.36277/geoekonomi.v15i1.2024.434>
- Sari, R., & Maharani, Y. (2021). Analisis CSR Dan Hubungannya Dengan Propitabilitas Masa Covid-19 Pada Perusahaan Konsumsi. *Islamic Banking: Jurnal Pemikiran Dan Pengembangan Perbankan Syariah*, 7(1), 67–76. <https://doi.org/10.36908/isbank.v7i1.269>
- Sari, S. N., & Sisdianto, E. (2024). Analisis Pengaruh Likuiditas Dan Struktur Modal Terhadap Profitabilitas Perusahaan. *JURNAL MEDIA AKADEMIK (JMA)*, 2(12), 3031–5220. <https://doi.org/https://doi.org/10.62281/v2i12.1094>
- Satuhu, T. A., & Djawoto. (2020). Pengaruh Struktur Modal, Perputaran Kas, Dan Perputaran Persediaan Terhadap Profitabilitas Pada Perusahaan Food And Beverage di BEI. *Jurnal Ilmu Dan Riset Manajemen*, 9(1), 1–14. <https://jurnalmahasiswa.stiesia.ac.id/index.php/jirm/article/view/2931>
- Setiawan, B., Zaretta, B., Yovita, L., & Setyahuni, S. W. (2025). Enhancing Profitability in Retail Companies: An Analysis of Turnover, Sales Growth, and Capital Structure. *Finance: International Journal of Management Finance*, 2(3), 59–73. <https://doi.org/10.62017/finance.v2i3.72>
- Sipayung, T., Zulfikar, M. K., & Tarigan, W. J. (2023). Pengaruh Likuiditas Dan Struktur Modal Terhadap Profitabilitas Perusahaan (Studi Kasus Perusahaan Pabrik Semen Yang Terdaftar Di Bursa Efek Indonesia Periode 2018 - 2022). *Jurnal Ilmiah Accusi*, 5(2), 146–155. <https://doi.org/10.36985/jia.v5i2.813>
- Sumarni, R., Gustina, I., & Nurfitriani. (2023). Pengaruh Likuiditas Dan Struktur Modal Terhadap Profitabilitas Pada Perusahaan Perbankan Yang Terdaftar di Bursa Efek Indonesia Periode 2019-2021. *Jurnal Akuntansi Dan Keuangan*, 12(1), 42–48. <https://doi.org/10.32520/jak.v12i1.2742>
- Viyanis, D. S., Nurjanah, A. O. T., Fahira, K., Nada, A. S., & Yulaeli, T. (2023). Faktor-faktor yang mempengaruhi Profitabilitas Perusahaan: Perputaran Modal Kerja, Perputaran Kas, Perputaran Persediaan, Perputaran Aset Tetap dan Perputaran Piutang. *Jurnal Riset Ekonomi Dan Akuntansi*, 1(3), 124–143. <https://doi.org/10.54066/jrea-itb.v1i3.632>
- Yulimtinan, Z., & Atiningsih, S. (2021). Leverage Ukuran Perusahaan Pertumbuhan Penjualan Terhadap Nilai Perusahaan Dengan Profitabilitas Sebagai Variabel Mediasi. *BALANCE: JURNAL AKUNTANSI DAN BISNIS*, 6(1), 69. <https://doi.org/10.32502/jab.v6i1.3422>

DISCLAIMER/PUBLISHER'S NOTE

The statements, opinions, and data contained in each publication are solely the responsibility of the respective authors and/or contributors. These statements do not represent the official views of the Rubinstein Journal or its editors. The Rubinstein Journal and/or its editors are not responsible for any loss, injury, or property damage that may arise from the use of any ideas, methods, instructions, products, or other information referred to in the published content. In accordance with the principles of academic responsibility and publication ethics, the author declares that the article submitted to the Rubinstein Journal has fulfilled the requirements of the [Statement of Originality](#).