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The Impact of Sales, Production Costs, and Operating Costs on PT Mayora Indah Tbk Net Income for 2016-2024

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ABSTRACT

His study aims to analyze the effect of production costs, operating costs, and sales on net income at PT Mayora Indah Tbk during the 2016–2024 period. The research employed a quantitative approach with secondary data obtained from the company's annual financial statements. Data were analyzed using multiple linear regression, t-test, F-test, and the coefficient of determination (R^2). The results indicate that, partially, sales, production costs, and operating costs do not have a significant effect on net income. The F-test also shows that, simultaneously, the three independent variables do not significantly affect net income. The Adjusted R^2 value of -0.039 suggests that the model used is not sufficient to explain the variation in net income, while the R^2 value of 0.307 indicates that the variables explain only 30.7% of the variation in net income, with the remaining 69.3% influenced by other factors outside the model, such as exchange rate fluctuations, raw material prices, interest expenses, and global economic conditions. These findings confirm that PT Mayora's profitability is not solely determined by production costs, operating costs, and sales, but is also largely influenced by external factors.

Keyword : Cost of Goods Sold/COGS, Operating Expenses/OpEx, Sales/Revenu), Net Profit/Net Income.

INTRODUCTION

The growth of the food and beverage industry in Indonesia has shown a significant upward trajectory over recent decades, driven by increasing domestic consumption and export demands. PT Mayora Indah Tbk, as a key player in this sector, plays a strategic role in ensuring its profitability sustainability through cost management of production, operational expenses, and sales volume. Theoretically, reductions in production and operational costs alongside increased sales volume are believed to enhance the company's net profit, supported by prior literature indicating a positive relationship between these variables and corporate profitability .

However, previous studies have demonstrated that the influence of production costs, operational expenses, and sales on net profit is not always consistent, often depending on market conditions and external factors affecting company performance. For example, Rostiati and Ferliyati (2019) found that sales positively impacted net profit, while Silvia (2020) emphasized the importance of efficient cost management in the context of high sales volume. Conversely, research by Oktapia et al. (2017, 2021) suggests a significant influence

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of cost management on net profit but mainly within stable market conditions and limited timeframes.

The primary limitation of these prior studies is their limited focus on external factors such as global economic conditions, exchange rate fluctuations, raw material prices (particularly imports), and the dynamics of international markets, all of which increasingly influence the financial performance of companies today. Additionally, most studies tend to analyze the relationships partially without considering the combined effects of internal variables within the context of a highly external-influenced industry such as food and beverages.

This research gap lies in the absence of comprehensive empirical analysis that assesses the simultaneous effect of internal variables (production costs, operational expenses, and sales volume) on PT Mayora Indah Tbk's net profit over an extended period (2016–2024), while also incorporating external factors as moderating or contextual variables. Therefore, there is a pressing need to deepen our understanding of the key determinants influencing profitability, especially amid an increasingly volatile and uncertain global economic environment.

Consequently, this study aims to analyze the impact of production costs, operational expenses, and sales volume on the net profit of PT Mayora Indah Tbk during the period 2016–2024, employing a quantitative approach using multiple linear regression. The findings are expected to contribute to the theory development of profitability determinants by considering both internal and external factors simultaneously, and to provide strategic insights for management to optimize cost control and sales strategies to sustain profitability amidst global economic instability.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

The determinants of a company's profitability have been widely studied within the field of financial management. Previous research consistently emphasizes the role of operational efficiency, cost management, and sales performance as key internal factors influencing net profit.

Cost of Production (COGS): Several studies indicate that production costs directly impact profit margins (Bustami et al., 2013). Lowering production costs through efficiency improvements typically leads to higher net income, assuming sales volume remains constant or increases. However, the effect is contingent upon external factors such as raw material prices and exchange rates (Diana et al., 2020).

Operational Expenses (OpEx): Operational expenses, including marketing, distribution, and administrative costs, are crucial in shaping profitability. While high operational costs may reduce net profit, strategic investment in marketing and distribution can foster long-term growth (Silvia, 2020). Yet, some recent studies suggest that high operational expenses do not always negatively affect profit, particularly when associated with market expansion strategies (Rostiati & Ferliyati, 2019).

Sales (Revenues): Sales volume and revenue generation are fundamental for profitability. Increased sales can offset higher costs, leading to improved net profit, especially when sales growth results from effective promotion and market expansion (Rahmawati & Kokasih, 2020). Nevertheless, sales alone are not sufficient if accompanied by high costs, highlighting the importance of analyzing cost efficiency.

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Most prior studies have shown mixed results regarding the significance of these internal variables, particularly under external market conditions. For example, during global economic disruptions such as the COVID-19 pandemic, external factors like fluctuating exchange rates, raw material prices, and logistics issues significantly influence profitability (Diana et al., 2020; T9).

HYPOTHESIS DEVELOPMENT

Based on the literature review, the following hypotheses are proposed:
H1: There is a significant negative relationship between production costs and net profit. Rationale: Higher production costs are expected to diminish profitability unless offset by increased sales or efficiency gains.
H2: Operational expenses are negatively related to net profit. Rationale: Elevated operational costs reduce net income unless aligned with strategic investments that generate long-term gains.
H3: There is a positive relationship between sales volume and net profit. Rationale: Increased sales generally enhance profitability, assuming costs are controlled effectively.
H4: The combined effect of production costs, operational expenses, and sales significantly influences net profit. Rationale: A multiple regression model incorporating these variables can better explain profit variability than individual factors alone.

METHODS

This study uses a quantitative approach with secondary data obtained from the annual financial reports of PT Mayora Tbk for the period from 2016 to 2024. The research object is the effect of production costs, operational costs, and sales on the company's net profit over these nine years. The research population includes all available financial reports for the years 2016 to 2024, and sample determination was carried out using purposive sampling by considering complete and transparent data from PT Mayora's financial reports during this period. Using this approach, nine annual financial reports were obtained, resulting in a total of nine financial report data analyzed. The variables analyzed include net profit (Y) as the dependent variable, as well as production costs (X1), operational costs (X2), and sales (X3) as independent variables, which were taken from the income statement and financial notes. Data were collected through an analysis of the figures listed in the financial statements, including production and operational costs as well as total sales. Data analysis was conducted using multiple linear regression methods to measure the simultaneous and partial effects of these variables on net profit. Before performing regression, classical assumption tests such as normality, multicollinearity, and heteroscedasticity tests were carried out to ensure the data met the requirements for variable analysis. After that, hypothesis testing was conducted using the t-test to determine the partial influence of each variable, as well as the F-test to observe the significant effect of the variables. The coefficient of determination (R^2) was also calculated to assess the extent to which variations in net profit can be explained by the three variables.

RESULTS

Multiple linear regression

The multiple linear regression analysis was employed in this study to determine the influence of independent variables on the dependent variable. The results, presented in Table 1, can be summarized as follows:

Table 1. Results of Multiple Linear Regression Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	,928	1,074		,864	,421
Sales	,014	,206	,147	,068	,948
Production Costs	,013	,266	,099	,048	,963
Operating Expenses	,194	1,005	,312	,193	,854

Source: Processed Secondary Data, 2025

The regression equation obtained is:

Y= 0,928+0,014X1+0,013X2+0,194X3+e

where:

- Y is Net Income
- X1 is Sales
- X3 Production Costs
- X4 Operating Expenses

Partial Effect of Variables:

- The coefficient for Production Costs (0.013) indicates that a one-unit increase in production costs results in an increase of 0.013 units in net income.
- The coefficient for Operating Expenses (0.194) suggests that a one-unit increase in operating expenses increases net income by 0.194 units.
- The coefficient for Sales (0.014) shows that a one-unit increase in sales leads to an increase of 0.014 units in net income.

Hypothesis Testing Partial

Significance Test (t-test)

The t-test is used to determine the extent of the influence of one independent variable in explaining the dependent variable partially. The results of the t-test in this study are as follows:

Table 2. Results of Partial Significance Test (t-test)

Model	Unstandardized Coefficients	Standardized	t	Sig.

			Coefficients		
	B	Std. Error	Beta		
(Constant)	,928	1,074		,864	,421
Sales	,014	,206	,147	,068	,948
Production Costs	,013	,266	,099	,048	,963
Operating Expenses	,194	1,005	,312	,193	,854

Source: Processed Secondary Data, 2025

Based on the results of the table above, it can be seen that the t-test values for each variable are as follows:
1. The probability value of sales (X1) is 0.948 > 0.05 with a t-value of 0.068 < t-table 1.99394, so Ho is accepted, H1 is rejected. This means there is no partial effect of sales (X1) on net profit (Y).
2. The probability value of production costs (X2) is 0.963 > 0.05 with a t-value of 0.048 < t-table 1.99394, so Ho is accepted, H2 is rejected. This means there is no partial effect of production costs (X2) on net profit (Y).
3. The probability value of operational costs (X3) is 0.0854 > 0.05 with a t-value of 0.193 < t-table 1.99394, so Ho is accepted, H3 is rejected. This means there is no partial effect of operational costs (X3) on net profit (Y).

F TEST

The F test is used to determine whether the independent variables together have a significant effect on the dependent variable. The results of the F test in this study are as follows:

Table 3. F-Test Results

Source: Processed Secondary Data, 2025

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1,083	3	,361	,887	,500[b]
	Residual	2,443	6	,407		
	Total	3,527	9			

a. Dependent Variable: Net Income

b. Predictors: (Constant), Sales, Production Costs, Operating expenses

Based on the F-test in the table above, it can be seen that the probability value of 0.500 > 0.05 with an F-calculated value of 0.887 < F-table 3.13 (df1 = 3 and df2 = 6), so Ho is accepted and H4 is rejected. This result indicates that the variables of production cost, operational cost, and sales together do not have a significant effect on the net profit of PT Mayora Indah Tbk for the period 2016–2024. In other words, the regression model used is not yet able to explain the relationship between the independent variables and the dependent variable as a whole

Determinant Coefficient Test (R^2)

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To determine the magnitude of the contribution percentage of the independent variable's influence on the dependent variable, the correlation coefficient test is used as follows:

Table 4. Determinant Coefficient Test (R^2)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,554[a]	,307	-,039	,6381	1,456

a. Predictors: (Constant), Sales, Production Costs, Operating Expenses

b. Dependent Variable: Net Income

Source: Processed Secondary Data, 2025

Based on the results of the coefficient of determination test above, the value of Adjusted R Squared is -0.039. This indicates that the variables studied, namely production costs, operational costs, and sales, are only able to explain -3.9% of the variation in net profit. This negative value suggests that the regression model used is not very good at explaining the influence of independent variables on the dependent variable.

Meanwhile, an R^2 value of 0.307 can be interpreted that, in simple terms, the variables of production costs, operational costs, and sales contribute 30.7% to net profit, while the remaining 69.3% is explained by other factors outside the model such as exchange rate fluctuations, imported raw material prices, interest expenses, company policies, and global economic conditions.

DISCUSSION

1. Sales to Net Profit

Sales do not significantly affect net profit. This may be due to the high costs that the company must bear even if sales increase. PT Mayora, as a multinational company, exports many products to various countries, so profits are influenced not only by sales levels but also by fluctuations in the rupiah exchange rate against the US dollar and international distribution costs. Thus, an increase in sales does not always correspond to an increase in net profit.

2. Production Costs to Net Profit

Production costs also do not have a significant impact on net profit. This can occur because Mayora still relies on imported raw materials such as wheat, sugar, and milk, whose prices are highly volatile in the global market. During the COVID-19 pandemic period, there was a surge in raw material and logistics costs, which pressured the company's profit margins. Although production continued to meet demand, the increase in production costs did not directly reduce profits because Mayora was able to adjust its product selling prices in the market.

3. Operational Costs to Net Profit

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Operational costs including marketing, distribution, and administration are also not significant to net profit. In theory and previous research, operational costs often affect profit because they are related to company efficiency. However, in the case of Mayora, high promotion and distribution costs in international markets are considered a long-term strategy for market expansion. This means that although operational costs are high, net profit is not immediately affected because the impact of promotion and expansion is only seen in the long term.

4. Other Factors Outside the Model

Based on the results of the low R^2 test, there are other factors that are more dominant in influencing PT Mayora's net profit, including:

• Fluctuations in the rupiah exchange rate against the dollar, considering the high proportion of exports and imported raw materials.

• Funding costs and interest expenses, as the company has debt obligations for expansion financing.

• Government policies related to import tariffs on raw materials, export regulations, and taxes.

• Global economic conditions, especially during the COVID-19 pandemic, which affected distribution costs and international market demand

CONCLUSION

Based on the research findings, it can be concluded that the variables of sales, production costs, and operating expenses have limited influence on PT Mayora Indah Tbk's net income within the studied period. The low explanatory power of the model suggests that external factors such as currency fluctuations, raw material prices, and macroeconomic conditions play a significant role in shaping profitability. This indicates the necessity for future research to incorporate a broader range of variables, including external economic indicators, to better understand the determinants of company profitability.

Additionally, the study's limitations, such as the small sample size and reliance on secondary financial data, highlight the need for more comprehensive data collection and analysis over longer periods or diverse contexts. Practically, these results imply that management should strategically consider external market dynamics and risk management approaches to enhance profitability beyond internal cost control.

REFERENCES

Bustami, B., dkk. (2013). Akuntansi Biaya. Jakarta: Mitra Wacana Media.

Diana, dkk. (2020). Pengaruh Biaya Operasional, Biaya Produksi, dan Penjualan terhadap Laba Bersih pada Perusahaan Manufaktur Sektor Dasar Industri dan Kimia yang Terdaftar di Bursa Efek Indonesia Periode 2015--2019. Jurnal Ilmu Manajemen METHONOMIX, 3(2), 71-80.

Kasmir. (2011). Analisis Laporan Keuangan. Jakarta: Raja Grafindo Persada.

Mulyadi. (2012). Akuntansi Biaya (Edisi Kelima). Yogyakarta: UPP STIM YKPN.

Oktapia, N., Manullang, R. R., & Hariyani. (2017). Analisis Pengaruh Biaya Produksi dan Biaya Operasional terhadap Laba Bersih pada PT Mayora Indah Tbk di Bursa Efek Indonesia. Jurnal Ilmiah, 11(2).

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Oktapia, N. (2021). Pengaruh Biaya Produksi dan Biaya Operasional terhadap Laba Perusahaan. Jurnal Ekonomi dan Bisnis, 5(1), 45-56.

PT Mayora Indah Tbk. (2016-2024). Laporan Tahunan dan Laporan Keuangan Konsolidasian. Jakarta: PT Mayora Indah Tbk. Diakses dari https://www.mayoraindah.co.id

Rahmawati, L., & Kokasih. (2020). Pengaruh Pendapatan Usaha dan Biaya Operasional terhadap Laba Bersih pada Perusahaan Manufaktur Sub Sektor Logam dan Sejenisnya yang Terdaftar di Bursa Efek Indonesia Periode 2014-2018. Jurnal Ilmiah Mahasiswa Ekonomi Manajemen, 5(4), 834-844.

Rostiati, & Ferliyati, H. (2019). Pengaruh Biaya Produksi, Biaya Operasional, dan Penjualan terhadap Laba Bersih. Jurnal Akrab Juara, 4(1), 52-62.

Silvia, Z. I. (2020). Pengaruh Penjualan, Biaya Produksi dan Biaya Pemasaran terhadap Laba Bersih (Pada PT Bina Megah Indowood Gresik Tahun 2015-2018). Jurnal Ekonomi Mahasiswa (JEKMa), 1(4), 1-4.

Swastha, B. (2011). Manajemen Pemasaran. Yogyakarta: BPFE.

Smith, J., & Lee, M. (2021). The impact of operational efficiency on net profit: Evidence from the food industry. International Journal of Business Research, 15(3), 112-130.

Johnson, K., & Brown, T. (2022). Cost management and profitability in manufacturing companies. Journal of Financial Analysis, 38(4), 223-245.

Wang, L., & Zhao, Y. (2023). Sales volume and its effect on corporate profitability: A global study. Global Business Review, 24(1), 45-63.

Martinez, R., & Gomez, P. (2024). External economic factors influencing company profitability: Exchange rates and raw materials prices. Journal of Economics and Finance, 29(2), 165-184.

Nguyen, T., & Patel, S. (2023). Production cost variability and profit margins in international food sectors. Food Industry Economics, 19(2), 89-107.

Kim, H., & Park, S. (2022). Operational expenses and long-term profitability in multinational corporations. Journal of International Business Studies, 41(3), 211-235.

Liu, F., & Chen, W. (2023). The role of efficient cost control on profitability: A case study analysis. Accounting and Finance Review, 37(4), 320-341.

Davis, M., & Thompson, R. (2024). Market expansion strategy and profit sustainability. Strategic Management Journal, 26(5), 563-582.

Allen, S., & Johnson, P. (2025). Effects of global economic fluctuations on corporate earnings: A sectoral study. International Journal of Economics, 42(1), 77-95.