

The Effect of Total Liabilities and Operating Expenses on Net Income: Evidence from Food and Beverage Manufacturing Companies Listed on the Indonesia Stock Exchange

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Article Info

Abstract

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This study aims to examine the effect of total liabilities and operating expenses on net profit in manufacturing companies, particularly those in the food and beverage subsector listed on the Indonesia Stock Exchange during the 2019–2023 period. The analysis employs multiple linear regression using 80 observations obtained from 16 companies. The results indicate that total liabilities have a positive effect on net profit, while operating expenses do not show a significant effect. In addition, the simultaneous test (F-test) reveals that all variables jointly influence net profit. The coefficient of determination (R^2) of 0.622 indicates that 62.2% of the variation in net profit can be explained by total liabilities and operating expenses, while the remaining 37.8% is influenced by other factors outside the model used in this study.

INTRODUCTION

Indonesia's manufacturing industry has continued to demonstrate relatively strong growth despite facing various global challenges, including economic uncertainty, increasing competition, geopolitical conflicts, and the lingering effects of the COVID-19 pandemic. Nevertheless, amid this growth, several companies have experienced a decline in profitability.

As empirical evidence, several companies within the food and beverage manufacturing subsector exhibited a downward trend in profits during the study

period. PT Nippon Indosari Corpindo Tbk. (ROTI) reported a 22.89% decline in net income in 2023 compared to the previous year, recording a total net profit of IDR 432.22 billion. A similar decrease was observed in PT Mulia Boga Raya Tbk. (KEJU), which experienced an annual net income contraction of 31.54%, resulting in a net profit of only IDR 80.34 billion during the same period.

This decline in profitability was not limited to these two companies but was also experienced by several other firms within the same subsector, including PT Wilmar Cahaya Indonesia Tbk. (CEKA), PT Wahana Interfood Nusantara Tbk. (COCO), PT Diamond Food Indonesia Tbk. (DMND), PT Buyung Poetra Sembada Tbk. (HOKI), and PT Sekar Bumi Tbk. (SKBM). This condition indicates that the decline in profitability is not an isolated case but rather reflects broader pressures affecting the industry.

In general, this phenomenon may be attributed to increasing operating costs, fluctuations in raw material prices, intense market competition, and changing economic conditions that affect corporate financial performance. Therefore, the decline in profits within this subsector serves as an important indication that internal factors, such as operational cost management and financial structure, play a crucial role in determining a company's profitability.

One of the factors contributing to the decline in profits is the increase in costs incurred by companies. In this context, operating expenses play a significant role in determining the level of profit generated. Without efficient management of operating expenses, companies may face difficulties in maintaining or improving profitability. Therefore, controlling and monitoring operating expenses are essential for achieving optimal financial performance (Syahputra et al., 2018).

Under certain circumstances, when companies require additional funding to support their operations, they may rely on external financing in the form of liabilities. However, the use of liabilities must be carefully managed due to the potential risks involved, as companies may encounter difficulties in fulfilling or settling their financial obligations. Consequently, companies need to implement appropriate policies to calculate, monitor, and control liabilities effectively (Indrawan & Agustien, 2020).

Previous studies have reported mixed findings regarding the effects of liabilities and operating expenses on net income. Adrianah (2019) found that both

short-term and long-term liabilities have a positive effect on net income, whereas Sahetapy (2023) reported a negative relationship between liabilities and net income. Regarding operating expenses, Mutiara (2022) identified a negative effect on net income, while Fathony and Wulandari (2020) found a positive influence of operating expenses on net income. In contrast, Purwanti and Rismasari (2022) concluded that operating expenses have no significant relationship with net income.

METHODS

The study employed a quantitative descriptive approach, utilizing numerical data to examine the relationships among the variables under investigation. A purposive sampling technique was applied to ensure that the selected sample accurately represented the target population, namely companies that met specific criteria relevant to the objectives and focus of the study. The research covered a five-year period from 2019 to 2023, with an estimated total sample size of 80 observations.

The study used quantitative data obtained from the financial statements of manufacturing companies listed on the Indonesia Stock Exchange (IDX). These data included detailed financial information, such as total liabilities, operating expenses, and net income, for the specified research period. The analyzed financial statements provided a comprehensive overview of the companies' financial performance and conditions, enabling an in-depth evaluation of how these variables influence net income. By utilizing quantitative data derived from corporate financial reports, the study aimed to generate empirical evidence regarding the relationship between total liabilities, operating expenses, and net income among companies operating in the food and beverage manufacturing subsector.

The use of quantitative data allowed the analysis to be conducted in a more objective, systematic, and measurable manner, thereby providing a more accurate understanding of the relationships among the variables examined. Furthermore, this numerical approach enhanced the reliability of the findings, as the results were based on empirical evidence that could be statistically tested.

The research was also supported by a literature review conducted through an

examination of scholarly sources, including textbooks, journal articles, and previous studies. The literature review was intended to strengthen the theoretical foundation of the study, provide relevant conceptual context, and support the analysis and interpretation of the research findings.

RESULTS AND DISCUSSION

Results

Descriptive Statistics

Table 1. Descriptive Statistics

		Statistics		
		X1	X2	Y
N	Valid	80	80	80
Mean		9324646,19	2301974,03	1435471,99
Std. Deviation		22341845,467	3942571,500	2709486,461
Minimum		119786	93549	957
Maximum		92285331	16371795	11493733

a. Multiple modes exist. The smallest value is shown

Source: Data Processed Using SPSS (2026)

Table 1 presents the analysis of 80 observations from companies classified within the food and beverage subsector of the manufacturing industry. The average total liabilities of the sampled companies amounted to IDR 9,324,646.19. The variability of total liabilities is reflected in the relatively high standard deviation of IDR 22,341,845.47, indicating substantial differences among companies in terms of their liability levels. Total liabilities ranged from a minimum value of IDR 119,786 to a maximum value of IDR 92,285,331.

Regarding operating expenses, the average operating expense recorded was IDR 2,301,974.03. The standard deviation of operating expenses was IDR 3,942,571.50, suggesting considerable variation in operational expenditures across the sampled companies. The minimum operating expense was IDR 93,549, while the maximum reached IDR 16,371,795.

Meanwhile, the average net profit earned by the sampled companies was IDR 1,435,471.99. The variability of net profit was also relatively high, as indicated by a standard deviation of IDR 2,709,486.46. Net profit ranged from a minimum value of IDR 957 to a maximum value of IDR 11,493,733. These findings indicate substantial variation in the net profits generated by companies within the subsector, which may be influenced by various factors, including total liabilities and operating expenses.

Normality Test

Table 2. Normality Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		65
Normal Parameters ^{a,b}	Mean	,0000000
	Std. Deviation	,62470191
Most Extreme Differences	Absolute	,056
	Positive	,056
	Negative	-,053
Test Statistic		,056
Asymp. Sig. (2-tailed)		,200 ^{c,d}
a. Test distribution is Normal.		
b. Calculated from data.		

Source: Data Processed Using SPSS (2026)

Based on the test results presented, the normality test was conducted using the One-Sample Kolmogorov–Smirnov method. The results indicate a test statistic value of 0.056 with an Asymp. Sig. (2-tailed) value of 0.200. Since the significance value exceeds the predetermined threshold of 0.05, it can be concluded that the residuals of the research model are normally distributed.

The fulfillment of this assumption indicates that the distribution of residuals does not significantly deviate from a normal distribution. This condition is essential because residual normality is one of the fundamental assumptions of linear regression analysis, ensuring that the estimated parameters are unbiased and that the hypothesis testing procedure yields valid results. As this assumption has been satisfied, the regression model employed in this study can be considered appropriate for further analysis.

Furthermore, the normal distribution of residuals suggests the absence of extreme deviations or irregular patterns in the data, allowing the relationships between the independent and dependent variables to be examined more accurately. Therefore, the results of the normality test enhance the reliability of the model in explaining the relationships among total liabilities, operating expenses, and net profit in this study.

Multicollinearity Test

Table 3. Multicollinearity Test Results

Coefficients ^a			
Model		Collinearity Statistics	
		Tolerance	VIF
1	LN_X1	,273	3,658
	LN_X2	,273	3,658

a. Dependent Variable: LN_Y

Source: Data Processed Using SPSS (2026)

The test results indicate that the regression model does not suffer from multicollinearity issues. This can be observed from the tolerance values of the total liabilities (X1) and operating expenses (X2) variables, both of which are 0.273, exceeding the minimum threshold of 0.10. In addition, the Variance Inflation Factor (VIF) value for both variables is 3.658, which remains below the maximum acceptable limit of 10.

These results suggest that there is no high linear correlation among the independent variables. Consequently, each independent variable is able to explain variations in net profit relatively independently, thereby ensuring the reliability of the regression coefficients and the validity of the subsequent regression analysis.

Autocorrelation Test

Table 4. Autocorrelation Test Results

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,796 ^a	,634	,622	,63470	,798
a. Predictors: (Constant), LN_X2, LN_X1					
b. Dependent Variable: LN_Y					

Source: Data Processed Using SPSS (2026)

The Durbin–Watson statistic obtained in this study is 0.798, indicating that the regression model does not exhibit autocorrelation. This value falls within the acceptable range of -2 to +2, which is commonly used as a criterion for determining the absence of autocorrelation.

Autocorrelation is a problem that can compromise the validity of regression results, as it indicates that the residuals of the regression model are not completely independent of one another. The absence of autocorrelation suggests that the residuals are sufficiently independent, thereby supporting the reliability of the regression estimates and the validity of subsequent statistical inferences.

Heteroscedasticity Test

Table 5. Heteroscedasticity Test Results

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,203	,622		,327	,745
	LN_X1	,030	,075	,096	,396	,694
	LN_X2	-,008	,089	-,023	-,095	,925
a. Dependent Variable: ABS_RES						

Source: Data Processed Using SPSS (2026)

The heteroscedasticity test results show that the significance values for total

liabilities and operating expenses are 0.694 and 0.925, respectively, both of which are greater than the significance level of 0.05. These findings indicate that the regression model does not exhibit heteroscedasticity.

This condition suggests that the variance of the residuals remains constant across all levels of the independent variables. Therefore, the regression model satisfies the classical assumption of homoscedasticity, resulting in more efficient and reliable parameter estimates. Consequently, the results of the regression analysis can be used as a valid basis for drawing conclusions regarding the relationships among the variables examined in this study.

Coefficient of Determination

Table 6. Coefficient of Determination Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.796 ^a	.634	.622	.63470

a. Predictors: (Constant), LN_X2, LN_X1
 Source: Data Processed Using SPSS (2026)

The Adjusted R Square value obtained in this study is 0.622, indicating that 62.2% of the variation in net profit can be explained by the independent variables included in the model, namely total liabilities (X1) and operating expenses (X2). This finding suggests that the proposed model has a relatively strong explanatory power in describing changes in the dependent variable.

The remaining 37.8% of the variation in net profit is explained by other factors that are not included in the research model. These factors may include variables such as sales revenue, operational efficiency, market conditions, and corporate management policies. Therefore, although the research model demonstrates a reasonably good explanatory capability, there is still room for other variables to contribute to the variation in net profit.

Multiple Linear Regression Analysis

Table 7. Multiple Linear Regression Analysis Results

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,741	1,029		3,637	,001
	LN_X1	,716	,124	,849	5,779	,000
	LN_X2	-,063	,148	-,063	-,426	,671

a. Dependent Variable: LN_Y
 Source: Data Processed Using SPSS (2026)

Based on the estimated multiple linear regression model, the regression

equation can be formulated as follows:

$$Y = 3,741 + 0,716X_1 - 0,063X_2 +$$

Based on the multiple linear regression equation, the following interpretations can be made:

- a. The constant value of 3.741 indicates that when total liabilities (X1) and operating expenses (X2) are assumed to be zero, the estimated net profit (Y) is 3.741.
- b. The regression coefficient of total liabilities (X1) is 0.716, indicating a positive relationship with net profit. This implies that, holding other variables constant, a one-unit increase in total liabilities is associated with an increase of 0.716 units in net profit.
- c. The regression coefficient of operating expenses (X2) is -0.063, indicating a negative relationship with net profit. This means that, assuming other variables remain constant, a one-unit increase in operating expenses is associated with a decrease of 0.063 units in net profit.

Partial Significance Test (t-Test)

Table 8. Partial t-Test Results

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,741	1,029		3,637	,001
	LN_X1	,716	,124	,849	5,779	,000
	LN_X2	-,063	,148	-,063	-,426	,671

a. Dependent Variable: LN_Y

Source: Data Processed Using SPSS (2026)

The analysis indicates that total liabilities have a positive and statistically significant effect on net profit, as evidenced by a significance value of 0.000 ($p < 0.05$) and a t-statistic of 5.779, which exceeds the critical t-value of 1.669. Therefore, total liabilities significantly influence net profit.

In contrast, operating expenses do not have a statistically significant effect on net profit. This is indicated by a significance value of 0.671 ($p > 0.05$) and a t-statistic of -0.426, which does not exceed the critical t-value of -1.669. Although the relationship between operating expenses and net profit is negative, the effect is not statistically significant. Consequently, changes in operating expenses cannot be considered a significant determinant of net profit within the context of this

study.

Simultaneous Significance Test (F-Test)

Table 9. Simultaneous Significance Test Results

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43,285	2	21,643	53,725	,000 ^b
	Residual	24,976	62	,403		
	Total	68,261	64			
a. Dependent Variable: LN_Y						
b. Predictors: (Constant), LN_X2, LN_X1						

Source: Data Processed Using SPSS (2026)

The results of the simultaneous significance test indicate that total liabilities (X1) and operating expenses (X2) jointly have a significant effect on net profit (Y), as evidenced by a significance value of 0.000 ($p < 0.05$). Furthermore, the calculated F-statistic of 53.725 exceeds the critical F-value of 3.15, further confirming that the regression model is statistically significant.

These findings suggest that the independent variables, when considered collectively, are capable of explaining variations in the company's net profit. In other words, although one of the independent variables did not demonstrate a statistically significant effect in the partial (t-test) analysis, the combined effect of total liabilities and operating expenses remains significant in explaining changes in net profit.

Conceptually, this result indicates that a company's financial performance is influenced by multiple interrelated factors rather than by a single factor in isolation. Therefore, the interaction of total liabilities and operating expenses plays an important role in explaining variations in net profit within the context of this study.

Discussion

The Effect of Total Liabilities on Net Profit

Based on the analysis, total liabilities were found to have a positive relationship with net profit. This is evidenced by the regression coefficient of 0.716, indicating that an increase in liabilities tends to be accompanied by an increase in the company's net profit. Furthermore, the strength of the relationship between the two variables is relatively high, as reflected by the correlation coefficient of 0.796, which indicates a strong positive association.

These findings are further supported by the results of the t-test, where the calculated t-value of 5.779 exceeds the critical t-value of 1.669, while the

significance value of 0.000 is lower than the significance level of 0.05. Therefore, it can be concluded that total liabilities have a significant effect on the net profit of food and beverage subsector companies listed on the Indonesia Stock Exchange (IDX).

From a theoretical perspective, liabilities represent an external source of financing that plays an important role in supporting a company's operational and investment activities. The effective utilization of liabilities enables companies to expand production capacity, improve operational efficiency, and promote business growth, which ultimately contributes to higher profits. Nevertheless, liabilities must be managed prudently, as excessive reliance on debt may increase financial risk.

The findings of this study are consistent with those of Adrianah (2019), who reported that liabilities have a positive effect on net profit. However, these results differ from the findings of Sahetapy (2023), who found that liabilities negatively affected the net profit of PT Bank Rakyat Indonesia (Persero) Tbk. This discrepancy suggests that the impact of liabilities on profitability is not universal but may be influenced by various factors, including capital structure, the efficiency of fund utilization, industry characteristics, and managerial strategies in managing corporate obligations.

Therefore, it can be concluded that although liabilities have the potential to increase net profit, the effectiveness of their impact largely depends on the company's ability to manage these financing sources optimally and proportionately.

The Effect of Operating Expenses on Net Profit

The results of the multiple linear regression analysis indicate that operating expenses have a negative relationship with net profit, as reflected by the regression coefficient of -0.063 (approximately -6%). This coefficient suggests that the effect of operating expenses on net profit is relatively small. Conceptually, the finding indicates that increases in operating expenses tend to be associated with decreases in net profit, whereas greater efficiency in managing operating expenses may contribute positively to profit growth.

Furthermore, the correlation analysis yielded a coefficient of 0.661, indicating a moderately strong relationship between operating expenses and net profit. However, the strength of this relationship is not supported by statistical

significance. This is evidenced by the results of the partial t-test, where the calculated t-value of -0.426 does not exceed the critical t-value of -1.669 , and the significance value of 0.671 is greater than the significance level ($\alpha = 0.05$).

These findings indicate that although operating expenses exhibit a negative directional relationship with net profit, the effect is not sufficiently strong to be considered statistically significant. This may be attributable to the presence of other factors that exert a more dominant influence on net profit, such as overall operational efficiency, cost structure, pricing strategies, and market conditions.

The results of this study are consistent with those reported by Purwanti and Rismasari (2022), who found no significant effect of operating expenses on net profit. However, the findings contradict those of Mutiara (2022), who reported a significant negative effect of operating expenses on the net profit of transportation service companies listed on the Indonesia Stock Exchange during the 2018–2020 period.

Overall, these findings suggest that although operating expenses are theoretically expected to influence profitability, their impact may vary depending on the characteristics of the industry, the efficiency of cost management practices, and other financial and operational factors affecting corporate performance.

CONCLUSION

The data analysis reveals that total liabilities have a positive effect on net profit, indicating that an increase in a company's liabilities tends to be associated with an increase in net profit. This finding suggests that liabilities play an important role in enhancing corporate profitability. In contrast, operating expenses do not have a significant effect on net profit. In other words, changes in operating expenses, whether increases or decreases, do not substantially affect the company's net profit. This result implies that other factors may exert a more dominant influence on net profit, or that operating expenses are managed in a manner that does not directly affect the company's overall financial performance.

Based on these findings, several recommendations can be proposed. First, companies should pay close attention to the level of liabilities they maintain, as liabilities can contribute positively to profitability. However, excessive liabilities may create difficulties in meeting financial obligations and increase financial risk.

Therefore, companies should establish appropriate policies to monitor and manage their total liabilities effectively.

Second, future studies are encouraged to incorporate additional variables that may influence net profit, given that 37.8% of the variation in net profit remains unexplained by the variables included in this study. Potential variables for further investigation include total assets, equity, selling prices, and sales volume, as these factors may provide a more comprehensive explanation of variations in corporate profitability.

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