The Implementation of Balanced Scorecard in Optimizing Company Performance Through Four Main Perspectives

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ABSTRACT

The purpose of this study is to investigate how the four primary perspectives of the Balanced Scorecard financial, customer, internal business process, and learning and growth affect the performance of manufacturing companies in the transportation subsector that are listed on the Indonesia Stock Exchange (IDX) between 2019 and 2023. Utilizing secondary data from corporate annual reports, a quantitative research methodology was applied. Net Profit Margin, Sales Growth, Operating Profit, and Net Income per Employee were the independent variables, while Return on Assets (ROA) was used to measure the dependent variable, or corporate performance. To evaluate the hypotheses, multiple linear regression analysis was employed. The findings show that ROA is significantly positively impacted by Net Profit Margin and Net Income per Employee, whereas Sales Growth and Operating Profit do not show a significant impact, 92.5% of the variation in business performance can be explained by the model. These findings suggest that profitability and employee productivity are crucial drivers of financial performance. The study contributes to the literature by demonstrating the strategic relevance of the Balanced Scorecard framework in the transportation manufacturing sector and recommends expanding future research with broader variables and sectoral comparisons.

INTRODUCTION

Given the fiercely competitive business environment of today, companies are required to adapt to rapid changes in production, marketing, human resource management, and business transactions. The rise of globalization has intensified competition, causing profit margins to shrink and pressuring companies to enhance their performance on a global scale. In this context, performance measurement systems play a crucial role in helping organizations respond strategically and improve their overall effectiveness (Krisbudiman, 2015).

Four major viewpoints are included in the Balanced Scorecard (BSC), a complete framework for measuring performance: financial, customer, internal business processes, and learning and growth. Unlike traditional financial metrics, the BSC provides a more holistic view of organizational performance by integrating both financial and non-financial indicators. This approach enables companies to align performance metrics with strategic objectives, ensuring balanced and sustainable value creation across all dimensions of the business (Fauzan et al., 2023). Through the use of a set of financial metrics, the Balanced Scorecard is a performance management tool that assists organizations in putting their vision and strategy into practice and non-financial indicators, all of which are interconnected through cause-and-effect relationships (Sagala & Siagian, 2021).

According to Krisbudiman (2015), financial indicators alone are insufficient to reflect a company's true performance. The Balanced Scorecard addresses this limitation by measuring performance through customer satisfaction, operational efficiency, innovation, and employee development. It converts the company's strategy and goal into a logical set of performance metrics, enabling effective evaluation

and strategic management. BSC has thus become a widely adopted tool in corporate performance management, particularly in complex and competitive sectors.

Regarding manufacturing firms in the transportation subsector that were listed between 2019 and 2023 on the Indonesia Stock Exchange (IDX), the implementation of the Balanced Scorecard is particularly relevant. These companies face unique challenges in optimizing performance while maintaining efficiency and innovation. By analyzing the impact of the four BSC perspectives on company performance, the purpose of this study is to evaluate how well the Balanced Scorecard may be used as a strategic tool to enhance performance and identify potential challenges and opportunities in its application (Fauzan et al., 2023).

Literature Review

Financial Perspective

The Balanced Scorecard's financial viewpoint assesses if the business's approach helps to improved profitability and shareholder value. This includes indicators such as revenue growth, profit margin, ROI, and cost efficiency. (Fauzan et al., 2023) reported that the financial performance of PT Indofood CBP Sukses Makmur Tbk was relatively poor compared to other perspectives, scoring lower during 2018–2019. Similarly, Sundoro et al. (2024) found that financial metrics of PT XYZ (plastic manufacturing) were below expectations despite high customer satisfaction. Dewi & Surya (2015) emphasized the need for improvement in financial ratios at PT XL Axiata Tbk, indicating that financial performance is a critical but often underperforming aspect. These studies confirm that while financial measures are essential, they may not fully reflect the company's strategic effectiveness without considering non-financial indicators.

Customer Perspective

The customer perspective focuses on customer satisfaction, loyalty, acquisition, and market share. According to Indrayani et al. (2023), the SME studied achieved 82% customer satisfaction, suggesting strong customer relationships. Pandaleke et al. (2021) also found positive customer performance metrics in PT Bank Sulutgo, demonstrating BSC's ability to track service quality. Dewi & Surya (2015) highlighted the need to improve customer satisfaction at PT XL Axiata, despite innovation in internal processes. Meanwhile, Nugroho et al. (2020) found that customer satisfaction index was among the weakest indicators in their Balanced Scorecard evaluation of a lamp manufacturing firm. These studies collectively stress that customer satisfaction and loyalty are pivotal in sustaining long-term business growth and must be measured alongside financial success.

Internal Business Process Perspective

This perspective examines how well internal processes are designed and executed to create value for customers and shareholders. Efficient operations, innovation, and quality control are typical focus areas. Krisbudiman (2015) identified operational performance and innovation as key indicators in PT Yuasa Battery Indonesia. Indrayani et al. (2023) reported that business processes at an SME reached an efficiency score of 1.4, suggesting well-functioning operations. Sundoro et al. (2024), however, noted that internal business processes in PT XYZ were underperforming, requiring improvement to support financial and customer outcomes. These studies show that internal process optimization plays a crucial mediating role between strategic goals and performance outputs.

Learning and Growth Perspective

The perspective of learning and growth assesses employee capabilities, motivation, and organizational culture as drivers of long-term performance. This includes training, innovation, employee satisfaction, and retention rates. Alimudin & Sasono (2022) highlighted that employee commitment and productivity significantly influence SME performance through better product/service delivery. Krisbudiman (2015) noted that employee satisfaction in PT Yuasa Battery was an essential performance indicator. Sundoro et al. (2024) found this perspective to be among the weakest at PT XYZ, implying a

need for better investment in human capital. Dewi & Surya (2015) showed that PT XL Axiata had already ensured high employee satisfaction, contributing positively to strategic alignment. Overall, learning and growth is essential for ensuring long-term innovation and sustaining competitive advantage.

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RESEARCH METHOD

This study used a quantitative research methodology to examine how the four primary viewpoints of the Balanced Scorecard financial, customer, internal business process, and learning and growthaffect the performance of the organization. Secondary data from the 2019–2023 annual reports of manufacturing companies in the transportation subsector listed on the Indonesia Stock Exchange (IDX) were used. Purposive sampling was used to select the data, and among the particular requirements were businesses with full financial statements in Indonesian Rupiah and fiscal years that concluded on December 31.

The study's dependent variable is the success of the firm as determined by Return on Assets (ROA), which shows how effectively a business makes use of its resources to create a profit. The four views of the Balanced Scorecard are represented by the independent variables: the learning and growth perspective (Net Income per Employee), the internal business process perspective (Operating Profit), the customer perspective (Sales Growth), and the financial perspective (Net Profit Margin). These metrics were chosen to represent the non-financial and financial aspects that affect long-term performance.

Using documentation procedures and a review of the literature, data was gathered by consulting official sources, including the IDX website (www.idx.co.id). To investigate the connection between variables, the study uses multiple linear regression analysis, descriptive statistics, and the traditional assumption tests (autocorrelation, heteroscedasticity, multicollinearity, and normality). The model's fit and the relative importance of each Balanced Scorecard perspective in describing business performance are evaluated using statistical methods like the coefficient of determination (R2).

RESULTS AND DISCUSSION

All manufacturing businesses in the transportation industry that are listed on the Indonesia Stock Exchange (IDX) between 2019 and 2023 make up the research object used in this study. A total of 24 firms were chosen as the sample for each year based on the sample criteria established in this study. Therefore, the total number of observational data used is 120. Outliers were identified using residual values by filtering the unstandardized results from the smallest to the largest and then removing the extreme data. A total of 53 outliers were removed, resulting in 67 companies that met the criteria. Table 1 displays the outcomes of the sample selection process based on the predefined criteria.

Table 1. Results of Selection Using Purposive Sampling

No	Criteria	Total
1	Transportation Sector Manufacturing Companies that published complete financial statements during the 2019–2023 period.	29
2	Transportation Sector Manufacturing Companies that presented financial statements in Rupiah during the 2019–2023 period.	26
3	Transportation Sector Manufacturing Companies that published annual financial statements ending on December 31 during the 2019–2023 period.	24
Sample that met the criteria for one year		24
Total units over five years		120
Outliers		-48
Total analyzed units over five years		72

Descriptive Statistical Analysis

Table 2. Descriptive Statistical Analysis

	N Statistic	Minimum Statistic	Maximum Statistic	Mean Statistic	Std. Deviation Statistic
ROA	72	-1663.00	7515.00	438.361	1246.69302
NPM	72	-3715.00	29002.00	1018,7778	4324.80202
PP	72	-5592.00	12310.00	629.2778	2760.89505
LO	72	-531110635306.00	772152841369.00	14871885405.5417	191380569212.32960
NIE	72	-316689270.00	1821632756.00	162474486.4167	377309071.1
Valid N (listwise)	72				

Source: Secondary data processed with SPSS 26, 2025

Table 2 presents the descriptive statistics for each research variable. The analysis of the dependent variable (Y) company performance measured by RoA shows a minimum value of -1,663.00, a maximum of 7,515.00, a mean of 438.2361, and a standard deviation of 1,246.69302, indicating a wide range in performance across the sampled companies. For the first independent variable (X1), representing the financial perspective through Net Profit Margin, the minimum value is -3,715.00, the maximum is 29,002.00, the average is 1,018.7778, with a standard deviation of 4,324.80202, suggesting high variability in profitability.

The second independent variable (X2), which reflects the customer perspective through sales growth, has a minimum value of -5,592.00, a maximum of 12,310.00, a mean of 629.2778, and a standard deviation of 2,760.89505, indicating that customer-related performance varies significantly among firms. The third independent variable (X3), representing internal business processes measured by operating profit, shows extremely large figures, with a minimum of -531,110,635,306.00, a maximum of 772,152,841,369.00, a mean of 14,871,885,405.54, and a standard deviation of 191,380,569,212.33, indicating substantial fluctuation in operational outcomes.

Finally, the fourth independent variable (X4), which covers the learning and growth perspective via net income per employee, records a minimum of -316,689,270.00, a maximum of 1,821,632,756.00, an average of 162,474,486.42, and a standard deviation of 377,309,071.10. This highlights the variation in workforce productivity across the companies, which may be attributed to differences in human resource effectiveness and technological investment.

Classical Assumption Test

Normality Test

Table 3. Normality Test Results

Monte Carlo Sig. (2-tailed)	**Sig.**		.151[d]
	99% Confidence Interval	Lower Bound	.141
		Upper Bound	.160

Source: Secondary data processed with SPSS 26, 2025

The significance value (2-tailed) is 0.151 according to the One-Sample Kolmogorov-Monte Carlo Test's SPSS output. This suggests that the study data is normally distributed as the significance value (2-tailed) is higher than 0.05 (significance level).

Multicollinearity Test

Table 4. Multicollinearity Test Results

Model		Unstand ardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	90.312	46.538		1.941	.057		
	NPM	.237	.015	.823	15.594	.000	.401	2.491
	PP	.018	.015	.040	1.180	.242	.978	1.022
	LO	-1.548E-11	.000	-.002	-.070	.944	.969	1.032
	NIE	5.855E-7	.000	.177	3.365	.001	.403	2.479

Source: Secondary data processed with SPSS 26, 2025

All independent variables exhibit VIF values < 10 and tolerance values > 0.10, according to the SPSS output findings of the VIF and tolerance tests. This shows that there is no multicollinearity between the independent variables in the regression model, indicating that the data passes the multicollinearity test.

Heteroscedasticity Test

Table 5. Heteroscedasticity Test Results

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	215.978	34.163		6.322	.000
	NPM	.003	.011	.047	.250	.804
	PP	.007	.011	.075	.614	.541
	LO	-1.863E-10	.000	-.140	-1.147	.255
	NIE	3.390E-8	.000	.050	.265	.792

Source: Secondary data processed with SPSS 26, 2025

All variables have an Asymp. Sig. (2-tailed) value > 0.05, according to the SPSS output findings of the Glejser test, suggesting that the regression model is heteroscedastic.

Autocorrelation Test

Table 6. Autocorrelation Test Results

	Unstandardized Residual
Test Value[a]	-28.17750
Cases < Test Value	36
Cases >= Test Value	36
Total Cases	72
Number of Runs	40
Z	.712
Asymp. Sig. (2-tailed)	.476

Source: Secondary data processed with SPSS 26, 2025

The Runs Test's Asymp. Sig. (2-tailed) value in the SPSS report is 0.476. This indicates that the 2-tailed Asymp. Sig. value is higher than 0.05. Consequently, it may be said that the data passes the autocorrelation test, meaning that there is no autocorrelation.

Hypothesis Testing

Coefficient of Determination

Table 7. Coefficient of Determination Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.962[a]	.925	.921	351.27981

Source: Secondary data processed with SPSS 26, 2025

Table 7 shows an Adjusted R Square value of 0.925. This means that the variables Net Profit Margin (X1 NPM), Sales Growth (X2 PP), Operating Profit (X3 LO), and Net Income per Employee (X4_NIE) simultaneously influence Return on Assets (Y ROA) by 92.1%, while the remaining 7.9% (100% - 92.1%) is influenced by other variables outside the regression equation.

F-Test

Table 8. F-Test Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	102083654.052	4	25520913.513	206.819	.000[b]
	Residual	8267632.934	67	123397.506		
	Total	110351286.986	71			

Source: Secondary data processed with SPSS 26, 2025

The variables Net Profit Margin (X1_NPM), Sales Growth (X2_PP), Operating Profit (X3_LO), and Net Income per Employee (X4_NIE) all have a significant impact on the Return on Assets (ROA) variable at the same time, according to Table 8 and the significance value (sig.) of 0.000 < 0.05. This suggests that the research model is important or works.

T-Test

Table 9. T-Test Results

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	90.312	46.538		1.941	.057
NPM	.237	.015	.823	15.594	.000
PP	.018	.015	.040	1.180	.242
LO	-1.548E-11	.000	-.002	-.070	.944
NIE	5.855E-7	.000	.177	3.365	.001

Source: Secondary data processed with SPSS 26, 2025

The first hypothesis is accepted as the significance value is less than 0.05, as indicated by Table 9's Net Profit Margin (NPM) variable's significance value of 0.000. The Sales Growth (PP) variable has a significance value of 0.242, indicating that the second hypothesis is rejected because the significance value

is > 0.05. The Operating Profit (LO) variable has a significance value of 0.944, meaning that the third hypothesis is rejected as the significance value is > 0.05. The Net Income per Employee (NIE) variable has a significance value of 0.001, which means the fourth hypothesis is accepted since the significance value is < 0.05.

Discussion

The Effect of Net Profit Margin on Company Performance

According to the t-test results, there is a substantial impact on Return on Assets from the Net Profit Margin variable, with a significance value of 0.000 < 0.05. Accordingly, the more NPM a business has, the more money it makes from the assets it uses. This finding is supported by research by Putra & Wahyuni (2021), who stated that NPM has a significant positive effect on ROA as it reflects management's ability to control costs and generate profit from sales. From the descriptive statistical analysis, the NPM (X1) variable has an average of 1,018.78 with a standard deviation of 4,324.80, indicating high variability. Nevertheless, the test results show that the data is normally distributed, with no multicollinearity, heteroscedasticity, or autocorrelation, thus validating the regression model used. With the significant contribution of NPM to ROA and an Adjusted R Square of 92.5%, NPM is one of the most important elements in raising a business's financial performance, it may be inferred.

The Effect of Sales Growth on Company Performance

Return on Assets (ROA) is not significantly impacted by sales growth, according to the Sales Growth (PP) variable's significance value of 0.242 > 0.05. This finding implies that more sales do not always correspond to more effective utilization of the company's resources. It is possible that increased sales are accompanied by rising operational or production costs, which may not enhance the company's profitability. Research by Andriani & Pnglipurningrum (2020) also indicated that sales growth does not always directly affect profitability if not accompanied by cost efficiency and productivity improvements. Descriptively, the PP (X2) variable has an average of 629.28 with a standard deviation of 2,760.90, indicating considerable fluctuation. This shows that sales growth in the observed companies is not consistent in supporting the efficient use of assets to generate profit. This lack of significance may be due to other factors, such as high operational costs or low efficiency, which hinder sales growth from contributing to ROA.

The Effect of Operating Profit on Company Performance

With a significance value of 0.944 > 0.05, the Operating Profit (LO) variable does not significantly affect Return on Assets (ROA). Because operational profit only shows the profit from core business operations before non-operating costs like interest and taxes are subtracted, this might happen. If these expenses are high, the impact on ROA becomes insignificant. In other words, even if operating profit is high, it does not necessarily result in optimal net income. Research by Khresat & Jassar (2025) Operating profit margin has a significant positive effect on company performance, as measured by return on assets (ROA), indicating that greater operational efficiency contributes directly to improved profitability.

The Effect of Net Income per Employee on Company Performance

According to the findings of the t-test, the Net Income per Employee (NIE) variable has a substantial impact on Return on Assets (ROA), with a significance value of 0.001 < 0.05. Accordingly, the greater the net income per employee, the more efficient and productive the company's human resources are. This has a direct impact on increasing profits and overall financial performance. NIE serves as an indicator of labor productivity that affects the level of asset returns. The study by Sakha (2022)

found that net income per employee is influenced by firm-level variables such as firm age and size, and it plays a significant role in explaining company performance indicators like ROA and ROE, although the effect may vary across different economic contexts.

CONCLUSION

According to the analysis's findings, two of the four independent variables looked at—Net Profit Margin (NPM) and Net Income per Employee (NIE) have a major impact on Return on Assets (ROA) for manufacturing companies in the transportation sector that are listed on the Indonesia Stock Exchange between 2019 and 2023. Meanwhile, Sales Growth (PP) and Operating Profit (LO) do not show a significant influence on financial performance in terms of asset returns. These findings suggest that net profitability and employee productivity play crucial roles in improving a company's financial performance, whereas increases in sales and operating profit alone may not be sufficient without the support of other contributing factors.

Considering the limitations of this study, future research is recommended to include a more diverse range of manufacturing sub-sectors to allow for broader and more comparative insights. Additionally, incorporating other variables such as total assets, operational efficiency, or liquidity ratios could provide a more comprehensive understanding of the factors influencing financial performance. This would not only enrich the academic literature but also offer practical implications for financial decision-making within companies.

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