

Capital Intensity, Sales Growth, and Profitability: The Moderating Role of Leverage in Healthcare Firms

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Abstract

This study investigates the effects of capital intensity and sales growth on profitability and examines the moderating role of leverage in healthcare firms listed on the Indonesia Stock Exchange during the 2020–2024 period. Using a panel dataset of 35 healthcare firms with 175 firm-year observations, this study explores how investment intensity, sales growth, and debt financing influence corporate profitability. The data were analyzed using panel data regression with moderating interaction terms in STATA 18 to examine the direct and moderating effects of the proposed relationships. The findings reveal that capital intensity has a significant negative effect on profitability, indicating that higher investments in fixed assets do not necessarily improve financial performance. In contrast, sales growth positively affects profitability, suggesting that firms experiencing higher revenue expansion tend to achieve superior financial outcomes. Regarding the moderating effects, leverage does not significantly moderate the relationship between capital intensity and profitability, implying that debt financing does not alter the profitability consequences of fixed asset investments. However, leverage strengthens the positive relationship between sales growth and profitability, indicating that debt financing enables growing firms to convert revenue expansion into higher profits more effectively. These findings highlight the importance of efficient asset utilization and prudent financing decisions in enhancing firm performance. By integrating capital intensity, sales growth, and leverage into a single framework, this study contributes to the profitability literature and provides practical implications for managers, investors, and policymakers in the healthcare sector.

Keywords: profitability; capital intensity; sales growth; leverage.

Abstrak

Studi ini meneliti pengaruh intensitas modal dan pertumbuhan penjualan terhadap profitabilitas dan mengkaji peran moderasi leverage pada perusahaan sektor kesehatan yang terdaftar di Bursa Efek Indonesia selama periode 2020–2024. Menggunakan dataset panel dari 35 perusahaan kesehatan dengan 175 observasi perusahaan-tahun, studi ini mengeksplorasi bagaimana intensitas investasi, pertumbuhan pendapatan, dan pembiayaan utang memengaruhi profitabilitas perusahaan. Data dianalisis menggunakan regresi data panel dengan istilah interaksi moderasi di STATA 18 untuk memeriksa efek langsung dan moderasi dari hubungan yang diusulkan. Temuan menunjukkan bahwa intensitas modal memiliki pengaruh negatif yang signifikan terhadap profitabilitas, menunjukkan bahwa investasi yang lebih tinggi pada aset tetap tidak selalu meningkatkan kinerja keuangan. Sebaliknya, pertumbuhan

penjualan berpengaruh positif terhadap profitabilitas, menunjukkan bahwa perusahaan yang mengalami ekspansi pendapatan yang lebih tinggi cenderung mencapai hasil keuangan yang lebih unggul. Mengenai efek moderasi, leverage tidak secara signifikan memoderasi hubungan antara intensitas modal dan profitabilitas, yang menyiratkan bahwa pembiayaan utang tidak mengubah konsekuensi profitabilitas dari investasi aset tetap. Namun, leverage memperkuat hubungan positif antara pertumbuhan penjualan dan profitabilitas, menunjukkan bahwa pembiayaan utang memungkinkan perusahaan yang sedang tumbuh untuk mengubah ekspansi pendapatan menjadi keuntungan yang lebih tinggi secara lebih efektif. Temuan ini menyoroti pentingnya pemanfaatan aset yang efisien dan keputusan pembiayaan yang bijaksana dalam meningkatkan kinerja perusahaan. Dengan mengintegrasikan intensitas modal, pertumbuhan penjualan, dan leverage ke dalam satu kerangka kerja, studi ini berkontribusi pada literatur profitabilitas dan memberikan implikasi praktis bagi manajer, investor, dan pembuat kebijakan di sektor kesehatan.

Kata kunci: profitabilitas; intensitas modal; pertumbuhan penjualan; leverage.

INTRODUCTION

Profitability is one of the most important indicators of corporate performance because it reflects a firm's ability to generate earnings from its operational activities and utilize its resources efficiently. High profitability not only enhances firm value but also improves a firm's capacity to attract investors, secure external financing, and sustain long-term growth (Vintilă et al., 2025; Wu et al., 2026). In the healthcare industry, profitability has become increasingly important due to rising operational costs, technological advancements, regulatory pressures, and growing competition. As healthcare firms are generally characterized by substantial investments in fixed assets and continuous business expansion, understanding the determinants of profitability remains an important issue for both academics and practitioners.

Among the factors that may influence profitability, capital intensity and sales growth have received considerable attention in the corporate finance and accounting literature. Capital intensity reflects the extent to which firms rely on fixed assets to generate revenue (Andriani and Halim, 2025; Huynh, 2025). According to the resource-based view, investments in productive assets can improve operational efficiency and create competitive advantages, which ultimately enhance profitability. However, high capital intensity may also increase depreciation expenses, maintenance costs, and operational rigidity, potentially reducing profitability (Herciu, 2017). Consequently, empirical evidence regarding the relationship between capital intensity and profitability remains inconclusive.

Sales growth is often regarded as an important driver of profitability. Firms experiencing strong sales growth may benefit from economies of scale, greater market share, and improved operational efficiency (Halim, 2024). Sales growth provide opportunities for firms to spread fixed costs over larger output levels, thereby improving profitability. Nevertheless, rapid growth may also create managerial and financial challenges, resulting in increased operating costs and lower profitability. Prior studies have reported findings regarding the effect of sales growth on profitability, suggesting that the relationship may depend on other firm-specific conditions (Mensah et al., 2025; Anokhin et al., 2026).

Leverage represents the extent to which firms utilize debt financing in their capital structure. The trade-off theory suggests that debt can enhance firm performance through tax benefits and managerial discipline. However, excessive leverage may increase financial risk and interest expenses, thereby weakening profitability. Therefore, leverage may not only directly affect profitability but also influence how effectively firms convert asset investments and sales growth into profits (Gungoraydinoglu & Öztekin, 2021).

The Indonesian healthcare sector experienced significant changes during the 2020–2024 period. During the COVID-19 pandemic, many healthcare firms recorded substantial increases in revenue and profitability due to heightened demand for healthcare services, pharmaceuticals, and medical equipment. However, following the pandemic period, several healthcare companies experienced a normalization of demand, resulting in fluctuations in financial performance. At the same time, healthcare firms continued to invest heavily in fixed assets, medical technologies, and service expansion to maintain competitiveness and comply with evolving healthcare regulations. These conditions raise concerns regarding whether increased capital investment and business growth are capable of sustaining profitability in the post-pandemic environment.

In addition, healthcare firms often rely on debt financing to support expansion and technological investments. The increasing use of leverage may create both opportunities and risks. While debt financing can provide additional resources for growth and generate tax benefits, excessive leverage may increase financial burdens and reduce profitability. Consequently, understanding the role of leverage in influencing the relationship between capital intensity, sales growth, and profitability becomes particularly relevant for healthcare firms operating in a dynamic business environment.

Previous studies have reported inconsistent findings regarding the determinants of profitability (Dahmash et al., 2021; Moussa and Boubaker, 2023; Anokhin et al., 2026). While Saif-Alyousfi et al., (2025) report that capital intensity improves profitability by enhancing operational efficiency and productive capacity, Hendayana et al. (2024) and Zahro (2021) find that higher capital intensity may reduce profitability due to increased depreciation expenses and inefficient asset utilization. Likewise, (Ali et al., 2019) and (Halim, 2024) document a positive impact of sales growth on profitability because expanding firms can benefit from economies of scale and greater market opportunities, whereas (Anokhin et al., 2026) suggests that rapid growth may not always translate into higher profits due to managerial challenges, operational inefficiencies, and increased business costs. These inconsistencies may be attributed to differences in industrial characteristics, institutional environments, economic conditions, and research periods across countries and sectors. Therefore, further investigation in the context of Indonesian healthcare firms is warranted.

Despite extensive research on profitability determinants, limited studies have simultaneously examined the effects of capital intensity and sales growth on profitability while considering leverage as a moderating variable, particularly in the Indonesian healthcare sector. This study addresses this gap by investigating healthcare firms listed on the Indonesia Stock Exchange during the 2020–2024 period. Specifically, this study aims to examine the effects of capital intensity and sales growth on profitability and to determine whether leverage moderates these relationships. By integrating these variables into a single framework, this study is expected to contribute to the profitability literature and provide practical insights for managers, investors, and policymakers in the healthcare industry.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

This study aims to investigate the effects of capital intensity and sales growth on profitability and to examine whether leverage moderates these relationships in healthcare firms. By focusing on the healthcare industry, this study contributes to extend prior research on profitability determinants by integrating capital intensity, sales growth, and leverage into a single framework. It also provides empirical evidence from a sector characterized by high asset intensity and significant financing requirements.

According to the Resource-Based View, both tangible and intangible resources are crucial for enhancing organisational success. Organisations that adeptly utilise their strategic resources are more inclined to enhance operational efficiency, strengthen their market position, and generate greater profits (Ristiyawan et al., 2023). Consequently, the ability to generate consistent sales growth and invest in productive assets can be regarded as strategic resources that enhance financial success.

Trade-Off Theory suggests that firms determine their optimal capital structure by balancing the benefits and costs of debt financing (Nicodano & Regis, 2019). The primary advantage of debt arises from tax shields, while excessive leverage may increase the likelihood of financial distress and agency costs. Consequently, the effectiveness of debt financing depends on whether the benefits outweigh the associated risks. Leverage may influence how efficiently firms transform investments and growth opportunities into profitability (Agyei et al., 2020).

Capital Intensity and Profitability

Capital intensity reflects the extent to which a firm relies on fixed assets to generate revenue and conduct its business operations. Firms with higher capital intensity generally possess larger investments in property, plant, equipment, and other productive assets (Hendayana et al., 2024). According to the Resource-Based View, strategic resources and productive assets can create sustainable competitive advantages that enable firms to improve operational efficiency and financial performance. Productive assets allow firms to increase production capacity, enhance service quality, and reduce operational inefficiencies, ultimately leading to higher profitability.

In the healthcare industry, capital intensity plays a particularly important role because firms require substantial investments in medical equipment, technological infrastructure, laboratories, and healthcare facilities. Such investments may increase operational effectiveness and strengthen firms' ability to deliver high-quality healthcare services. Consequently, firms with greater capital intensity are expected to achieve superior profitability through more efficient resource utilization. Prior studies report that firms with greater investments in productive assets tend to experience improved efficiency and stronger financial performance (Adeyonu & Odozi, 2022; Saif-Alyousfi et al., 2025).

H1: Capital intensity has a positive effect on profitability.

Sales Growth and Profitability

Sales growth is commonly regarded as an important indicator of a firm's ability to expand its market presence and increase its revenue-generating capacity. An increase in sales reflects the firm's success in attracting customers, maintaining market demand, and responding effectively to competitive pressures (Ali et al., 2019; Viviyana & Halim, 2025). Based on Resource-Based View, sales growth can be viewed as an outcome of a firm's ability to effectively utilize its resources and capabilities. Firms possessing superior resources, such as strong managerial capabilities, advanced technology, efficient operational systems, and valuable customer relationships, are more likely to achieve sustainable growth. These resources enable firms to create value, enhance competitiveness, and generate higher revenues over time.

Previous empirical studies have reported mixed evidence regarding the impact of sales growth on profitability. Several studies find that firms with higher sales growth tend to achieve superior profitability because they benefit from economies of scale and stronger market positions (Fareed et al., 2016; Dahmash et al., 2021; Anokhin et al., 2026). In contrast, other studies suggest that rapid growth may create operational inefficiencies and increase costs, thereby weakening profitability. These inconsistent findings indicate that the relationship between sales growth and profitability remains context-dependent and requires further investigation, especially in industries characterized by intense competition and substantial investment requirements.

H2: Sales growth positively affects profitability.

The Moderating Role of Leverage in the Relationship between Capital Intensity and Profitability

Leverage refers to the proportion of debt financing used by a firm to support its operations and investments. According to Trade-Off Theory, firms seek an optimal capital structure by balancing the benefits of debt financing against the costs associated with financial distress. Debt provides tax advantages and additional financial resources that may enhance firm performance when utilized efficiently (Pham et al., 2022). However, excessive leverage may generate high interest obligations and financial risk, reducing the economic benefits obtained from fixed-asset investments. Consequently, the impact of capital intensity on profitability may vary according to the level of leverage employed by the firm.

The moderating perspective suggests that leverage acts as a boundary condition that determines the effectiveness of capital investments in generating profits. The relationship between capital intensity and profitability may depend on the firm's leverage level. Capital-intensive firms often require substantial financial resources to acquire and maintain productive assets. Firms with adequate debt financing may be better able to invest in advanced technology, medical equipment, and infrastructure that improve operational efficiency and profitability (Kim et al., 2023; Moussa & Boubaker, 2023; Bueno-Ferrer et al., 2026). Under such conditions, leverage can strengthen the positive effect of capital intensity on profitability.

H3: Leverage moderates the relationship between capital intensity and profitability.

The Moderating Role of Leverage in the Relationship between Sales Growth and Profitability

Leverage may also influence the extent to which sales growth contributes to profitability. Firms experiencing rapid sales growth often require additional financial resources to support production

expansion, inventory accumulation, technological investments, and market development activities (Bhatia & Kumari, 2025). Debt financing may provide access to these resources, enabling firms to capitalize on growth opportunities more effectively. Nevertheless, excessive debt may create financial burdens that offset the benefits of growth. Higher interest expenses and increased financial risk may reduce the profitability generated from expanding sales activities. These competing arguments suggest that leverage plays an important contingent role in the growth-profitability relationship.

Based on the Trade-Off Theory, moderate levels of leverage can facilitate business expansion and strengthen the profitability benefits associated with sales growth. Firms with access to external financing may be better equipped to respond to increasing demand, improve operational capacity, and exploit economies of scale. As a result, leverage may enhance the positive relationship between sales growth and profitability (Youssef et al., 2022; Arhinful & Radmehr, 2023; Tripathi et al., 2024).

H4: Leverage moderates the relationship between sales growth and profitability.

The conceptual framework of this study is presented in Figure 1. The framework illustrates the direct effects of capital intensity and sales growth on profitability, as well as the moderating role of leverage in these relationships.

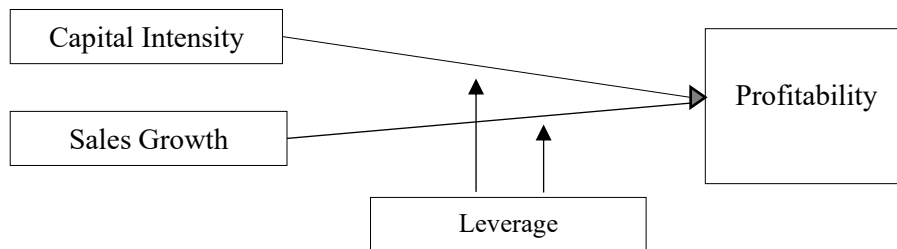


Figure 1. Conceptual Framework)

METHOD

This study employs a quantitative research approach using secondary data obtained from the annual reports and audited financial statements of 35 healthcare firms listed on the Indonesia Stock Exchange (IDX). The observation period covers the years 2020–2024. Healthcare firms were selected because the industry is characterized by substantial investments in fixed assets, continuous technological development, and increasing demand for healthcare services, making it an appropriate setting for examining the relationships among capital intensity, sales growth, leverage, and profitability.

The sample was selected using a purposive sampling technique. Firms were included in the sample if they (1) were classified in the healthcare sector during the observation period, (2) published complete annual financial statements, and (3) provided the information required to calculate all research variables. Firms with incomplete data were excluded from the final sample.

Profitability is measured by Return on Assets (ROA), which reflects a firm's ability to generate earnings from its assets. Capital intensity is measured as fixed assets divided by total assets, while sales growth is calculated as the annual percentage change in sales revenue. Leverage, as the moderating variable, is measured using the debt-to-assets ratio. Firm size is included as a control variable and measured by the natural logarithm of total assets. The operational definitions of the variables are presented in Table 1.

Table 1. Research Variable Measurement

Variable	Symbol	Measurement	References
Dependent Variable			
Profitability	ROA	Net Income / Total assets	(Anokhin et al., 2026)
Independent Variable			
Capital Intensity	CAPINT	Net Fixed Assets / Total Assets	(Chen et al., 2021)
Sales Growth	GROWTH	$(Sales_t - Sales_{t-1}) / Sales_{t-1}$	(Adela et al., 2023)

Moderating Variable			
Leverage	DAR	Total Liabilities / Total Assets	Khuong et al. (2023)
Control Variable			
Firm Size	SIZE	Ln(Total Assets)	Abigail & Dharmastuti (2022)

Panel data analysis allows the study to capture both cross-sectional and time-series variations, thereby improving estimation efficiency and reducing potential bias.

The baseline regression model is specified as follows:

$$ROA_{it} = \beta_0 + \beta_1 CAPINT_{it} + \beta_2 GROWTH_{it} + \beta_3 SIZE_{it} + \varepsilon_{it}$$

To test the moderating role of leverage, the following extended model is estimated:

$$ROA_{it} = \beta_0 + \beta_1 CAPINT_{it} + \beta_2 GROWTH_{it} + \beta_3 DAR_{it} + \beta_4 (CAPINT \times DAR)_{it} + \beta_5 (GROWTH \times DAR)_{it} + \beta_6 SIZE_{it} + \varepsilon_{it}$$

where ROA represents profitability, CAPINT denotes capital intensity, GROWTH refers to sales growth, DAR indicates leverage, SIZE represents firm size, and ε is the error term.

RESULTS AND DISCUSSION

Descriptive statistics

Table 2 presents the descriptive statistics of the variables used in this study. The table reports the mean, standard deviation, minimum value, and maximum value for each variable based on 175 firm-year observations.

Table 2. Descriptive statistics

Variables	N	Mean	Std. Dev.	Min.	Max.
ROA	175	0,0599	0,1378	-0,9489	0,7559
CAPINT	175	0,4459	0,2353	0,0308	1,385
GROWTH	175	0,1575	0,3889	-0,6058	2,5680
DAR	175	0,3966	0,3119	0,0449	2,8507
SIZE	175	28,5405	1,2079	23,9194	31,0130

Source: Stata Results, 2026

The descriptive statistics of the research variables are presented in Table 2. The sample consists of 175 firm-year observations. Overall, the data exhibit a certain degree of heterogeneity, as reflected in the variation across all variables. The mean value of profitability is 0.0599, indicating that healthcare firms generate an average return of approximately 5.99 percent on total assets. Capital intensity has a mean value of 0.4459, suggesting that fixed assets account for a substantial proportion of total assets. Meanwhile, the average sales growth is 0.1575, indicating positive revenue expansion during the observation period.

Regarding the moderating and control variables, the mean debt-to-assets ratio (DAR) is 0.3966, reflecting a moderate level of debt financing among healthcare firms. Firm size records a mean value of 28.5405 with relatively limited dispersion. The distribution of these variables suggests considerable differences in profitability, investment intensity, growth opportunities, leverage, and liquidity across firms, providing a suitable basis for further empirical analysis.

Correlation Matrix

Table 3 presents the Pearson correlation matrix among the variables used in this study. The correlation coefficients provide preliminary evidence regarding the direction and strength of the relationships among the variables and help identify potential multicollinearity issues.

Table 3. Correlation matrix

Variable	ROA	CAPINT	GROWTH	DAR	SIZE
ROA	1.0000				
CAPINT	-0.2959***	1.0000			
GROWTH	0.3092***	-0.0685	1.0000		
DAR	-0.6441***	0.0921	-0.1053	1.0000	
SIZE	0.0086	0.0801	-0.1784**	-0.1358*	1.0000

Significance at the 10%, 5%, and 1% levels is indicated by *, **, and ***, respectively

Source: Stata Results, 2026

The results show that profitability is negatively correlated with capital intensity and leverage, while it is positively associated with sales growth. Specifically, the correlation coefficient between ROA and CAPINT is -0.2959 and statistically significant at the 1% level, indicating that firms with higher capital intensity tend to exhibit lower profitability. In contrast, sales growth is positively correlated with profitability, suggesting that firms experiencing higher revenue growth generally achieve better financial performance. Leverage shows the strongest correlation with profitability, implying that higher debt levels are associated with lower profitability.

Regression Results

Table 4 reports the regression results for the effects of capital intensity, sales growth, and leverage on profitability.

Table 4. Regression results

Variables	Model 1	Model 2
CAPINT	-0.2546*** (0.0626)	-0.4564*** (0.1435)
GROWTH	0.0703*** (0.0214)	0.0354** (0.0198)
DAR	-0.2415*** (0.0452)	-0.5452*** (0.2535)
CAPINT*DAR		0.5466 (0.3751)
GROWTH*DAR		0.1118** (0.0496)
SIZE	-0.0437** (0.0170)	-0.0283** (0.0218)
Constant	1.5207*** (0.5113)	1.1911*** (0.5755)
F-Test	F(5,24)=13.95 (0.0000)	F(7.24)=60.57 (0.0000)
R ²	0.4517	0.4990
Observations	175	175

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Source: Stata Results, 2026

Model 1 presents the baseline regression results. The findings indicate that capital intensity has a negative effect on profitability, whereas sales growth positively influences profitability. Leverage is also found to negatively affect profitability, suggesting that higher debt utilization tends to reduce firms' financial performance. In addition, firm size exhibits a negative relationship with profitability. Overall, the model is statistically significant, indicating that the independent variables jointly explain variations in profitability among healthcare firms.

Model 2 incorporates the interaction terms to examine the moderating role of leverage. The results show that capital intensity continues to have a negative effect on profitability, while sales growth maintains a positive relationship with profitability. Leverage remains negatively associated with profitability. Furthermore, leverage does not significantly moderate the relationship between capital intensity and profitability. However, leverage strengthens the positive effect of sales growth on

profitability, indicating that debt financing can enhance the ability of growing firms to generate profits. The model remains statistically significant and provides greater explanatory power than the baseline model.

Regarding model performance, the explanatory power increases from 45.17 percent in Model 1 to 49.90 percent in Model 2, indicating that the inclusion of moderating variables improves the model's ability to explain variations in profitability. Furthermore, the F-statistics are significant at the 1% level in both models, confirming the overall robustness of the regression models.

Discussion

The Effect of Capital Intensity on Profitability

The results indicate that capital intensity has a negative and significant effect on profitability, suggesting that healthcare firms with higher levels of fixed asset investment tend to generate lower financial returns. This finding implies that an increase in asset intensity does not necessarily translate into improved profitability. Instead, excessive investments in fixed assets may create additional operational burdens through higher depreciation expenses, maintenance costs, and lower flexibility in resource allocation.

The Resource-Based View explained that productive assets are considered strategic resources that can generate competitive advantages and superior performance when utilized effectively. However, RBV also emphasizes that the mere ownership of resources is insufficient to create value. Firms must possess the capabilities to manage and deploy these resources efficiently. Therefore, the negative relationship found in this study suggests that healthcare firms may not fully utilize their fixed assets to generate optimal economic benefits. As a result, substantial investments in tangible assets may reduce profitability rather than enhance it.

Despite being inconsistent with the proposed hypothesis, these findings are in line with prior studies conducted by (Zahro, 2021), which also documented a negative effect of capital intensity on firm profitability. This consistency indicates that higher asset intensity may reduce financial performance when firms are unable to utilize their fixed assets efficiently or when the costs of maintaining such assets exceed the economic benefits generated.

The Effect of Sales Growth on Profitability

The results indicate that sales growth has a positive and significant effect on profitability, suggesting that healthcare firms experiencing higher revenue growth tend to achieve better financial performance. This finding implies that increasing sales enables firms to generate greater earnings and improve the efficiency of resource utilization. As firms expand their revenue base, they may benefit from economies of scale, stronger market positions, and improved operational efficiency, all of which contribute to higher profitability.

This finding is consistent with the Resource-Based View, which argues that superior firm performance is achieved when organizations effectively utilize their valuable resources and capabilities. Sales growth can be viewed as an outcome of a firm's ability to exploit its strategic resources, including managerial capabilities, technological assets, innovation, and customer relationships. Firms that successfully transform these resources into increasing sales are more likely to generate superior financial returns. Therefore, the positive relationship between sales growth and profitability supports the RBV argument that effective resource deployment enhances firm performance.

The results are also in line with (Fareed et al., 2016; Dahmash et al., 2021; Anokhin et al., 2026) that report a positive relationship between sales growth and profitability. Prior research suggests that firms with higher sales growth benefit from increased market demand, stronger competitive positions, and greater opportunities to spread fixed costs across larger volumes of output. Consequently, revenue expansion often translates into improved profit margins and enhanced financial performance.

The Moderating Role of Leverage on the Relationship between Capital Intensity and Profitability

The results indicate that leverage does not significantly moderate the relationship between capital intensity and profitability. This finding suggests that the level of debt financing does not strengthen or weaken the impact of capital intensity on profitability in healthcare firms. In other words, the profitability consequences of fixed asset investments appear to be relatively independent of firms' financing structures.

According to Trade-Off Theory, debt financing can provide benefits through tax shields and

additional financial resources that support investment activities. Under this framework, leverage is expected to enhance the effectiveness of capital investments by providing firms with access to external funding. However, the insignificant moderating effect found in this study indicates that the benefits associated with debt financing may not be sufficient to influence the relationship between capital intensity and profitability.

The insignificant interaction effect suggests that the profitability consequences of capital-intensive investments are not contingent upon firms' leverage levels. Moreover, healthcare companies may support their capital expenditures through a blend of internal resources and external debt, diminishing the significance of leverage as a variable in the link between capital intensity and profitability. Consequently, debt financing does not significantly influence the extent to which investments in fixed assets yield exceptional financial success. Consequently, H3, which posited that leverage moderates the relationship between capital intensity and profitability, is unsupported.

This finding suggests that the financial benefits generated from fixed asset investments depend more on how effectively firms utilize their assets than on the financing sources used to acquire them. Consequently, leverage does not significantly influence the relationship between capital intensity and profitability in healthcare firms.

The Moderating Role of Leverage on the Relationship between Sales Growth and Profitability

The results indicate that leverage strengthens the relationship between sales growth and profitability. This finding suggests that the positive impact of sales growth on profitability becomes stronger when healthcare firms employ higher levels of debt financing. In other words, firms experiencing sales expansion are able to translate revenue growth into higher profitability more effectively when supported by appropriate debt financing.

This finding is consistent with Trade-Off Theory, which argues that debt can provide benefits through tax advantages and access to additional financial resources. When firms encounter growth opportunities, external financing enables them to expand production capacity, increase inventories, invest in technology, and improve operational infrastructure. Consequently, leverage may facilitate the efficient exploitation of growth opportunities and enhance the profitability benefits associated with increasing sales.

The positive moderating effect also indicates that debt financing can function as a strategic resource for supporting business expansion. Healthcare firms often require substantial financial resources to meet increasing demand for healthcare services, pharmaceutical products, and medical technologies. Firms with access to debt financing may be better positioned to respond to growing market demand, strengthen operational capabilities, and improve service quality. As a result, sales growth generates a greater contribution to profitability when accompanied by adequate financial support.

The results demonstrate that leverage serves as an important contingent factor in the sales growth and profitability relationship. The availability of debt financing allows firms to capitalize on growth opportunities more effectively, thereby strengthening the positive relationship between sales growth and profitability. The positive effect of sales growth on profitability becomes stronger in firms with higher leverage, indicating that debt financing can help healthcare firms maximize the financial benefits derived from business growth.

CONCLUSION AND SUGGESTION

This study investigates the effects of capital intensity and sales growth on profitability and examines the moderating role of leverage in healthcare firms. The results indicate that capital intensity negatively affects profitability, while sales growth has a positive effect on profitability. Leverage is also found to negatively influence profitability. Regarding the moderating effects, leverage does not significantly moderate the relationship between capital intensity and profitability. However, leverage strengthens the positive relationship between sales growth and profitability.

These findings suggest that increasing investments in fixed assets does not necessarily improve financial performance. Instead, healthcare firms need to ensure that existing assets are utilized efficiently to generate economic benefits. In contrast, revenue growth contributes positively to profitability, particularly when firms possess sufficient financial resources to support business expansion. The results further indicate that debt financing can enhance the profitability benefits associated with sales growth,

although excessive reliance on debt may directly reduce profitability.

This study contributes to the profitability literature by providing evidence that the effects of capital intensity and sales growth on profitability are not uniform and may depend on firms' financing structures. Specifically, the findings extend the understanding of the resource-based view and capital structure theory by demonstrating that leverage plays a complementary role in strengthening the profitability impact of sales growth but does not significantly alter the relationship between capital intensity and profitability. Furthermore, this study enriches the limited evidence from the Indonesian healthcare sector, particularly during the post-pandemic period. Managers should focus on improving asset utilization efficiency and carefully balancing growth strategies with financing decisions. Firms experiencing strong growth opportunities may benefit from external financing, provided that debt levels remain manageable. Investors may also consider firms' growth prospects and financing structures when evaluating future profitability.

This study's analysis is limited to healthcare companies listed on the Indonesia Stock Exchange, which may limit the generalizability of the findings to other industries. Furthermore, this study focuses solely on leverage as a moderating variable. Therefore, future studies are encouraged to examine companies from different sectors or countries, use alternative performance measures such as firm value, earnings quality, or market-based performance indicators, and include additional moderating variables such as corporate governance, firm size, liquidity, or innovation capability. Such expansion could provide a more comprehensive understanding of the determinants of corporate profitability across various institutional and industry contexts.

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