



Profitability and Firm Value of Manufacturing Companies: Internationalization Moderations

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Abstract. The purpose of the following study is to propose and test whether internationalization moderates the profitability-firm value relationship based on a sample of 110 manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the period 2009 to 2020. This study uses sub-group moderation analysis, moderated regression analysis, and pure moderation approaches in testing the effects of profitability, leverage, asset growth, and dividend payout ratio on firm value. The findings suggest that profitability and leverage predict firm value inversely while asset growth, and dividend payout positively affect it. In addition, the results imply that internationalization magnifies the negative effect of profitability on firm value. The findings of this study provide important contributions to understanding the intricacies between profitability, internationalization, and firm value with implications for manufacturing managers and investors.

Keywords: Profitability, Firm Value, Internationalization.

1 Introduction

1.1 A Subsection Sample

Corporate value is such an important concept for a company to guarantee success and survival. It mirrors the market perception of the capability of a company to reap future earnings and profit, therefore gauging the attractiveness of such a company to its investors. A high level of corporate value tends to attract many investors, thus accessing capital in bulk, which is required to further expand and develop. This enables the company to benefit from new opportunities, to expand its share in the market, and also to become more competitive. The greater the value a company possesses, the more actual potential investors are convinced of the future of the company and have a favorable opinion about it as well [1].

Good profitability is the primary component of high corporate value [2. Stable and large profits evidence good financial indicators and also correct management of the business. Such a high level of profitability means that the company has maximized its revenues and minimizes costs, thus leading to an increase in net income. Healthy profits guarantee a stable cash flow, offering an opportunity for the company to further invest in the business, provide shareholders with dividends, and reduce debt. All these will have a huge bearing on corporate value. High profitability shows likely appreciation of

corporate value and is observed from a slowly rising stock price [3]. Research by [4], [5], [6], [7] illustrated that the variable of profitability indicated a positive and significant effect on company value. Nonetheless, [8] reported that the variable of profitability did not provide any significant effect on the value of the company.

Other factors besides profitability that may influence firm value include capital structure, measured in terms of leverage or the debt-to-asset ratio. High leverage means a significant proportion of debt in the capital structure of a company, which can be harmful to the value of the firm. The high leverage represents a high portion of indebted companies, which they have to service fixed interest and principal payments regardless of the financial or operational condition of the company. In this case, the risk of bankruptcy is higher due to the commitments the company has to make, which can reduce the company's value. [3], [9], [10], [11] reported an adverse effect of capital structure on firm value, in direct contrast to, [5] who did not find any significant.

Further, higher asset growth was seen as a positive sign of health and future prospects of firm growth that leads to increase in value. If a company makes an effective effort to grow its assets, it typically means the business is expanding, there has been increased production capacity or they have made strategic asset acquisitions. This growth in assets demonstrates the company's ability to successfully increase its operational footprint and ultimately grow its revenues long-term, which should support an increased investor belief in their outlook for the future, hence helping drive up stock price and market capitalization. Increasing asset growth provides a significant opportunity for companies to achieve higher future profits [12]. Research [13] found a positive correlation between asset growth and company value. Conversely, [14] reported a significant negative effect of asset growth on company value.

Company value can also be influenced by the company's ability to distribute dividends. Stable and sustainable dividend payments can reduce investor uncertainty regarding the company's financial prospects. Companies that consistently pay dividends indicate stable cash flow and strong profitability. This signals to the market that the company's management is confident in their financial performance and future. When investors feel secure about the company's stability and growth, they are more likely to maintain or increase their investment, supporting the stock value and overall company value. A study by [15] found that an increase in firm value was partly due to increased dividend payouts. Conversely, [16] concluded that dividend policy does not affect firm value.

To the best of the researcher's knowledge, the moderating impact of internationalization on the relationship between profitability and firm value has rarely been studied, especially in developing countries. Therefore, internationalization is introduced as a moderating variable affecting the relationship between profitability and firm value. Internationalization allows companies to achieve greater economies of scale by meeting foreign market demand [17]. Higher volume production can reduce unit costs, increasing profitability and firm value. Thus, this study aims to examine the impact of internationalization on profitability, which in turn affects overall firm value.

2 Literature Review

Signaling theory, states the possibility of stock prices changing to reflect dividend policy changes [18]. This theory rests on the fact that managers have proprietary information related to the status of their companies and the prospects that are yet to be revealed to the investors. The manager has tried to communicate to the investors to raise the company's stock prices. Dividend payments can sometimes be considered as signals by managers regarding the financial position of the company. Signaling theory states that companies, in general, should provide clear and transparent information to the public in the form of financial statements or other disclosures [18]. This sort of information is important because it reduces the information asymmetry that management and investors have between themselves and can affect investment decisions and stock prices.

In this context, internal parties, namely management, provide signals, and external parties, namely investors, receive these signals [18], [19]. Managers, as signal givers, use various means to communicate information, including company announcements and financial reports. Conversely, investors, as signal recipients, use this information to assess the company's condition and prospects, impacting their investment decisions. Investors receive signals through corporate announcements, helping them make more precise and measured investment decisions. When corporate information is published and received by market players, they analyze whether the information is a positive or negative signal. If the information is perceived as a positive signal, the stock trading volume will likely increase as more investors become interested in buying the company's shares [20].

3 Methods

3.1 Population and Sample

The population in this study is manufacturing companies listed on the Indonesia Stock Exchange in 2009-2020. This study used a sample of 110 companies and 1320 observations selected through purposive sampling based on the criterion, 1) The availability of financial reports, 2) Companies have complete data related to the variables in this study.

3.2 Variable Measurement

Table 1. Variable Measurement

Variable	Description	Measurement
Price to Book Value (PBV)	The ratio that measures the value of a company derived from the share price to the book value of equity.	Closing PriceTotal EquityListed Shares
Return on Equity (ROE)	The ratio of net profit earned by a company each year to the company's total equity in the same year.	Earning After TaxTotal Equity

Debt to Asset Ratio (DAR)	The ratio obtained from the amount of debt to the amount of company assets.	Total Debt/Tota Asset
Asset Growth (AG)	Shows the asset growth in the research year compared to the previous year.	Assett-Assett-1/Assett-1
Dividend Policy (DPR)	The ratio obtained from dividends per share to net income per share.	Dividend/Earning After Tax
Internationalization (INT)	dummy variable with a value of 1 for companies that export and 0 otherwise.	dummy variable with a value of 1 for companies that export and 0 otherwise

3.3 Model

The regression equations in Equations 1 and 2 demonstrate the application of sub-group moderation analysis. This method tests whether the independent variable's effect on the dependent variable varies across subgroups within the sample. In this study, the subgroups were distinguished by whether companies expanded their market share internationally during the study period. To identify a moderator variable, the Chow test was employed, following the sub-group regression method [21], [22]. Equation 3 shows the Chow test formula used, where RSS_r = Restricted residual sum of squares for total observations; RSS_1 = Restricted residual sum of squares for exporting companies; RSS_2 = Restricted residual sum of squares for non-exporting companies; $RSS_{ur} = RSS_1 + RSS_2$. After calculating the F value, it was compared against the critical value from the F distribution table. If the calculated F value exceeded the critical F value, it indicated that internationalisation moderated the impact of profitability on firm value. Conversely, if the F value was less than or equal to the table value, internationalisation was not considered a moderator.

$$PBV_{export\ firm} = \alpha + \beta_1 ROE_{export\ firm} + \beta_2 DAR_{export\ firm} + \beta_3 AG_{export\ firm} + \beta_4 DPR_{export\ firm} + \varepsilon \quad (1)$$

$$PBV_{domestic\ firm} = \alpha + \beta_1 ROE_{domestic\ firm} + \beta_2 DAR_{domestic\ firm} + \beta_3 AG_{domestic\ firm} + \beta_4 DPR_{domestic\ firm} + \varepsilon \quad (2)$$

$$F = \left(\frac{RSS_r - RSS_{ur}}{k} \right) / \left(\frac{RSS_{ur}}{n_1 + n_2 - 2k} \right) \quad (3)$$

Equations 4, 5, and 6 illustrate the use of moderated regression analysis, a technique that enables the assessment of both the standalone effect of the moderating variable and the interaction effect between the independent variable and the moderating variable. This approach identifies either the direct effect of the moderating variable on the dependent variable or how the interaction between the independent and moderating variables influences the dependent variable. The rationale for the moderated regression analysis is divided into three main phases. First, it was through a regression equation with independent and control variables to predict a dependent variable; secondly, it was a regression equation but including the independent variable and the moderator variable to test their combined effect on the dependent variable; and thirdly, it was a regression equation in which independent variable, moderator variable, interaction term, and the control variables were included to fully explore the collective impact on the dependent

variable. In these stages, the process involves a system of assessing the direct and interacting effects of the moderating variable in order to gain an adequate understanding of its function in the independent-dependent variable relationship.

$$PBV_{i,t} = \alpha + \beta_1 ROE_{i,t} + \beta_2 DAR_{i,t} + \beta_3 AG_{i,t} + \beta_4 DPR_{i,t} + \varepsilon \quad (4)$$

$$PBV_{i,t} = \alpha + \beta_1 ROE_{i,t} + \beta_2 DAR_{i,t} + \beta_3 AG_{i,t} + \beta_4 DPR_{i,t} + \beta_5 INT_{i,t} + \varepsilon \quad (5)$$

$$PBV_{i,t} = \alpha + \beta_1 ROE_{i,t} + \beta_2 DAR_{i,t} + \beta_3 AG_{i,t} + \beta_4 DPR_{i,t} + \beta_5 INT_{i,t} + \beta_6 ROExINT_{i,t} + \varepsilon \quad (6)$$

Equations 7 represent the regression equations using the pure moderation analysis method, which allows for testing pure interaction between the independent variable and the interaction on dependent variable.

$$PBV_{i,t} = \alpha + \beta_1 ROE_{i,t} + \beta_2 DAR_{i,t} + \beta_3 AG_{i,t} + \beta_4 DPR_{i,t} + \beta_6 ROExINT_{i,t} + \varepsilon \quad (7)$$

4 Result and Discussion

4.1 Result

Table 2. Hypothesis testing results

Variables	Sub-Group		MRA			Pure Moderation
	(1) PBV	(2) PBV	(3) PBV	(4) PBV	(5) PBV	(6) PBV
ROE	-0.504*** (0.122)	-0.631*** (0.180)	-0.596*** (0.101)	-0.572*** (0.102)	-0.959*** (0.184)	-1.047*** (0.199)
DAR	-0.408*** (0.039)	-0.292** (0.141)	-0.385*** (0.040)	-0.360*** (0.043)	-0.364*** (0.044)	-0.363*** (0.044)
AG	0.155** (0.077)	0.410** (0.169)	0.182** (0.081)	0.204** (0.084)	0.204** (0.084)	0.200** (0.083)
DPR	1.556*** (0.109)	0.159* (0.090)	1.136*** (0.098)	1.061*** (0.098)	1.022*** (0.099)	1.050*** (0.099)
INT				0.061 (0.054)	0.034 (0.056)	
ROExINT					0.439** (0.210)	0.527** (0.219)
Constant	0.800*** (0.032)	0.855*** (0.087)	0.834*** (0.030)	0.775*** (0.056)	0.809*** (0.057)	0.834*** (0.032)
R-squared	0.402	0.150	0.295	0.279	0.264	0.272

4.2 Discussion

The analysis results show that profitability, as measured by return on equity (ROE), consistently has a negative effect on company value. This means that even though a company has a high ROE, it can still reduce the company's value. High profitability

does not always equate to high revenue. Companies can sometimes achieve higher profitability by cutting costs, such as reducing research and development (R&D) expenses or marketing costs. While these actions can boost short-term profitability, they may harm long-term growth prospects and competitive advantage, ultimately lowering company value. Additionally, earnings management practices have become common. High profitability is often susceptible to high levels of earnings management. If investors suspect that a company's profitability results from earnings management or accounting manipulation rather than actual business performance, it can lead to a loss of trust and a significant decrease in company value once the company's true financial health is revealed. The study's findings align with previous research by [23], [24], who found that increasing profitability is inversely proportional to company value. However, this result contradicts the study by [5].

The proxy of leverage, the debt-to-asset ratio (DAR), is negatively related to firm value. This result is consistent with pecking order theory in the sense that high use of debt leads to a decrease in the value of the firm [7]. There is also a probable increase in the cost of borrowing for the highly leveraged firm. In case of default, high-leverage firms will be viewed as risky by the lender and therefore demand higher interest to compensate for this escalated risk. This raises the average cost of capital of the firm, which can lower the value of the firm. Furthermore, high leverage can also be an indicator of financial distress and bad management by investors or analysts. Highly leveraged firms could assume the situation of being overborrowed and at the risk of financial distress. The market may perceive them in this negative light, which can eventually cause stock prices to depreciate and firm value to fall. This result is consistent with the previous study conducted by [10], [11], but contradict the results of [5].

Asset growth positively affects company value. When a company's assets grow, its value can increase. Asset growth often leads to increased production capacity, resulting in higher sales and profits because the company can produce more goods or offer more services. Sustainable revenue and profit growth are major drivers of company value, as they demonstrate the company's ability to generate future cash flows. Asset growth can indicate the company's progress, forming a favorable outlook for the company. The findings of [13] support these results. However, this study contradicts the results of [14], who found that companies with smaller asset growth rates perform better than those with larger asset growth rates.

Dividend policy variables also have a positive effect on company value. This means that the company chooses to distribute part of its profits as dividends, which can encourage investors to buy company shares, thereby maximizing the stock price. This view is in line with the bird in the hand theory, where dividends that are described as birds in the hand are preferred compared to retained earnings that are described as birds in trees or bushes because retained earnings do not receive any return from the shares owned. The larger the company distributes dividends, the company's stock price can increase and vice versa. This arises because distributing dividends can reduce the doubts faced by investors [6]. Therefore, if the company can pay substantial dividends, it will positively affect the company's value [15]. However, this view contradicts the research conducted by [16], [25], who found that dividend policy did not significantly affect company value.

Another fascinating result of this study is that the internationalization variable can confirm the negative relationship between profitability and company value. The role of exports carried out by companies will ideally increase the amount of profit and increase the value of the company because of the form of market expansion innovation. However, in this study, the manufacturing companies that were the subjects of the study did not benefit from increasing company value from internationalization efforts. Companies that expand internationally must face various different regulatory environments and cultural barriers, which can lead to increased compliance costs and slower market penetration, thus affecting profitability [26]. Additionally, international operations introduce complexity and increase operating costs, potentially reducing overall profitability [27]. This challenge is particularly pronounced for companies lacking the organizational structure needed to manage international activities effectively.

5 Conclusion

This study aims to analyze the effect of profitability on firm value moderated by internationalization in a sample of 110 manufacturing companies from the IDX, based on the 2009-2020 period. The results are identified by subgroup moderation analysis, moderated regression analysis, and pure moderation techniques. The first group of results showed that there was a negative relationship between profitability and leverage with firm value. This means that at least for the period under study, higher profitability and greater leverage do not lead to higher firm value within the manufacturing sector. On the other hand, asset growth and dividend payout ratio positively affect firm value, which means that the firms with a higher growth in assets and more generous policy of dividends are valued more by the market. Importantly, the paper shows that internationalization worsens the negative influence of profitability on firm value. It highlights the difficulty level of international expansion and its seriousness for profitability. Though internationalization can happen for many strategic purposes, it does not appear that this is the case in this paper since it aggravates the negative influence of profitability on firm value.

This study has several limitations. It considers only PBV as a measure of firm value. Second, the research is limited to manufacturing companies listed on the Indonesia Stock Exchange. Future research is expected to elaborate the other moderating factors that will support these findings or use a focus on other sectors and periods to provide a deep understanding of the dynamics among profitability, internationalization, and firm value.

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