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Firm growth and firm value: Moderation role of board size during Russia-Ukraine war

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ABSTRACT

This study's objective is to investigate the influence of board size as a moderator in a research model examining the impact of firm growth on firm value, considering the impact of the Russia-Ukraine war on Indonesia over the past seven years. The study consisted of 328 observations, ranging from 2014 to 2021. This study discovered that company expansion has a considerable beneficial impact on firm value. The board of directors has the ability to operate as a moderating variable, whereas the board of commissioners did not moderate the impact of firm expansion on company value. The results of the research aligned with the signaling theory, which posited that a company's ability to expand is a crucial indicator of its success. The market responded positively to this positive signal, drawing in new investors who subsequently increased the company's value. This study revealed that, despite their important functions in a company, the board of directors and the boards of commissioners were unable to mitigate the impact of firm expansion on firm value. This could be caused by external factors like the Indonesian economy and market during the Russia-Ukraine conflict. The Russia-Ukraine war affected Indonesian companies, but they remained stable until now. The researcher was unable to acquire financial data from non-public firms impacted by the conflict between Russia and Ukraine, resulting in a small sample size.

Contribution/Originality: The board of commissioners and the board of directors serve as moderating variables in this study. Price-to-Book Value (PBV) and Tobin's Q are two metrics that are used as supplementary tests to examine the worth of the company. The phenomenon under investigation has to do with Indonesia's reactions to the Russia-Ukraine war.

1. INTRODUCTION

The perspectives of accounting theory and strategic management should be well-integrated, particularly in terms of creating value for shareholders (Alberts & McTaggart, 1984; Myers, 1984). The goal of creating value for shareholders is widely accepted by companies and is incorporated into strategic management literature known as Value-Based Planning (Hax & Maljuf, 1984). Value-Based Planning aims to evaluate corporate strategies by determining the firm value. Firm value is identified through factors such as growth and profitability (Varaiya, Kerin, & Weeks, 1987).

The presence of value within a firm is critical since high value attracts investors and, as a result, boosts the company's profitability. To attain high company value, the firm must have a competitive edge that distinguishes it from others. This competitive advantage will attract customers, thereby impacting corporate profits. Investors prefer companies that generate consistent profits (Fajaria & Isnalita, 2018).

Many studies on entrepreneurs and classical entrepreneurial personalities indicate that many entrepreneurs come from disadvantaged backgrounds, influencing top management to initiate change and growth (Stevenson & Carlos Jarrillo-Mossi, 1986). The changes and growth that occur within a company often involve risks, either financial or ego-based. The financial risks are evident, but for successful entrepreneurs, their self-image is one of "infallibility." As the company grows, resources may appear to be abundant, but the real task is to grow together based on resources. Growing and successful companies become more complex. New markets, new products, expansion, and new technologies often accompany growth. Success in a growing company comes from good teamwork (Stevenson & Carlos Jarrillo-Mossi, 1986).

Growth in sales is one of the aspects that determine the firm's worth (Connolly & Hirschey, 2005). In a seminal analysis conducted by Miller and Modigliani (1961) growth is considered to have a beneficial effect on market value if it is anticipated that future investments will provide returns greater than the average rate and if growth is critically important to those returns. Growth affects predicted surplus profits, but erratic growth is not as valuable as consistent sales growth.

Results from prior investigations on how business growth affects firm value were inconsistent and unreliable. Varaiya et al. (1987) discovered that predicted profit increases boost business value. Pindado, De Queiroz, and De La Torre (2010) observed that company expansion boosts firm value and R&D (Research and Development) spending. Hermuningsih (2013) displayed that growth potential enhances corporate value. Kodongo, Mokoaleli-Mokoteli, and Maina (2015) revealed that sales growth and company size play crucial roles in managing firm value. Tambunan, Siregar, Manurung, and Priyarsono (2017) found that related party sales and income transactions have a significant positive impact on firm value. Fajaria and Isnalita (2018) discovered that companies with a high growth rate indicate high management productivity, serving as a positive signal for investors. Dang and Do (2021) identified similar outcomes, namely that business growth significantly impacted firm value in the wholesale market, but negatively in the food and beverage (F&B) sector. This illustrates the various applications of agency theory. Agency fees associated with growth or reduction can lower the cost of financing while increasing the company's value.

Other studies have also yielded diverse results. Helfert (1997) explains that growth results from operational cash flow changes in the company due to growth or decline in business volume. Firm growth is highly anticipated by both internal and external stakeholders because it delivers a favorable message to investors. Both internal and external stakeholders eagerly anticipate firm growth as it conveys a positive message to investors. Paminto, Setyadi, and Sinaga (2016) found that firm expansion has a significant negative impact on profitability and firm value. However, company expansion does not affect firm value in terms of profitability. Subagyo (2021) claimed that businesses with great development potential have a negative association between debt utilization and company value. However, debt utilization has a favorable influence on firm value for enterprises with limited growth possibilities. Syaifulhaq, Herwany, and Layyinaturrobaniyah (2020) found that business growth does not significantly impact company's value.

The Russia-Ukraine war began in 2014 but escalated in 2021 due to Russia's military buildup in the Russia-Ukraine border region. On February 24, 2022, the conflict expanded with a full-scale invasion of Ukraine (CNBCIndonesia, 2022b). Since Russia invaded Ukraine, the war has damaged European economic stability. Energy and commodity prices have significantly increased, thereby increasing the risks of inflation and economic growth in the European region (ECB, 2022). Europe is highly dependent on energy supplies from Russia. In 2020, Europe imported 27% of crude oil and 43% of natural gas. This situation has greatly harmed the countries in the European region. As if coping with the COVID-19 epidemic was not enough, Europe is also facing the impact of the Russia-Ukraine war, which has damaged the banking industry's profits (Boubaker, Nguyen, Trinh, & Vu, 2023).

The war between the two countries has caused Russia to divert its focus from the economy to defense and security sectors. The Russia-Ukraine war has not only impacted the European region but also Indonesia. The Russia-Ukraine war has had three main impacts: 1) an increase in energy commodity prices, reaching USD 100 per barrel. Other commodities, such as palm oil and nickel, also experienced price increases. 2) There has been an increase in the prices of food commodities, especially wheat, a crucial ingredient in the production of noodles. 3) inflation causes the Indonesian rupiah to depreciate (SINDOnews, 2022).

The price increases are primarily due to Indonesia's reliance on imports to meet domestic demands, including the supply from Russia, as well as the inability of the national budget to adequately address these needs. The war between the two countries has also led to stagflation in the Indonesian economy. Stagflation is a condition where economic growth slows down while inflation and unemployment rise simultaneously (Bisnis.com, 2022). Figure 1 depicts the inflationary conditions in several countries.

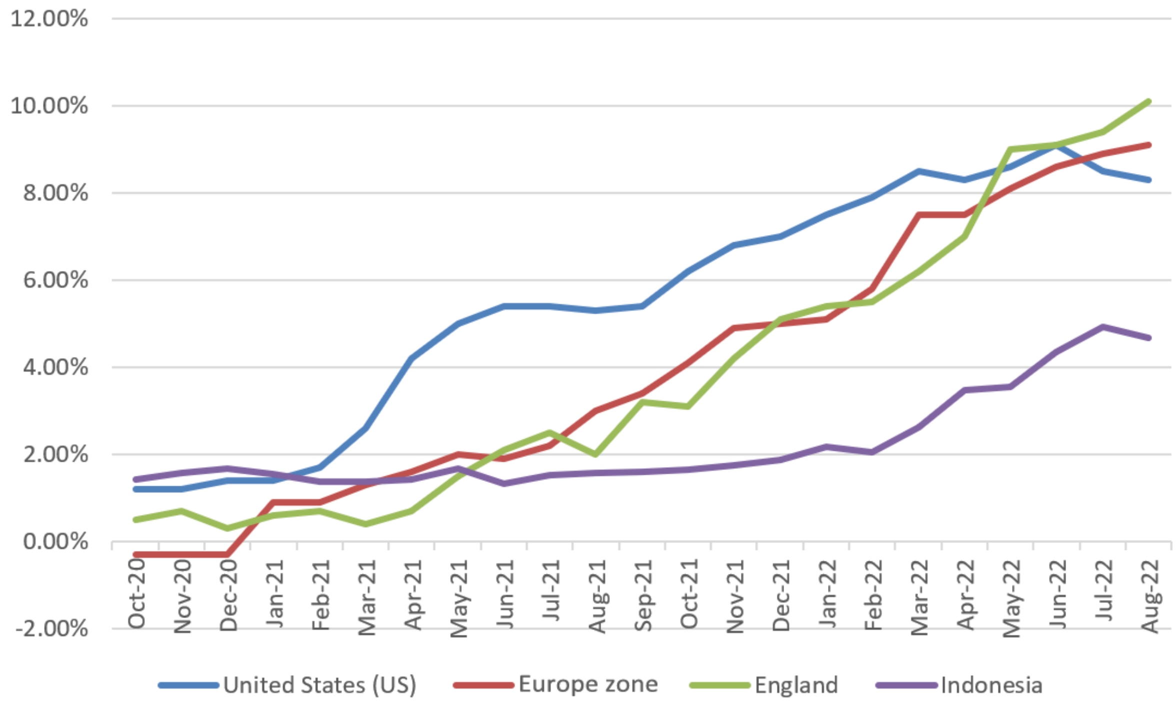

Figure 1. Inflation in several countries.

Source: CNBC Indonesia (2022a).

In the Figure 1, it is shown that all countries, including Indonesia, experienced inflation. However, Indonesia has a lower inflation rate than other countries.

Russia is one of the major and biggest producers of oil and natural gas in the world (Investor.id, 2022). According to Kompas.com (2022) Indonesia stands to gain from Russia's strategy of neglecting business and economic sectors. The Russia-Ukraine conflict has led to a depletion of global nickel supplies. Indonesia, on the other hand, is one of the world's main nickel producers. The international community has boycotted the export of Russian coal, which needs to be replaced by its competitors, such as Indonesia. The volume of coal exports to main destination countries from 2012 to 2021, as shown in Figure 2, has experienced fluctuations and tends to increase. As shown in Figure 3, the volume of nickel exports has seen a drastic increase in the past five years, particularly from 2020 to 2022. The value of palm oil exports, as indicated in Figure 4, has also shown a significant increase from 2020 to 2021.

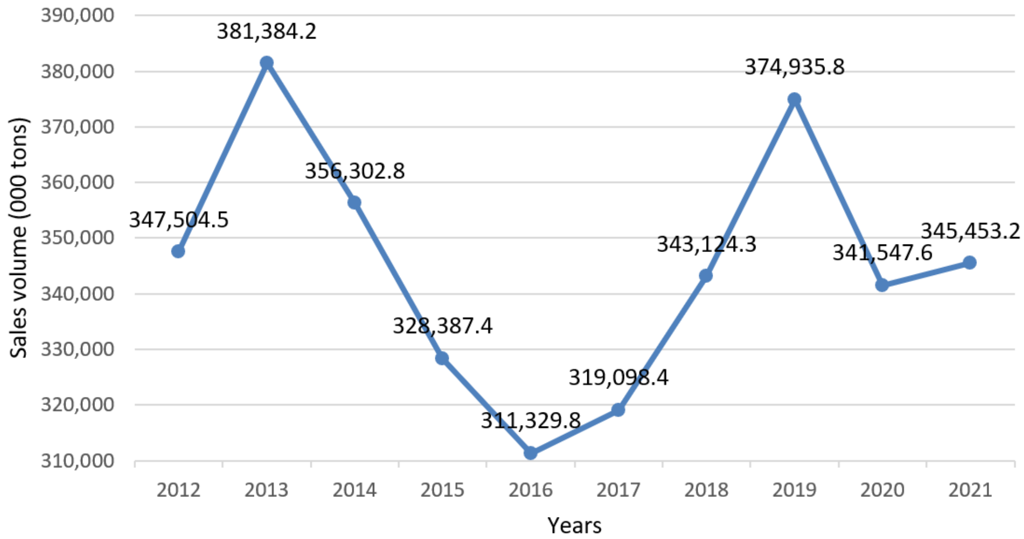

Figure 2. Volume of coal exports to main destination countries.

Source: BPS (2022a).

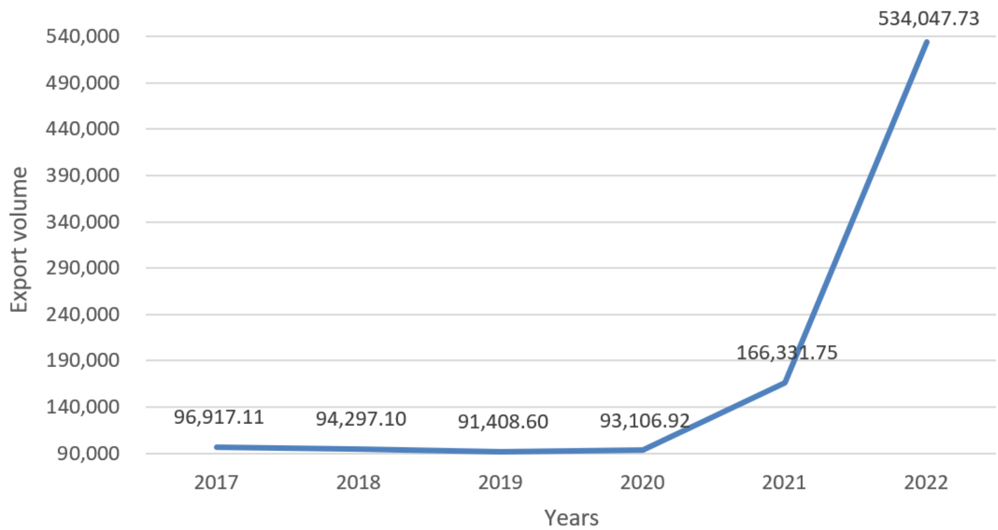

Figure 3. Volume of nickel exports from Indonesia in the last 5 years.

Source: Katadata.co.id (2022).

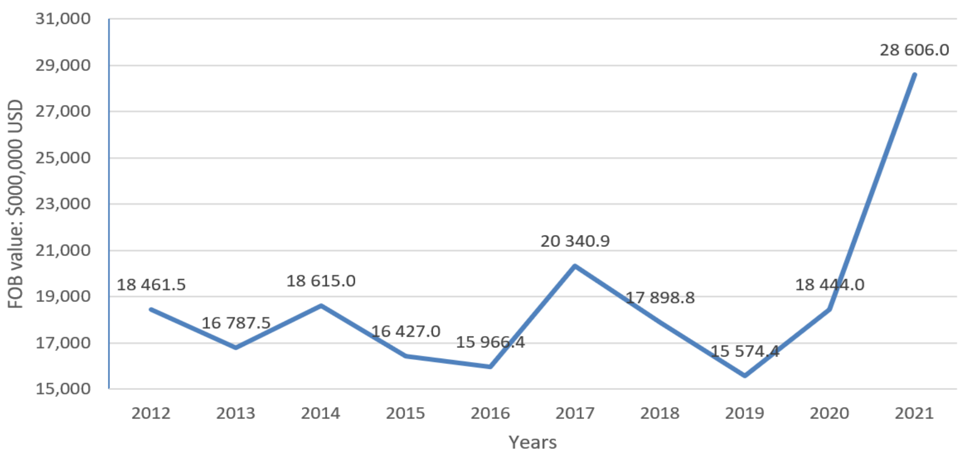

Figure 4. Value of palm oil exports by main destination countries.

Source: BPS (2022b).

The current situation presents an interesting opportunity to further investigate whether Indonesia is indeed benefiting from the Russia-Ukraine conflict, as well as its impact on firm growth and value. The board of directors and the board of commissioners are two moderating factors that the researchers want to look at in the link between firm value and business growth. The researchers have chosen the board of directors and commissioners as moderators because they are interested in their potential to enhance or weaken the relationship between company development and firm value. According to the experts, an extensive board of directors may assist the organization make strategic decisions by using their expertise and experience. Therefore, the board's involvement could boost the influence of company growth on business value. However, the opposite can also happen. Since several board members of a business might extend decision-making procedures due to conflicting opinions among members, impeding the company's growth, the board may lessen the effect of company's growth on company value. Indeed, we will still have a lot to learn about the impact of business development on firm value.

In fact, there is still much to be learned about how business development affects firm value. This study innovative due to the variety of phenomena the researchers studied, the variables they utilized, the model they employed, and the research object they employed. The researchers in this study concentrate on the mining, agriculture, and consumer goods sectors in light of the three impacts of conflict between Russia and Ukraine on Indonesia that were previously discussed.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Signalling Theory

The signaling theory helps reduce uncertainty on one side by providing credible information about the characteristics or intentions of the behavior of the other party that cannot be directly observed (Connelly, Certo, Ireland, & Reutzel, 2011; Jaufenthaler, 2023). Signaling has two basic requirements: it must be visible to the signal recipient, and it must incur some costs. If useful signals are effortlessly replicated and do not entail costs, all organizations would attempt to generate them, reducing or even removing the signaling effects (Connelly et al., 2011; Jaufenthaler, 2023; Spence, 1973).

2.2. Firm Value

The traditional business theory's basic idea, or purpose, is to maximize existing short-term revenue. The goal of the firm to increase long-term earnings often sacrifices short-term profits (Syaifulhaq et al., 2020). The benefits of long-term and short-term earnings are equally important, so, according to current firm theory, maximizing the wealth of a company's numerous stakeholders is the primary objective of the organization in order to raise firm value. This is clearly reflected in the firm's predicted future earnings in current value terms (Syaifulhaq et al., 2020).

The welfare of shareholders is reflected in the firm's value. Shareholder welfare and firm value have a positive influence. A publicly traded company's main goal is to increase the value of the business in order to increase the wealth of its owners or shareholders (Devita, Setyadi, Paminto, Defung, & Adhimursandi, 2021). Several analyses can be used to assess market value, such as Price Earnings Ratio (PER), Market Book Ratio (MBR), Price-Book Value Ratio (PBVR), Dividend Payout Ratio (DPR), and Dividend Yield Ratio (Brigham & Houston, 2021).

The study uses the Price to Book Value Ratio (PBV) to calculate firm value, or the capacity of the company to generate value in relation to the amount of capital invested. A high PBV ratio suggests that the stock price is higher than the book value per share. Therefore, one could claim that a company's performance in creating value for shareholders is correlated with its stock price (Brigham & Houston, 2021).

There are certain advantages to PBV. Firstly, book value provides a metric that is intuitively stable and comparable to the market price. PBV is suitable for investors who are unsure about discounted cash flow approaches. Secondly, book value provides all organizations with a consistent accounting standard. We can use PVB to assess comparable companies and identify overvaluation or undervaluation. Thirdly, the PBV ratio is a useful tool for evaluating firms with negative earnings, as the Price Earnings Ratio (PER) cannot be used for such assessments (Ang, 2010; Syaifulhaq et al., 2020).

2.3. Firm Growth

From an investor's perspective, a company's business strategy is considered successful when its sales experience growth. Sales growth also demonstrates the company's capacity to compete within its industrial environment (Irawan, Pulungan, Subiyanto, & Awaludin, 2022). Growth will influence the company's cash flow, with operational changes resulting from an increase or decrease in business (Devita et al., 2021). Higher sales will increase the company's revenue (Irawan et al., 2022).

2.4. Firm Growth and Firm Value

Growth is both a challenge and a goal for companies. The demand for continuous growth presents promising opportunities (Titus, Pieper, Josefy, & Welbourne, 2022). Firm growth is a key issue in management studies, defined as the firm's increase over the course of time. Firm growth is essential for job and economic development, allowing new firms to establish legitimacy, survival, and growth, which serves as a signal of success (Eisenhardt & Schoonhoven, 1990; Nason & Wiklund, 2018). Firm growth is not inherently synonymous with performance, and each organization has its own unique way of growing. The growth strategies companies pursue yield different results (Titus et al., 2022). Brush, Bromiley, and Hendrickx (2000) argue that managers sometimes benefit more than shareholders from firm growth. Ha, Tuan Anh, Yue, and Hoang Phi Nam (2021) revealed that company growth and value are positively correlated, and that sales positively affect firm value since they increase business profitability, which influences its value. Profit is a business's ultimate aim, and in order to attain it, it must produce the predicted beginning income through sales.

H_1: Firm growth has a positive impact on firm value.

2.5. Board of Directors and Board of Commissioners Can Moderate the Influence of Firm Growth on Firm Value

Two distinct tiers of the board hierarchy exist in Indonesia: the board of directors and the board of commissioners (Nugraheni & Muhammad, 2019). Under this two-tier board structure, the board of commissioners monitors performance, while the board of directors deals with managerial responsibilities (Arifai, Tran, Moslehpour, & Wong, 2018). Shareholders can optimize their majority ownership through the two-tier board structure. These boards' distinct duties may cause agency issues and information asymmetry, but they may also have diverse consequences for the operation of the company (Arifai et al., 2018; Firth, Fung, & Rui, 2007; Giovannini, 2010; Zhao & Millet-Reyes, 2007).

Conversely, as they are perceived as providing experience that adds value to the firm, a larger board of directors and commissioners may strengthen the moderating effect of firm growth on firm value.

H_2: The board of directors moderates the influence of firm growth on firm value.

H_3: The board of commissioners moderates the influence of firm growth on firm value.

3. RESEARCH METHODOLOGY

3.1. Sample and Data Collection

This study population consisted of 81 open and closed companies, including 26 companies in the agricultural sector with a subsector of palm oil plantations and food crops, 10 companies in the consumer goods sector with a subsector of food and beverage production using wheat, 34 firms in the mining business with a subsector of coal, 6 firms in the mining sector with a subsector of Oil & Gas Production & Refinery, and 5 companies in the mining sector with a subsector of Diversified Metals & Minerals. However, only data from the financial reports of open companies was used due to their easier accessibility, eliminating closed companies from the sample. Non-profitability sampling was the sampling technique used. Saturation sampling was the non-profitability sampling approach selected. Saturation sampling is a technique that uses the entire population as a sample. A different term for saturation sampling is census, which refers to a sample of the complete population; in this case, 81 firms were monitored over an eight-year period. This study covered an 8-year period from 2014, the start of the Russia-Ukraine conflict, until 2021. Therefore, the total observations were done 648 times. However, during the data collection process, some companies did not meet the criteria of being open companies and did not have complete financial reports, resulting in their elimination from the sample. As a result, the final sample consisted of 41 firms that were observed over an eight-year period, for a total of 328 observations. The conceptual model utilized in this investigation is shown in Figure 5.

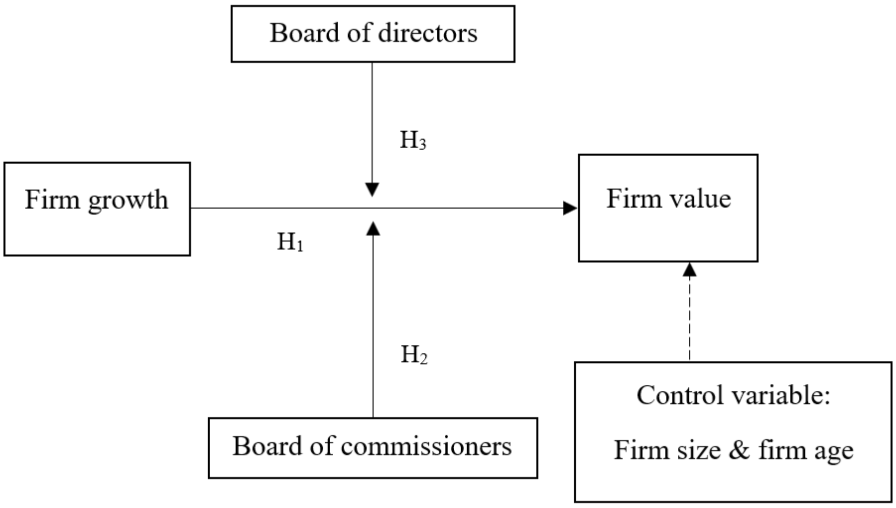

Figure 5. Conceptual model.

3.2. Definitions and Measurements

3.2.1. Firm Growth

The independent variable was firm growth. The formula for calculating firm growth is as follows (Batt, 2002; Brush et al., 2000):

Firm Growth = Percentage Change of Sales.

$$\text{Percentage Change of Sales} = \frac{sales_t - sales_{t-1}}{sales_{t-1}} \, x \, 100$$

3.2.2. Firm Value

The dependent variable is the firm value, and it is assessed using Price to Book Value (PBV). Additionally, Tobin's Q is used as an additional analysis to test the robustness of the model. The more the profit received by shareholders, the higher the company value, showing that the value of company may be used as an indication to improve shareholders' prosperity (Sucuahi & Cambarihan, 2016). PBV is measured using the following formula (Brigham & Houston, 2021):

$$\text{PBV} = \frac{Market\ Price\ per\ Share}{Book\ Value\ per\ Share}$$

Meanwhile, Tobin's Q is measured using the following formula (Chakroun, Salhi, Amar, & Jarboui, 2019; Lahouel, Zaied, Song, & Yang, 2021):

$$\text{Tobin's Q} = \frac{Market\ Value\ of\ Equity + Book\ Value\ of\ Debt}{Book\ Value\ of\ Total\ Assets}$$

3.2.3. Board of Directors and Board of Commissioners

In this study, the Board of Directors and the Board of Commissioners served as moderating variables. The size of the board of directors is determined by bringing together all of the board members (Chams & García-Blandón, 2019; De Andres & Vallelado, 2008), while the number of independents and board members of the Board of

Commissioners is used to calculate its size (Nugraha et al., 2021). The company's financial reports contained information about its Board of Directors and the Board of Commissioners.

3.2.4. Control Variable

The study's control variables were firm age and size. Firm age is determined by computing the gap between the current year and the year of the company's founding, whereas firm size is determined using LnTotalAssets (Covin, Green, & Slevin, 2006; Masenyetse & Manamathela, 2023).

4. RESULT AND DISCUSSION

4.1. Descriptive Statistic

Table 1 provides findings from the descriptive analysis. The firm growth mean, as shown in Table 1, is 6.994, with a standard deviation of 30.144. The firm value (PBV) description shows a mean of 1.092 with a standard deviation of 0.692. The mean of the firm's value (Tobin's Q) is 0.657, with a standard deviation of 0.512.

The average number of board members, as described, was 5.22, with a standard deviation of 1.534. The average number of commissioners, as described by the board, was 4.81, with a standard deviation of 1.676. The board describes the firm size as an average of 22.924 and a standard deviation of 1.339. Last but not least, the company age description revealed an average of 28.30 with a standard deviation of 17.097.

Table 1. Descriptive summary statistics.

	N	Minimum	Maximum	Mean	Std. deviation
Firm growth	328	-98.22	115.49	6.9441	30.11451
Firm value (PBV)	328	-0.79	2.91	1.0920	0.69161
Firm value (Tobin's Q)	328	0.02	2.00	0.6573	0.51175
Board of directors	328	3	11	5.22	1.534
Board of commissioners	328	2	10	4.81	1.676
Firm size	328	19.68	25.91	22.9242	1.33892
Firm age	328	7	100	28.30	17.097
Valid N (Listwise)	328				

Source: The research data were processed (2023).

4.2. Classical Assumption Tests

4.2.1. Normality Test

Table 2 presents the results of the normality test on the relationship between business growth and firm value, along with the moderating effects of the board of directors and commissioners. The residual data was found to be normally distributed, as evidenced by the Asymp. Sig. (2-tailed) value of 0.068, which was larger than 0.05.

Table 2. The result of normality test.

		Unstandardized residual
N		328
Normal parameters[a,b]	Mean	0.0000000
	Std. deviation	0.66969820
Most extreme differences	Absolute	0.048
	Positive	0.048
	Negative	-0.041
Test statistic		0.048
Asymp. sig. (2-tailed)		0.068[c]

Note: a. Test distribution is normal.
b. Calculated from data.
c. Lilliefors significance correction.
Source: The research data were processed (2023).

4.2.2. Multicollinearity Test

Table 3 presents the findings of the multicollinearity test for the effect of firm growth on firm value, with the board of directors and board of commissioners as moderating variables. Table 3 displays that the VIF (Variance Inflation Factor) values for each variable were smaller than 10, indicating that there was no multicollinearity.

Table 3. The result of multicollinearity test.

Coefficients[a]			
		Collinearity statistics	
Model		Tolerance	VIF
1	Firm growth	0.979	1.022
	Board of directors	0.678	1.476
	Board of commissioners	0.663	1.508
	Firm size	0.732	1.367
	Firm age	0.974	1.026

Note: a. Dependent variable: Firm value (PBV)
Source: The research data were processed (2023).

4.2.3. Heteroscedasticity Test

Figure 6 shows the findings of the heteroscedasticity test for the association between company growth and firm value, with the board of directors and board of commissioners acting as moderating factors. The test was conducted using a scatter plot of ZPRED (Standardized Predicted Value) and SRESID (Studentized Residual). The scatter plot showed that there was no discernible pattern among the data points; instead, they were dispersed randomly. Therefore, we could potentially conclude that we achieved the heteroscedasticity assumption.

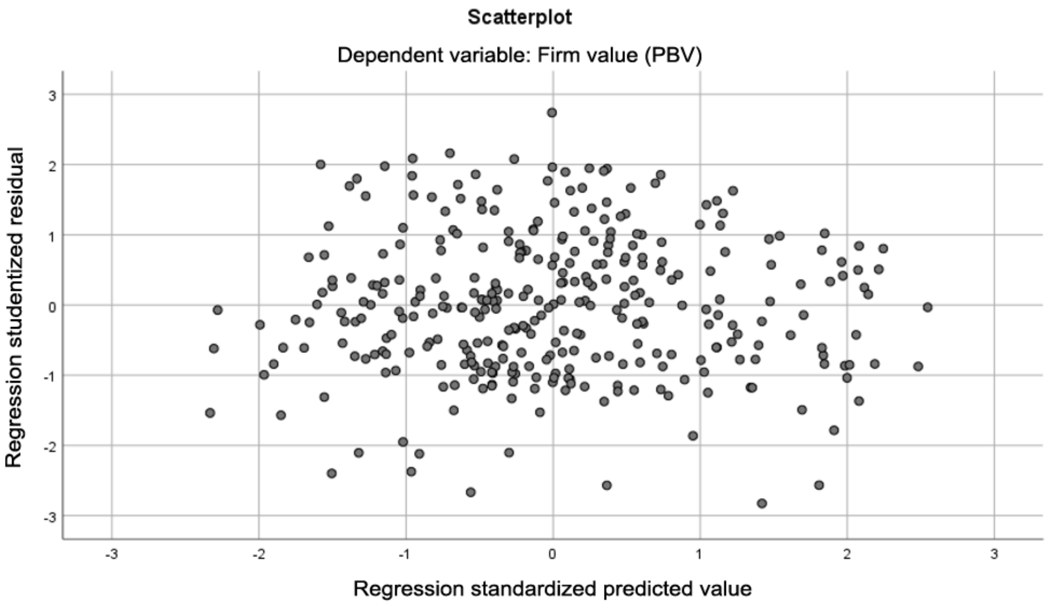

Figure 6. Heteroscedasticity test result using scatter plot of ZPRED and SRESID.
Source: The research data were processed (2023).

4.2.4. Autocorrelation Test

Table 4 displays the autocorrelation test results for the impact of firm expansion on firm value, with the board of directors and board of commissioners acting as moderating factors. Table 4 displays the Durbin-Watson (DW) statistic value of 1.757 with the critical value of du = 1.863. There was no indication that there was an autocorrelation issue because the DW value was within the range of du and 4-du (du < DW < 4-du). Consequently, the assumption of autocorrelation was met.

Table 4. The results of the autocorrelation test using the Durbin-Watson (DW) test.

Model Summary[b]	
Model	Durbin-Watson
1	1.757[a]

Note: a. Predictors: (Constant), Firm age, firm growth, board of directors, firm size, board of commissioners.
b. Dependent variable: Firm value (PBV)
Source: The research data were processed (2023).

4.3. F Test (Goodness of Fit Test)

Table 5 displays the findings of the F-test for the effect of company growth on firm value, with the board of directors and board of commissioners serving as moderating variables.

Table 5. F test result (Goodness of fit).

ANOVA[a]						
Model		**Sum of squares**	**df**	**Mean square**	**F**	**Sig.**
1	Regression	10.888	7	1.555	3.420	0.002[b]
	Residual	145.525	320	0.455		
	Total	156.414	327			

Note: a. Dependent variable: Firm value (PBV).
b. Predictors: (Constant), firm age, firm growth * board of commissioners, firm growth, board of directors, firm size, firm growth * board of directors, board of commissioners.
Source: The research data were processed (2023).

A significant value of 0.002, which was less than 0.05, is displayed in Table 5. As a result, it may be inferred that this model is statistically significant and appropriate for use in research.

4.4. Moderation Analysis

Table 6 highlights the effect of business growth on firm value, with the board of directors and board of commissioners serving as moderating variables.

Table 6. Results of moderation regression analysis: firm growth on firm value.

Coefficients[a]						
Model		**Unstandardized coefficients**		**Standardized coefficients**	**t**	**Sig.**
		B	**Std. error**	**Beta**		
1	(Constant)	1.766	0.682		2.589	0.010
	Firm growth	0.004	0.001	0.166	3.023	0.003
	Board of directors	0.011	0.030	0.025	0.375	0.708
	Board of commissioners	0.064	0.027	0.155	2.342	0.020
	Firm growth * board of directors	0.000	0.001	0.011	0.171	0.864
	Firm growth * board of commissioners	-0.002	0.001	-0.090	-1.461	0.145
	Firm size	-0.052	0.033	-0.101	-1.590	0.113
	Firm age	0.005	0.002	0.112	2.038	0.042

Note: a. Dependent variable: Firm value (PBV).
* represents the interaction between the independent variable and the moderating variable.
Source: The research data were processed (2023).

The regression equation derived from the test results is as follows:

PBV = 1.766 + 0.004 Firm Growth + 0.011 Board of Directors + 0.064 Board of Commissioners + 0.000 Firm Growth * Board of Directors - 0.002 Firm Growth * Board of Commissioners - 0.052 Firm Size + 0.005 Firm Age + ε

The board of directors and board of commissioners serve as moderating factors, the regression equation that illustrates the impact of company expansion on firm value.

a) The coefficient of the constant term, 1.766, indicated that in the absence of influence from other variables, the predicted value of firm value was 1.766 units.

b) The regression coefficient of the firm growth variable, 0.004, indicated that firm growth positively influenced firm value. With a significance level of 0.003, the computed t-value of 3.023 was less than the 0.05 threshold. Therefore, we can conclude that company expansion significantly impacted firm value (PBV) and we accepted H1.

c) Regression analysis revealed that the number of directors may moderate the link between company value and growth, with a coefficient of 0.000 for the firm growth variable and the moderation of the number of directors. This suggests that having a larger board of directors may amplify the impact of company expansion on firm value. Nonetheless, the t-value of 0.171, which was computed with a significance level of 0.864, was more than 0.05. Thus, either H2 was rejected or there was no discernible relationship between company development and firm value with the moderation of the number of board of directors.

d) A regression of the firm growth variable with the moderation of the board of commissioners showed that the size of the board of commissioners had no effect on the link between firm growth and firm value (-0.002). Therefore, adding more commissioners to the board won't strengthen the impact of company expansion on firm value. There was more than 0.05 in the computed t-value of 1.461, with a significance level of 0.145. Consequently, it may be said that either H3 was rejected or there was no discernible relationship between company value and growth when the number of commissioners on the board was moderated.

4.5. Discussion

4.5.1. Firm growth and Firm Value

The first finding showed that company growth had a substantial positive influence on firm value (measured by PBV). Firm growth is a key indicator of a company's success. The market widely accepts this favorable signal, attracting new investors and increasing the company's value. Despite the ongoing Russia-Ukraine war, Indonesian companies remain in a stable condition. Russia's neglect of the business and economic sectors may have contributed to this stability during the Russia-Ukraine war. Additionally, Russia has faced international boycotts, leading countries that were previously dependent on Russia to meet their needs by purchasing from competing countries like Indonesia. This indirectly benefits Indonesia. The findings of this study align with the theories and findings of Titus et al. (2022); Brush et al. (2000); Nason and Wiklund (2018) and Eisenhardt and Schoonhoven (1990).

4.5.2. Firm Growth, Board of Directors, Board of Commissioners and Firm Value

The second result suggested that, according to PBV, the board of directors may operate as a moderating element in the link between firm value and company growth. However, according to the third conclusion, the board of commissioners did not lessen the effect that company development had on firm value as determined by PBV. Particularly in Indonesian corporations, the board of directors and the board of commissioners hold important roles in enterprises. The non-significant results, however, showed how the commissioners and board of directors were unable to influence value and company development. Outside variables such as the state of Indonesian economy and the market during the conflict between Russia and Ukraine may explain this.

It can be concluded that there's a chance the commissioners and board of directors in the agricultural sector, specifically in the subsectors of palm oil plantations and food crops, companies in the consumer products industry in the subsector of food and beverage production that utilize wheat as an ingredient, companies in the mining industry in the subsector of coal, companies in the mining business in the subsector of oil and gas production and refinery, and companies in the subsector of diversified metals and minerals mining, became more passive as most of their export volumes increased during the war. This increase in export volume automatically increased the firms' sales, decreasing the efficacy of the board of directors and commissioners in affecting company growth and company value.

4.6. Robustness Check and Additional Test

Table 7 displays a robustness assessment of the impact of company growth on company value using the board of directors and board of commissioners as moderating variables. The robustness check in this study employed firm value measured by Tobin's Q.

Table 7. Robustness check result.

Coefficients[a]						
Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. error	Beta		
1	(Constant)	1.623	0.504		3.220	0.001
	Firm growth	0.003	0.001	0.148	2.700	0.007
	Board of directors	0.022	0.022	0.067	1.020	0.309
	Board of commissioners	0.050	0.020	0.163	2.469	0.014
	Firm growth * board of directors	-0.001	0.001	-0.045	-.731	0.466
	Firm growth * board of commissioners	0.000	0.001	-.018	-.292	0.770
	Firm size	-0.062	0.024	-0.163	-2.577	0.010
	Firm age	0.003	0.002	0.106	1.940	0.053

Note: a. Dependent variable: Firm value (Tobin's Q).
* represents the interaction between the independent variable and the moderating variable.
Source: The research data were processed (2023).

The robustness test, which regressed firm growth on firm value (Tobin's Q) while controlling for the number of directors and commissioners, the robustness test revealed that firm growth had a significant positive influence on firm value (Tobin's Q), with a regression coefficient of 0.003 and a significance level of 0.007, which is less than 0.05.

The analysis results in Table 7 show that the board of directors might operate as a moderating variable in the relationship between firm growth and firm value (Tobin's Q), but the board of commissioners was unable to. These findings are in line with the results obtained when firm value was measured by PBV. Therefore, we can argue that the study model demonstrated robustness when we evaluated firm value using both PBV and Tobin's Q.

5. CONCLUSION, CONTRIBUTIONS, LIMITATIONS, AND FUTURE RESEARCH

5.1. Conclusion

Based on previous research and signaling theory, firm growth is important for increasing firm value. Companies that achieve strong growth offer favorable signals to investors, increasing the company's worth. Therefore, the aim of this research was to investigate the relationship between company expansion and firm value as measured by Tobin's Q and PBV. The research also included the board of directors and the board of commissioners as moderating variables. The study examined 41 companies from 2014 to 2021, resulting in a total of 328 observations. The sampled companies consisted of those affected by the Russia-Ukraine war, as reported by SINDOnews (2022) including firms in the agricultural sector with subsectors such as palm oil plantations and food crops, consumer goods sector with subsectors of food and beverage companies that use wheat in their production, mining sector with subsectors of coal, mining sector with subsectors of oil & gas production and refinery, and mining subsectors with subsectors of diversified metals and minerals.

The study's findings are consistent with signaling theory, which indicates that good company growth can enhance firm value as investors perceive such growth as a positive signal for investment. Despite their significant roles in a business, this study shows that the board of directors and the board of commissioners are powerless to mitigate the effects of the company's expansion on its worth. This situation may be attributed to external factors such as the economic issues facing Indonesia and the status of the market amid the crisis between Russia and Ukraine. The investigation's results are in line with those of previous research by Varaiya et al. (1987); Pindado et al. (2010); Hermuningsih (2013); Kodongo et al. (2015); Fajaria and Isnalita (2018) and Dang and Do (2021).

5.2. Contributions

The investigation into the phenomenon of the war between Russia and Ukraine, together with the model that examines the impact of company development on firm value by utilizing the board of directors and commissioners as moderating factors, is still in its early phases. Consequently, our work fills a vacuum in earlier studies. The study's significance is due to the research methodology, which uses commissioners and the board of directors as moderating factors, as well as its application to signaling theory.

Another contribution is towards the future development of scientific knowledge as an additional reference, and it also contributes to companies by encouraging individuals within them to continue improving sales even after the conclusion of the Russia-Ukraine war.

5.3. Limitations

The study's limitations are its small sample size. This is because the researchers were unable to acquire financial data from non-public enterprises that were also impacted by the conflict between Russia and Ukraine.

5.4. Future Research

If future researchers take a similar topic, they are expected to pay attention to and adapt to the current phenomena and add variables to enrich the research findings in this area. Another approach that can be taken in future studies is to compare the firm growth of non-manufacturing and manufacturing companies. Future researchers can also consider using different measurements of firm growth, such as asset growth, or even use both measures as proxies for firm growth.

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