

Analysis of the Effect of Profitability and Leverage on Dividend Policy Moderated by Company Size

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Abstract. This research investigates how profitability and leverage impact dividend policy, considering company size as a moderating variable, in infrastructure companies listed on the Indonesia Stock Exchange (IDX) from 2018 to 2022. Dividend policy remains a complex financial issue for firms, with profitability generally enhancing the ability to pay dividends, while leverage can impose constraints. Recent perspectives suggest that company size could moderate these effects, offering a new angle for understanding dividend distributions in different organizational contexts. Utilizing a causal-conclusive research design, this study investigates the cause-and-effect relationships between the variables, analyzing data collected from RUPST (General Meeting of Shareholders) reports and annual financial statements. By focusing on the infrastructure sector, the study provides industry-specific insights into how dividend policies can be optimized based on profitability, leverage, and company size. The results of this research are anticipated to offer meaningful insights for financial managers, investors, and policy makers, enabling companies to customize their dividend strategies according to their specific financial and organizational characteristics. Additionally, this study enhances the existing literature by exploring the interaction between internal financial factors and company size in influencing dividend policy decisions, particularly in emerging markets such as Indonesia.

Keywords: Dividend Policy, Leverage, Profitability, Company Size.

Introduction

The capital market plays an important role in providing funds for the business world to finance investment, expand business and increase working capital. The Indonesia Stock Exchange (IDX) is a capital market in Indonesia as a place that brings together companies that are looking for large amounts of funds and investors who want to invest their money with the aim of making a profit (Zainuddin et al., 2020). By investing, investors expect a profit in the form of capital gains (profit on the difference between the selling price of shares and the purchase price of shares) and dividends (Laurensa & Widhiastuti, 2022). According to (Riri Mayliza & Nanda Suryadi, 2023) stable dividend payments are preferred by investors because they can provide certainty in providing profits rather than capital gains (share price increases) whose profits cannot be ascertained and are speculative.

According to (Nuraini, 2021) dividend policy is a financial problem experienced by companies that has not been solved until now. Many previous studies have discussed the company's dividend policy, but until now there is still no generally accepted explanation (Bassam Jaara et al., 2018). Dividend policy is a company management policy in managing company profits which can then be distributed to shareholders as dividends or used as retained earnings to finance company investment projects (Wahjudi, 2019). Dividend policy can be measured by several proxies, dividend yield is used by (Al-Najjar & Kilincarslan, 2016) as a proxy for dividend policy, while (Ahmad Kautsar, 2014) uses dividend payout ratio (DPR).

According to (FITRI et al., 2016) profitability is one of the factors that can affect dividend policy because dividend payments come from the profits earned by the company, if a company has a low level of profitability, it can affect the decline in dividend payments. The ability of a company to generate profits can be reflected by profitability. The company's profit determines how much dividends can be distributed to shareholders or how much profit can be retained to finance the company's investment (Zainuddin et al., 2020) shows profitability has a significant positive effect on dividend policy. However, these findings differ from (IZFS et al., 2022), which shows profitability has a significant negative effect on dividend policy and ("Profitability and Leverage as Determinants of Dividend Policy: Evidence of Turkish Financial Firms," 2021) shows profitability has no effect on dividend policy. Firm size can moderate profitability because according to (Devi Hoei Sunarya, 2013) the larger the size of the company, the higher the level of profitability, so that dividend payments made by large companies will be higher when compared to small companies. Research (Enny Prayogo et al., 2021) shows that firm size can moderate (strengthen) the effect of profitability on dividend policy. However, the results are different from (- & -, 2023) which shows that firm size cannot moderate the effect of profitability on dividend policy.

According to (Hardianto, 2021), leverage is another factor that needs to be considered in determining dividend policy. Leverage is able to reflect how much debt is used to finance corporate spending (I Made Sudana, 2009). High leverage can reduce dividend payments, this is due to an increase in interest expense on debt carried out by the company (Izdihar et al., 2020). Research (Wahjudi, 2019), shows that leverage has a significant negative effect on dividend policy. However, these findings differ from ("Profitability and Leverage as Determinants of Dividend Policy: Evidence of Turkish Financial Firms," 2021) which shows leverage has a significant positive effect on dividend policy and (Hardianto, 2021) which shows leverage has no effect on dividend policy.

Firm size can moderate leverage because according to (Izdihar et al., 2020) large companies have a greater ability to pay dividends, this is because large companies have large assets that can contribute to increasing company operations and profits. Therefore, even though large companies have debt, they can pay a large amount of dividends than small companies (Moeljono & Alfianto, 2020). Research (Moeljono & Alfianto, 2020) shows that firm size can moderate (strengthen) the effect of leverage on dividend policy. However, the results are different from (Maria Ulfa et al., 2020) which shows firm size can moderate (weaken) the effect of leverage on dividend policy and (Christiningrum & Rahman, 2023) which shows firm size cannot moderate the effect of leverage on dividend policy.

Literature View

Dividend policy is a crucial decision for companies that need to be considered and considered carefully, this includes determining the amount of profit that will be distributed to shareholders as dividends as well as the share of profit that will be kept by the company. There are several dividend policy theories that can be used as a reference in determining the dividend policy that is appropriate for the company, including dividend irrelevance theory, bird in the hand theory, tax preference theory, and agency theory. Agency theory describes the existence of various parties in the company that have different and often conflicting interests (Kautsar et al., 2022).

Dividends are proxied using the Dividend Payout Ratio, this ratio affects the investment decisions of shareholders and also has an impact on the company's financial condition (Robert Jao et al., 2022). (Hery, 2016) Dividend Payout Ratio is the ratio between dividends distributed and net income earned, and is generally expressed as a percentage. This ratio shows the portion of earnings per share distributed in the form of dividends (Donald E. Kieso et al., 2020).

Profitability refers to the level of net profit that can be achieved by the company during its operations (Dr. Kasmir, 2018). Profitability ratio is a tool to evaluate the company's ability to generate revenue or operational success in a certain period (Andi Iswandi, 2022). Return on equity describes how much the results obtained from the use of company equity in generating net income. Return on equity reflects how effectively the company manages its own capital (equity) and measures the return on investment made by shareholders.

Leverage is a measure of the company's debt ratio (Sitanggang, 2014). This ratio shows how much the company uses external debt to finance its operations and expansion (James C. Van Horne & John M Wachowicz, 2010). (Dr. Kasmir, 2018) Debt to Equity Ratio is a ratio used to evaluate the ratio between debt and equity. This ratio is used to determine the amount of funds provided by creditors to company

owners. The higher the leverage ratio, the greater the obligations that must be fulfilled by the company and vice versa.

Firm size is an indicator to measure the size of a company (Wesely M. Cohen & Daniel A. Levinthal, 2000). Larger and more established companies tend to have a broader view, better quality employees, and more sources of information compared to small, undeveloped companies (Ni Putu Desia Putri Pucangan & Dewa Gede Wirama, 2021). In this study, the natural log of total assets was used. The larger the size of a company, the higher the level of dividend payments given. Company size can be measured from the total assets owned (N.K. Malhotra, 2009). A large amount of total assets indicates that the company has good prospects in the future. In addition, larger companies tend to be more stable and more capable of generating positive profits.

This study uses a problem-solving approach by directly analyzing the effect of profitability and leverage on dividend policy and analyzing indirectly by involving firm size as a moderating variable so as to provide reinforcement that company size is an important determinant of the effect of profitability and leverage on dividend policy. This research uses a quantitative approach to test the hypothesis and research model. The sample is taken from representative and precise subjects in accordance with the phenomena, gaps, and literature reviews that have been described. Thus, this research approach can help companies maintain a healthy balance between growth, financial stability, and returns for shareholders.

A new approach in dividend policy research that takes into account the moderation of firm size opens up opportunities for a deeper understanding of how dividend policy can be adjusted to different firm conditions. For example, by considering firm size, research can reveal more specific patterns in how large and small firms respond to changes in dividend policy. This can provide valuable insights for financial managers in making decisions that are more appropriate to their firms' characteristics and needs. In addition, this new approach also allows research to further explore additional factors that may influence the relationship between dividend policy and firm size.

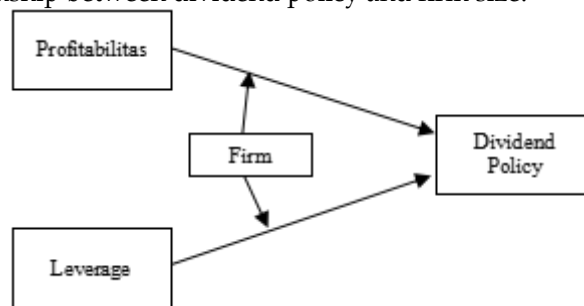


Fig. 1. Proposed research model

Methods

This research is a type of causal conclusive research that examines the cause-and-effect relationship between two or more variables (Qomusuddin et al., 2021). This research uses quantitative data because the data used are numbers (I Ghazali, 2017). This study uses the AGMS minutes report document and the annual financial statements of infrastructure sector companies listed on the Indonesia Stock Exchange (IDX) for the 2018-2022 period. The data was obtained through the official IDX website as well as the official websites of the companies used as research samples.

The causal relationship between constructs can be expressed by structural equations. The structural equation in this study is stated as follows:

$$DPR = \alpha + \beta_1 ROE + \beta_2 DER + \beta_3 SIZE + \beta_4 ROE * SIZE + \beta_5 DER * SIZE + \epsilon \dots (1)$$

Keterangan:

- α : Konstanta
- β : Regression Coefficient
- DPR : Dividend per Share
- ROE : Return on Equity
- DER : Debt to Equity Ratio
- SIZE : Firm Size (Moderasi Variabel)
- ϵ : Error

Data analysis techniques in this study used descriptive statistical analysis, multiple regression and moderated regression analysis (MRA) using modprobe. Moderated Regression Analysis (MRA) is used to test the ability of moderating variables to strengthen or weaken the influence of the independent variable on the dependent variable. Moderating Regression Analysis (MRA) is a special application of multiple linear regression, where in the regression equation there is a multiplication interaction between two or more of the independent variables (CHE-YAHYA & ALYASA-GAN, 2020).

Result and Discussion

I. Research Sampling Details

The research object in this study includes all infrastructure companies listed on the Indonesia Stock Exchange for the period 2018-2022. The following is a table of research sample details:

No.	Sample Criteria	Total Company
1.	Go public infrastructure companies listed on the Indonesia Stock Exchange (IDX) for the period 2018 - 2022.	69
2.	Present financial statements for the period 2018-2022 and have been audited by an independent auditor.	47
3.	Distribute cash dividends for the period 2018-2022.	24

The normality test aims to evaluate whether the regression model has residuals from dependent and independent variables that are normally distributed or not.

II. Kolmogorov Smirnov Test

		Unstandardized Residual
N		90
Normal Parameters ^{a,b}	Mean	0E-7
	Std. Deviation	3,80851665
	Absolute	0,361
Most Extreme Differences	Positive	0,361
	Negative	-0,328
Kolmogorov-Smirnov Z		3,420
Asymp. Sig. (2-tailed)		0,000

The results showed that the residuals of the dependent and independent variables in the regression model were not normally distributed because the significance was less than 0.05, namely 0.00. Therefore, data transformation is carried out using natural logarithms.

III. Kolmogorov Smirnov Test Data Transformation

		Unstandardized Residual
N		80
Normal Parameters ^{a,b}	Mean	0E-7
	Std. Deviation	0,98129243
	Absolute	0,117
Most Extreme Differences	Positive	0,117
	Negative	-0,060
Kolmogorov-Smirnov Z		1,046
Asymp. Sig. (2-tailed)		0,224

Through the results of data transformation, it shows that the regression model has a residual value of the dependent variable and the independent variable is normally distributed because the

significance value is more than 0.05, namely 0.224. This Study used SPSS version 20 to test multiple regression.

IV. Multiple Regression Test Result

IV.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	11,667	5,860	1,991	0,50
Probabilitas	-0,029	0,047	-0,607	0,545
Liquiditas	-0,028	0,092	-0,300	0,765
SIZE	-3,666	1,731	-2,119	0,037

$$DPR = 11,667 - 0,029ROE - 0,028 DER - 3,666 SIZE + \varepsilon$$

The value of profitability proxied by ROE, leverage proxied by DER, and SIZE has a value of 0, then the cash dividend policy proxied by DPR is 11.667. If the independent variable ROE increases by 1%, while the independent variable DER and the independent variable SIZE remain fixed, the dependent variable for DPR will decrease by -0.029. If the independent variable DER increases by 1% while the independent variable ROE and the independent variable SIZE remain, the dependent variable DPR will decrease by 0.028. If the independent variable ROE increases by 1% while the independent variable DER remains constant, the dependent variable for DPR will decrease by 3.666.

Moderated Regression Analysis (MRA) is a testing method in which one or more independent variables affect one dependent variable, with moderating variables as factors that strengthen or weaken the effect. The following are the results of regression analysis with moderation.

VI. Moderation Regression Analysis Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	20,400	8,095	2,520	0,014
Probabilitas	5,316	3,141	1,692	0,095
Leverage	-1,186	5,503	-0,216	0,830
SIZE	-6,240	2,391	-2,610	0,011
Probabilitas_SIZE	-1,566	0,925	-1,693	0,94
Likuiditas_SIZE	0,381	1,641	0,232	0,817

The equation model with moderation regression analysis is:

$$DPR = 20,400 + 5,316 ROE - 1,186 DER - 6,240 SIZE - 1,566 ROE_SIZE + 0,381 DER_SIZE + \varepsilon$$

Based on the equation above, if the variables ROE, DER, and SIZE, the interaction between ROE and SIZE, and the interaction of DER and SIZE are 0, the value of DPR is 20,400. The interaction between ROE and SIZE has a negative relationship with the dependent variable, namely DPR. If the interaction between ROE and SIZE increases by 1% while the other variables of the regression model are fixed, the dependent variable DPR will decrease by 1.566. The interaction between DER and SIZE has a positive relationship with the dependent variable, namely DPR. If the interaction between DER and SIZE increases by 1% while the other variables of the regression model are constant, the dependent variable DPR will increase by 0.381.

Conclusion

Based on the results of hypothesis testing, it is found that company size can strengthen the effect of profitability on cash dividend policy. The t statistical test results show a significant value of

ROA_SIZE of $0.94 > 0.05$ and a t statistical value of -1.693 , then H3 which states that company size is able to strengthen the effect of profitability on cash dividend policy is accepted. The result of H3 is that company size moderates (strengthens) the effect of profitability on cash dividend policy. This finding is in line with research (Adawiyah et al., 2024) which shows that firm size strengthens the relationship between profitability and dividend policy, especially in blue-chip companies.

Company size is unable to moderate (weaken) the effect of leverage on cash dividend policy. The t statistic test results show a significant value of DER_SIZE of $0.817 > 0.05$ and the t statistic value is 0.232 . This indicates that firm size does not moderate, either weaken or strengthen the effect of leverage on cash dividend policy. This is in accordance with the research findings of (Schreck & Raithel, 2018) that company size cannot weaken or strengthen the effect of leverage on sustainability reports.

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