The Managerial and Government Ownership Effect on Dividend Policy: The Moderating Role of Investment Opportunities

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Abstract

Purposes: This study investigates agency conflicts related to dividend policy within corporate companies, focusing on managerial ownership and government ownership.

Methods: Using a quantitative approach, the study employs multiple linear regression and moderation regression analyses. Data from 89 observations of State-Owned Enterprises (SOEs) listed on the Indonesia Stock Exchange from 2015 to 2019 are analyzed to examine the relationships between ownership structures and dividend policy, and the moderating role of investment opportunities.

Findings: The findings indicate that managerial ownership negatively influences dividend policy, with investment opportunities failing to moderate this negative effect. Conversely, government ownership positively impacts dividend policy, but investment opportunities weaken this positive effect. These results underscore the distinct impacts of managerial and government ownership on dividend policies within SOEs.

Novelty: This research offers new insights into agency conflicts and dividend policies of SOEs, a less explored area in corporate finance. It highlights the moderating role of investment opportunities, adding a unique perspective to the understanding of these relationships. However, the study is limited by its sample size, focusing only on publicly listed SOEs, while most SOEs have not gone public. Further research is necessary to fully understand agency conflicts in corporate financial relations across a broader range of SOEs.

Keywords: Dividend Policy, Government Ownership, Investment Opportunity Set, Managerial Ownership.

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INTRODUCTION

In the corporate world, companies often separate the roles of owners and managers to optimize profits and enhance company value. This separation can create an agency conflict, particularly regarding the management of free cash flow. Agency conflict arises when management allocates free cash flow to projects that may not align with the interests of shareholders (Rahmawati et al., 2018; Sianturi & Dianawati, 2018). To address this conflict, dividend policy can

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act as a mechanism for controlling how free cash flow is managed by the company's management (Duygun et al., 2018; Savitri et al., 2018).

Despite extensive research on dividend policy, several gaps still need to be addressed in understanding how managerial and government ownership impact dividend policy, especially within Indonesian state-owned enterprises (SOEs). Recent studies by Alamsyah et al. (2020), Duygun et al. (2018), and Setiawan et al. (2016) provide insights into various aspects of SOEs in Indonesia but do not fully explore how different ownership structures specifically influence dividend decisions in this unique context. Indonesian SOEs operate under specific political, economic, and social conditions that may affect their dividend policies differently compared to private firms (Hermansjah et al., 2021).

Moreover, the role of the investment opportunity set (IOS) as a moderating variable in the relationship between ownership structures and dividend policies has not been extensively studied. Although IOS is known to influence corporate financial decisions, its moderating effect on the relationship between managerial and government ownership and dividend policy in Indonesian SOEs remains underexplored (Alamsyah et al., 2020 & Susanti et al., 2019). Recent research by Alamsyah et al. (2020) and Duygun et al. (2018) touches upon IOS but lacks comprehensive analysis within the Indonesian SOE context.

The specific agency conflicts faced by Indonesian SOEs also necessitate further research. While agency theory provides a framework for understanding conflicts of interest between managers and shareholders Setiawan et al. (2016) and Sianturi and Dianawati (2018) its application to Indonesian SOEs, where government involvement is significant, requires more investigation. Studies such as those by Setiawan et al. (2016) and Susanti (2019) indicate the need to understand how government ownership influences dividend policies and how IOS may moderate these effects in the Indonesian context.

This study aims to provide empirical evidence on the effects of managerial and government ownership on dividend policy and seeks to understand how IOS moderates these effects. By focusing on Indonesian SOEs, this research addresses the identified gaps and contributes to a deeper understanding of how different ownership structures impact dividend policies. The originality of this study lies in its examination of IOS as a moderating variable, particularly within the context of Indonesian SOEs. Utilizing agency theory, this study explores how conflicts of interest between owners and management are managed through dividend policies.

A quantitative approach will be used to test these hypotheses, analyzing secondary data from 89 observations of Indonesian SOEs listed on the Indonesia Stock Exchange (IDX) for the period 2015-2019. Purposive sampling techniques are employed to select the sample, with 2020 excluded due to the differing business characteristics caused by the COVID-19 pandemic. Multiple linear regression and moderation regression techniques will be employed using SPSS software. Preliminary results indicate that managerial ownership negatively affects dividend policy, while government ownership positively affects it. Additionally, IOS does not moderate the effect of managerial ownership on dividend policy but weakens the effect of government ownership on dividend policy. These findings are expected to refine the understanding of dividend policy in Indonesian SOEs and provide valuable insights for future research and practitioners involved in policy formulation and investment decision-making.

Agency theory, introduced by Jensen and Meckling (1976) ensures management aligns with shareholder interests in corporate settings. However, access to internal information can lead to conflicts if personal interests conflict with shareholder interests (Brealey et al., 2011). Companies use oversight mechanisms, including agency fees Godfrey et al. (2010) and dividend policy to resolve agency conflicts and reduce costs by distributing free cash flow to shareholders (Easterbrook, 1984; Jensen & Meckling, 1976).

Agency conflicts in Indonesian state-owned enterprises (SOEs) can occur despite the government's role as the controlling shareholder and its direct appointment of the Board of Directors. These conflicts arise when the government's objectives, often focused on socio-

economic goals, clash with the economic interests of the SOEs themselves. For instance, the government may push SOEs to undertake infrastructure projects that are not financially profitable but necessary for national development, leading to misaligned interests between the government and the management of the SOEs. Studies have shown that such conflicting objectives can negatively impact the performance of SOEs, as government-driven agendas often overshadow the company's economic goals, thereby exacerbating agency conflicts and reducing overall efficiency (Apriliyanti & Randøy, 2019; Fitriningrum, 2020).

Managerial Ownership refers to the extent of ownership stakes that the company's management holds in the firm. This concept is based on the idea that when managers own shares in the company, their interests align more closely with those of the shareholders, reducing potential agency conflicts. However, the relationship between managerial ownership and company policies, such as dividend policies, can be complex and may vary depending on the level of ownership and other factors like manager

Dividend Policy is a corporate decision regarding the distribution of profits to shareholders in the form of dividends. It involves determining how much of the earnings will be distributed as dividends and how much will be retained in the company for reinvestment. The decision on dividend policy can be influenced by various factors, including the company's financial performance, cash flow, and ownership structure. For example, companies with high levels of managerial ownership may decide on a lower dividend payout to retain more earnings for future investments (Nofitasari & Gunarsih, 2022).

Managerial ownership and dividend policy are strategies to address agency conflicts (Jensen & Meckling, 1976). Agency theory suggests that the separation of ownership and control in a firm creates conflicts of interest between managers and shareholders, leading to suboptimal allocation of resources. Research by James et al. (2016); Rizqia et al. (2013); Ullah et al. (2012) indicates that higher managerial ownership is associated with lower dividend payouts, as managers with significant ownership stakes may prefer to reinvest earnings rather than distribute them as dividends. This preference for reinvestment over payout aligns with the agency theory's prediction of reduced agency costs through managerial ownership but at the expense of dividend payouts.

In the context of state-owned enterprises (SOEs), managerial ownership can enhance performance and corporate governance, addressing unique governance challenges such as political interference and bureaucratic inefficiencies. By aligning the interests of managers with those of the company through ownership stakes, SOEs can improve governance practices and operational performance. However, this alignment may lead to a preference for retaining earnings to finance future growth and investments rather than paying out dividends, thereby negatively impacting dividend policy.

H$_1$: Managerial ownership negatively affects dividend policy.

Companies with numerous investment opportunities tend to reduce dividend payments to support these investments, as seen in the research by Jones and Sharma (2001), Ardestani et al. (2013), Sharma (2020), and Subramaniam et al. (2011). Retaining earnings allows firms to finance profitable projects internally, fostering growth and maximizing shareholder value in the long term. In state-owned companies, this tendency to retain earnings over paying dividends is often more pronounced, as they frequently prioritize funding for potential investments such as business expansion or segment improvement over distributing profits as dividends (James et al., 2016; Ullah et al., 2012). This approach aligns with agency theory, where managerial ownership aims to balance the interests of managers and shareholders by optimizing the use of free cash flow for future growth opportunities.

Given this, the investment opportunity set is expected to strengthen the negative relationship between managerial ownership and dividend policy. Agency theory suggests that conflicts between managers and shareholders arise due to differing preferences for the use of free

cash flow. Managers with significant ownership stakes might favor retaining earnings to finance future investment opportunities, reducing immediate shareholder returns in favor of long-term growth (Jensen & Meckling, 1976). Empirical evidence supports this notion, showing that firms with high investment opportunities are less likely to distribute dividends (Ardestani et al., 2013; Jones & Sharma, 2001). Logically, managers who see high-return investment opportunities would prefer to reinvest the company's earnings rather than distribute them as dividends, aiming for higher future returns and company growth.

H_2: **The set of investment opportunities reinforces the influence of managerial ownership on dividend policy.**

Jensen and Meckling (1976) suggest that government ownership in companies can increase the risk of improper use of cash flow, leading to higher dividends. According to agency theory, government ownership can exacerbate agency problems as government objectives might not align with those of minority shareholders. However, dividend policy can be employed to mitigate these agency costs, enabling the government to extract wealth from state-owned enterprises through the tunneling effect (Lam et al., 2012). This effect occurs when controlling shareholders, such as the government, transfer resources out of the company for their benefit. In this context, dividend payments serve as a mechanism to distribute excess cash flow, reducing the potential for misuse by ensuring funds are returned to the shareholders, including the government.

Furthermore, revenue from dividends can support the country's economic activities, providing an additional incentive for government-owned companies to maintain high dividend payouts (Lam et al., 2012; Wang et al., 2011). Empirical evidence supports this theoretical perspective, with some studies showing a positive relationship between government ownership and dividend policy (Duygun et al., 2018; Goyal et al., 2019; Lam et al., 2012; Wang et al., 2011). These studies indicate that greater government ownership leads to higher dividends, as governments seek to extract income from these enterprises to support public finances and economic policy objectives. This aligns with the hypothesis that government ownership has a positive effect on dividend policy

H_3: **Government ownership has a positive effect on dividend policy**

Companies with growth opportunities often use free cash flow for investment, leading to lower dividend payments (Subramaniam et al., 2011). This is because retaining earnings to finance profitable projects can foster long-term growth and maximize shareh.older value. According to Fairchild (2010), high dividend payments may indicate a lack of profitable investment opportunities, as firms with fewer growth prospects may choose to return cash to shareholders rather than invest in new projects.

Government shareholders typically prefer cash dividends, as these payments can support public finances and economic policy objectives (Duygun et al., 2018). However, when companies, including state-owned enterprises (SOEs), identify profitable investment opportunities, the preference for cash dividends might be overridden by the potential for higher future returns from reinvestment. This scenario suggests that investment opportunities can moderate the relationship between government ownership and dividend policy. Some SOEs may opt not to pay dividends to preserve cash for future growth and competitive positioning, aligning their strategies with long-term investment goals rather than immediate dividend payouts.

H_4: **The set of investment opportunities weakens the influence of government ownership on dividend policy.**

METHODS

This study employs quantitative methods and statistical analysis tools to test hypotheses, focusing on measuring variables and analyzing data to draw conclusions. The descriptive, explanatory approach explains sample generalization and the relationship between variables.

This study investigates the company's dividend policy as the main dependent variable, focusing on the factors influencing its behavior. This study examines dividend policy, which involves a company's net profit distribution based on share ownership. The Dividend Payout Ratio (DPR) measures this policy, indicating the proportion of profits distributed to shareholders and retained within the company. A higher DPR indicates higher dividend payouts, while lower DPRs indicate higher retained profits.

Dividend Pay Out Ratio (DPR) = Total Dividend Payments/Net Income......................................(1)

This study analyzes managerial ownership and government ownership as independent variables. Managerial ownership, owned by parties involved in strategic decision-making, is measured by the proportion of shares in a company's total outstanding shares (Rizqia et al., 2013). It encourages management to act like shareholders, reduce dependence on external shareholders, and understand corporate decisions' consequences (Ullah et al., 2012).

Managerial Ownership (MNG) = Stock Owned by Management/Total Outstanding Shares.......(2)

Government ownership in a company can lead to agency conflicts and imbalance of control, affecting minority shareholders (Duygun et al., 2018). It is measured by the proportion of government shares to total outstanding shares and can result from differences in corporate commercial objectives and political agendas (Goyal et al., 2019).

Government Ownership (GOV) = Stock Owned by Government/Total Outstanding Shares......(3)

This study utilized the set of investment opportunities as a moderation variable to assess the relationship between the independent and dependent variables. Investment opportunities (IOS) are potential projects that could provide economic benefits and influence a company's value and growth prospects (Ardestani et al., 2013). The study measures IOS using the market to book value of equity (MVE/BVE) ratio, which reflects a company's market value and its capacity for growth.

Market/Book Value of Equity (IOS) = (Stock Price x Outistanding Shares)/Total Equity.............(4)

This research utilizes secondary data from third-party sources, including financial statements and annual reports of State-Owned Enterprise (BUMN) companies listed on the Indonesia Stock Exchange (IDX) from 2015 to 2019, sourced from IDX and company websites. The study examines state revenue from these SOEs, highlighting a positive trend and significant growth over this period. From an initial population of 120 observations, the final sample size was reduced to 89 observations due to the sample selection process based on specific criteria. Additionally, the data utilized in this study is unbalanced.

The COVID-19 pandemic, which began in early 2020, caused significant disruptions in business operations, corporate policies, and the global economy. Using data from the 2015-2019 period allows researchers to avoid distortions caused by the pandemic, ensuring that the analysis results more accurately reflect normal and sustainable conditions. According to the World Bank (2020), the pandemic has caused the largest economic shock in decades, significantly affecting financial and economic data validity. International Monetary Fund (2020) also reported substantial economic contraction globally, which would have impacted the analysis if the pandemic period had been included.

In the context of this study, which focuses on the effects of managerial and government ownership on dividend policy, using data beyond 2019 could introduce substantial bias. During

and after the pandemic, many companies, including those with government ownership, were forced to drastically alter their dividend policies, not as a reflection of ownership structure but in response to external economic pressures, fiscal interventions, and liquidity constraints. Government-owned enterprises (SOEs) in particular, may have been influenced by state-directed policies to prioritize national economic stability over dividend distribution, further complicating the analysis of ownership effects (Ankudinov & Lebedev, 2016).

Descriptive statistics is the first step in the data processing process by describing or describing the data that has been collected (Sekaran & Bougie, 2016). Descriptive statistics explain the general characteristics of this research sample in more detail so that the minimum and maximum values, mean values, median values, and standard deviations of dividend policy variables, managerial ownership, government ownership, and investment opportunity sets can be determined.

In the early stages of research, preliminary tests are conducted to check the basic assumptions of research data, preventing bias and ensuring representativeness (Field, 2013; Ghozali, 2016). The Normality Test, using the Kolmogorov-Smirnov Test with a significance level of 0.05, assesses if the residual data from the regression model is normally distributed. Data is considered normally distributed if the test shows significance above 0.05, indicating a lower risk of bias. Multicollinearity, which can result in inaccuracies in measuring the influence of independent variables, is tested using tolerance values and Variance Inflation Factor (VIF). A tolerance value $\geq$ 0.10 and VIF $\leq$ 10 indicate no significant multicollinearity (Field, 2013).

The heteroscedasticity test evaluates uneven residual variation using scatterplots; a good model shows evenly spread points around 0 without a specific pattern (Ghozali, 2016). The autocorrelation test checks for residual inequality between observation periods, which can falsely increase the significance of regression coefficients. The Runs Test, with significance levels > 0.05, indicates no autocorrelation (Ghozali, 2016; Gudono, 2015). These preliminary tests are crucial for ensuring the validity and reliability of the research results.

Multiple linear regression analysis is used to understand the extent to which the independent variables (managerial ownership and government ownership) affect the dependent variable (dividend payout ratio). Regression models were used to test the hypotheses in this study:

$$DPR = \alpha + \beta_1 MNG + \beta_2 GOV + e ....(5)$$

Moderated Regression Analysis (MRA) was chosen in this study because of the element of moderation variables that affect the relationship between two independent variables to one dependent variable. MRA is a tool or method used to test the effect of moderation variables in moderating the relationship of independent variables to dependent variables through interaction elements in regression equations (Ghozali, 2016). The regression model used in the study was formulated:

$$DPR = \alpha + \beta_1 MNG + \beta_2 GOV + \beta_3 IOS + \beta_4 MNG*IOS + \beta_5 GOV*IOS + e...(6)$$

Moderation variables, as described by Sharma et al. (1981), can have different types based on their relationship to the dependent variable and the independent variable. In the empirical model of moderation regression analysis above, the type of moderation variable of the investment opportunity set will be determined based on the comparison of the significance of the coefficients β3 with β4 and between the coefficients β3 with β5 according to Table 1.

RESULTS AND DISCUSSIONS
Descriptive Statistics

Descriptive statistics provide an overview of research variables, including independent variables (managerial ownership and government ownership), moderation variables (set of investment opportunities, represented by MVE/BVE value), and dependent variables (dividend

policy, measured by dividend payout ratio/DPR percentage). Descriptive statistics include the minimum and maximum values, averages, and standard deviations of each study variable, which are described in the following Table 2:

Table 1. Types of moderation variables

Types of Moderation	Sig. β3	Sig. β4 or β5
Pure moderation	Insignificant	Significant
Quasi-moderation	Significant	Significant
Moderation predictors	Significant	Insignificant
Homologizer moderation	Insignificant	Insignificant

Table 2. Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
MNG	89	0.000	0.006	0.000	0.000
GOV	89	0.510	0.900	0.630	0.100
IOS	89	0.567	2.988	1.699	0.729
DPR	89	0.100	0.750	0.345	0.152

Source: SPSS data processing.

This study used three independent variables: managerial ownership (MNG), government ownership (GOV), and the set of investment opportunities (IOS). Managerial ownership values ranged from 0 to 0.0065, with the highest value in PT Bank Tabungan Negara and an average of 0.000254. Government ownership values ranged from 0.51 to 0.90025, with PT Kimia Farma having the highest value and an average government ownership of 0.6308, indicating significant government shareholding. The IOS, measured by the Market to Book Value of Equity (MVE/BVE) ratio, ranged from 0.567168 to 2.98875, with an average of 1.69983 and a standard deviation of 0.72933. The dependent variable, dividend payout ratio (DPR), ranged from 10% to 75%, with PT Elnusa having the lowest and PT Bukit Asam and PT Telkom Indonesia having the highest values and an average DPR of 34.58% with a standard deviation of 15.23%.
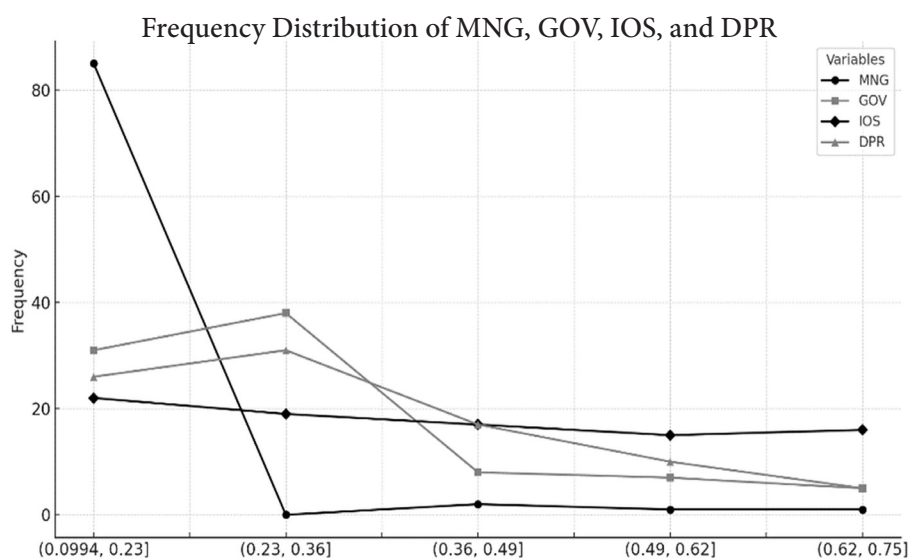

Figure 1. Frequency Distribution

Source: SPSS data processing.

The line chart illustrates the frequency distribution of four variables: MNG, GOV, IOS, and DPR. MNG has the most skewed distribution, with a very high frequency in the lowest range and quickly tapering off to nearly zero in higher ranges. GOV and DPR show more evenly spread distributions, with frequencies peaking in moderate ranges before gradually declining. IOS has a relatively uniform distribution across its ranges, indicating a more balanced spread of investment opportunities among the companies. Overall, the chart highlights the varying degrees of concentration and spread across these financial indicators.

Analysis of Research Results

Before undergoing a hypothesis test, the assumption test is important to avoid bias in the research results and improve the quality of the research model, thus allowing a more accurate interpretation of the results (Field, 2013). Several classical assumption tests, such as the normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test, are performed.

In this study, the normality test was used to check whether the data used in the regression model had a normal or near-normal distribution. The normality test was performed using the Kolmogorov-Smirnov Test, and the level of significance set was 0.05. The results of the normality test showed that both regression models, both multiple linear regression models (Model 1) and regression models with moderation (Model 2), had results with significance values of more than 0.05. Therefore, it can be concluded that both models have a normal or near-normal data distribution.

Table 3. Model 1 and Model 2 Normality Test Results

Model Regresi	Information	Unstandardized Residual
Model 1	Test Statistic	0.102
	Asymp. Sig (2-tailed)	0.219
Model 2	Test Statistic	0.086
	Asymp. Sig (2-tailed)	0.124

Source: SPSS data processing.

A multicollinearity test is performed to check whether there is a correlation among the independent variables in the regression model. Tolerance and variance inflation factor (VIF) values are used in this test. If the tolerance value ≥ 0.10 and the VIF value ≤ 10, then there are no symptoms of multicollinearity. The results of the multicollinearity test in Model 1 (multiple linear regression model) showed that the independent variables MNG and GOV met the criteria with a tolerance value of ≥ 0.10 and a VIF value of ≤ 10, so there were no symptoms of multicollinearity in Model 1. The results of the multicollinearity test in Model 2 (regression model with moderation) also show that the independent variable in Model 2 meets these criteria, so there are no symptoms of multicollinearity in Model 2.

Table 4. Model 1 Multicollinearity Test Results

Variable	Colliniearity Statistic		Information
	Tolerance	BRIGHT	
MNG	0,998	1,002	Free from Multicollinearity
GOV	0,998	1,002	Free from Multicollinearity

Source: SPSS data processing.

The heteroscedasticity test aims to determine whether there are inequalities in the variance of residual values among observations in the regression model. The method used in this test is to look at the scatterplot chart. The scatterplot diagram results for Model 1 show that the dots are scattered randomly around the number 0 and do not form a specific pattern, which indicates the inequality of variance in this model.

Table 5. Model 2 Multicollinearity Test Results

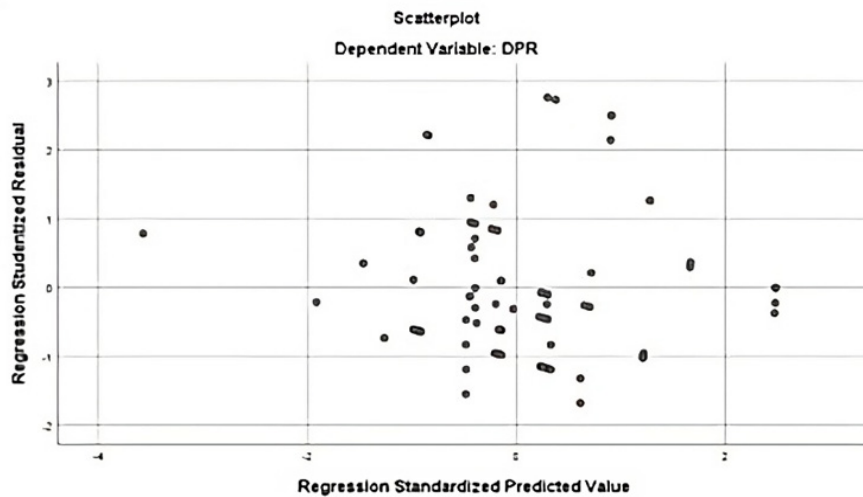| Variable	Colliniearity Statistic		Information
	Tolerance	BRIGHT	
MNG	0,134	7,461	Free from Multicollinearity
GOV	0,120	8,329	Free from Multicollinearity
IOS	0,208	4,994	Free from Multicollinearity
MNG*IOS	0,133	7,493	Free from Multicollinearity
GOV*IOS	0,153	5,270	Free from Multicollinearity

Source: SPSS data processing.

Figure 2. Model 1 Heteroscedasticity Test Results

Source: SPSS data processing.

In both regression models (Model 1 and Model 2), the results of the scatterplot diagram show that the dots are scattered randomly around the number 0 and do not form a specific pattern. Therefore, it can be concluded that there are no signs of heteroscedasticity in these two models. Although the results are similar in the absence of heteroscedasticity, there are specific differences between the scatterplot diagrams in model 1 and model 2. The scatterplot diagram in model 2 shows a finer spread of points with higher intensity.
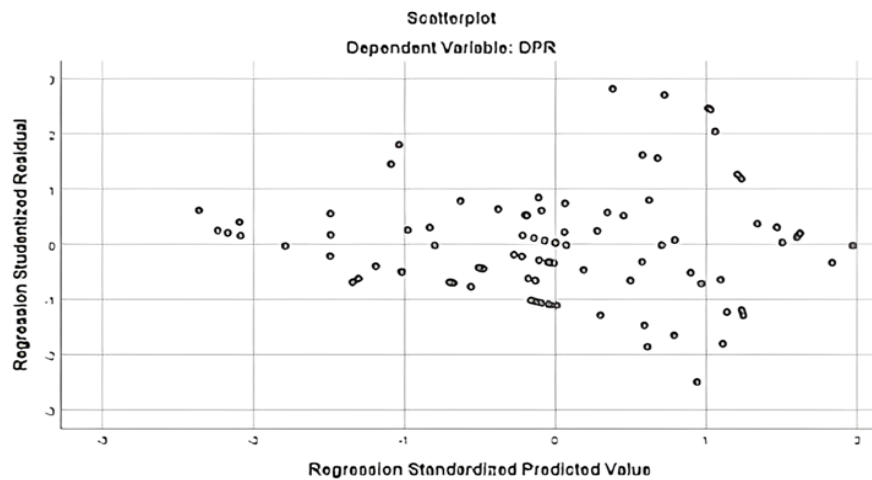

Figure 3. Model 2 Heteroscedasticity Test Results

Source: SPSS data processing.

Autocorrelation test using Runs Test approach in this study. Results from the test showed significance values greater than 0.05 for both models (model 1 and model 2). Therefore, it can be concluded that there are no signs of autocorrelation in either model, and both are free from autocorrelation problems.

Table 6. Model 1 Autocorrelation Test Results

	Unstandardized Residual
Test Value	-0.03030
Cases < Test Value	44
Cases >= Test Value	45
Total Cases	89
Number of Runs	47
With	0.321
Asymp. Sig. (2-tailed)	0.748

Source: SPSS data processing.

Table 7. Model 2 Autocorrelation Test Results

	Unstandardized Residual
Test Value	-0.00174
Cases < Test Value	44
Cases >= Test Value	45
Total Cases	89
Number of Runs	43
With	-0.532
Asymp. Sig. (2-tailed)	0.595

Source: SPSS data processing.

This study used two regression analysis models: multiple linear regression and moderation regression analysis (MRA). The first regression model examines the effect of managerial and government ownership on dividend policy. The second regression model examines how the investment opportunity set variable moderates the relationship between managerial ownership and government ownership of dividend policy.

Table 8. Summary of Model 1 Regression Results

	Unstandardized Coefficients		t	Say.
	B	Std. Error		
(Constant)	0,012	0,096	0,122	0,903
MNG	-33,016*	15,834	-2,086	0,040
GOV	0,543*	0,150	3,632	0,000
Adjusted R^2				0,149
F statistic				8,688
Fud .				0,000

Source: SPSS data processing.

Information:

* = significant at a significance level of 0.05

In regression analysis model 1, regression coefficients are used to describe the relationship between the independent variable and the dependent variable. The constant (α) has a coefficient of 0.012, indicating that if managerial ownership (MNG) and government ownership (GOV) have a value of 0, then the value of the Dividend Payout Ratio (DPR) will be around 0.012. The MNG variable has a coefficient of -33.016, indicating a negative relationship with DPR, while the GOV variable has a coefficient of 0.543, indicating a positive relationship with DPR. The t-test results show that the MNG variable has a significant negative influence on the DPR with a t value of -2.086 and a significance of 0.040, meaning that managerial ownership has a significant negative impact on dividend policy. Additionally, the GOV variable has a significant positive influence on the DPR with a t value of 3.632 and a significance of 0.000, indicating that government ownership has a significant positive impact on dividend policy. Therefore, the H1 and H3 hypotheses are acceptable.

Looking at Table 2 Descriptive Statistics, it is evident that the mean value of managerial ownership (MNG) is almost zero, specifically less than 0.1%. This suggests that, in practical terms, managerial ownership does not have significant power to influence or oppose the dividend policy mandated by the government and targeted through the state budget (APBN). In this context, although the regression results from Model 1 indicate that managerial ownership has a significant negative impact on the Dividend Payout Ratio (DPR) with a high beta coefficient (-33.016), the very low magnitude of this ownership suggests that its actual influence may be limited. The statistical significance might reflect the model's sensitivity to the variables rather than a substantial practical impact in reality. In other words, despite appearing statistically significant, managerial ownership, given its negligible level, likely lacks the capacity to alter decisions that are predominantly driven by government ownership.

Table 9. Summary of Model 2 Regression Results

	Unstandardized Coefficients		t	Say.
	B	Std. Error		
(Constant)	-0.562	0.286	-1.965	0.053
MNG	11.824**	41.192	0.287	0.775
GOV	1.314*	0.462	2.842	0.006
IOS	0.316*	0.131	2.418	0.018
MNG*IOS	-29.730**	26.003	-1.143	0.256
GOV*IOS	-0.411*	0.205	-2.002	0.049
Adjusted R^2				0.230
F statistic				6.246
Fud .				0.000

Source: SPSS data processing.

Information:

* = significant at a significance level of 0.05

** = insignificant

In the second regression model, several coefficients describe the relationship of variables to dividend policy (DPR). The constant (α) is -0.562 with a significance level of 0.053, indicating a negative initial relationship if all other variables are 0. The MNG (managerial ownership) variable has a positive coefficient of 11.824, signifying a positive relationship with the DPR, while the GOV (government ownership) variable also has a positive coefficient of 0.543, and the IOS (set of investment opportunities) variable has a positive coefficient of 0.316, both indicating positive relationships with the DPR. However, interaction variables MNG*IOS and GOV*IOS have negative coefficients, indicating negative relationships with the DPR. The t-test results showed that while MNG did not significantly influence the DPR, GOV, and IOS had significant positive effects.

Additionally, the interaction variable MNG*IOS did not significantly influence DPR, suggesting that IOS does not moderate the relationship between managerial ownership and dividend policy, leading to the rejection of hypothesis H2. The IOS is more suitable as an independent variable, as indicated by the significant β3 coefficient, while the β4 coefficient is not significant. Conversely, the interaction between government ownership (GOV) and IOS (GOV*IOS) moderates the negative influence of GOV on dividend policy, supporting hypothesis H4. Overall, the variables MNG, GOV, IOS, MNG*IOS, and GOV*IOS explained about 23% of the variation in DPR, with the remaining 77% attributed to other factors not included in the model.

Furthermore, in Model 2, the interaction between managerial ownership and the set of investment opportunities (MNG*IOS) does not significantly influence DPR. This can be explained by the extremely low magnitude of managerial ownership, meaning that even though a moderating effect might be theoretically expected, the weak presence of managerial ownership is insufficient to produce a meaningful moderating effect. This supports the finding that the moderating variable in Hypothesis 2 is not significant, indicating that IOS does not play a strong moderating role in the relationship between managerial ownership and dividend policy.

It is also important to note that while the beta coefficient for managerial ownership is high and statistically significant, the discrepancy between the low mean and high beta values could be due to data imbalance or potential multicollinearity within the model. This might cause the beta coefficient to appear large despite the variable's low practical impact. This underscores the importance of considering statistical results and practical implications in the analysis. Therefore, although the results are statistically significant, the practical significance of managerial ownership's influence on dividend policy in the context of SOEs may need to be reconsidered.

Using bootstrap regression as a robustness method in regression analysis provides additional validation for the results. Bootstrap regression is a statistical method that involves resampling the original data 1,000 times with replacement. This approach helps identify whether a specific sample influences the main regression results or if they remain consistent across all resamplings. The results of the bootstrap regression are presented in Table 10.

Tabel 10. Summary of Robustness Analysis

	Unstandardized Coefficients		p-value
	B	Std. Error	
(Constant)	0.012	0.079	0.875
MNG	-33.016*	52.135	0.011
GOV	0.543*	0.126	0.001
	Unstandardized Coefficients		**p-value**
	B	Std. Error	
(Constant)	-0.562	0.271	0.039
GOV	1.314*	0.457	0.005
IOS	0.316*	0.128	0.010
GOV*IOS	-0.411*	0.202	0.037

Source: SPSS data processing.

Information:

* = significant at a significance level of 0.05

** = insignificant

The results of the bootstrap regression analysis presented in Table 10 demonstrate consistency with the main regression results, indicating that the regression parameter estimates are robust. In the bootstrap regression, all variables that were significant in the main regression model, such as MNG (p = 0.011) and GOV (p = 0.001), remained significant at the same level of significance when resampled 1,000 times on Panel A. The interaction variable GOV*IOS in Panel B also showed significance in the main regression (p = 0.037). This confirms that the interaction effect between GOV and IOS on the dependent variable is stable and reliable.

Therefore, these bootstrap regression results provide additional validation that the parameter estimates in the main regression model are robust, and the conclusions drawn from this analysis can be trusted. The robustness of these results indicates that the relationships between the independent and dependent variables are not only applicable to a specific sample but can also

be generalized across different conditions or samples. Consequently, the findings of this study possess strong external validity, which is crucial for evidence-based policy and strategy decision-making.

Discussions

The study examines the effects of managerial and government ownership on dividend policy in state-owned enterprises (SOEs). Managerial ownership shows a significant negative impact on dividend policy, where higher ownership correlates with lower dividend payouts, consistent with prior research (James et al., 2016; Rizqia et al., 2013; Ullah et al., 2012). This finding supports the hypothesis that managerial ownership and dividend policies act as substitution mechanisms to control agency conflicts, especially in SOEs where managerial shareholding is designed to enhance performance (Florackis et al., 2015). The frequency distribution analysis further underscores this relationship, revealing that managerial ownership is heavily concentrated in the lower ranges, which aligns with the observed trend of reduced dividend payouts.

However, the interaction between managerial ownership, investment opportunities, and dividend policy was insignificant, indicating that other factors may be more influential in determining dividend decisions. The relatively uniform distribution of investment opportunities (IOS) across the sample may explain why the expected interaction effect did not emerge, as there may not have been enough variability to influence the relationship between managerial ownership and dividend policy significantly. Additionally, it is recommended that the arrangement of the hypotheses in the discussion be adjusted to reflect the logical flow of the analysis and the theoretical framework more effectively. The hypothesis regarding the interaction effect, which was not supported, likely reflects the predominance of other factors—possibly institutional or regulatory—that exert a greater influence on dividend policy decisions in SOEs.

Government ownership, conversely, has a significant positive effect on dividend policy, with greater government shareholding leading to higher dividend payouts, supporting the hypothesis and findings by previous research (Duygun et al., 2018; Goyal et al., 2019; Lam et al., 2012). This effect reflects high agency conflicts and the government's preference for cash dividends to extract wealth and fund economic activities (La Porta et al., 2000; Wang et al., 2011). Investment opportunities can moderate this relationship, reducing the tendency for higher dividends when profitable opportunities exist (Fairchild, 2010). Overall, managerial ownership, government ownership, and investment opportunities explained about 23% of the variation in dividend policies, indicating the significant influence of these variables in SOEs.

CONCLUSIONS

This research reveals the influence of managerial ownership, government ownership, and set of investment opportunities on dividend policy in SOEs listed on the IDX during 2015-2019. The results showed that stock ownership by management negatively impacts dividend policy, especially when managerial ownership is low, suggesting that this is a mechanism to reduce agency costs. However, there is no evidence that investment opportunities moderate such relationships.

In addition, the study found that government ownership contributes positively to a company's dividend policy. The greater the government ownership, the higher the dividend payout, but this relationship can weaken if there are promising investment opportunities.

The study's limitations include a small sample size of 89 observations and data usage up to 2019 to avoid distortions from the COVID-19 pandemic. While this ensures the analysis reflects stable conditions, it limits the ability to explore how extraordinary events, like the pandemic, impact the relationship between ownership structure, dividend policy, and investment opportunities. Future research could include pandemic and post-pandemic data to offer a more comprehensive understanding of SOEs' governance and decision-making, especially during economic instability.

REFERENCES

Alamsyah, A. R., Subroto, B., Aisjah, S., & Djazuli, A. (2020). The effect of ownership structure, capital structure, and investment opportunity set on firm values mediated by a dividend policy. *International Journal of Innovation, Creativity and Change*, *12*(6), 459–483.

Ankudinov, A. B., & Lebedev, O. V. (2016). Dividend payouts and company ownership structure amid the global financial crisis: evidence from Russia. *Post-Communist Economies*, *28*(3), 384–404. https://doi.org/10.1080/14631377.2016.1196882

Apriliyanti, I. D., & Randøy, T. (2019). Between politics and business: Boardroom decision making in state owned Indonesian enterprises. *Corporate Governance: An International Review*, *27*(3), 166–185. https://doi.org/10.1111/corg.12270

Ardestani, H. S., Rasid, S. Z. A., Basiruddin, R., & Mehri, M. (2013). Dividend payout policy, investment opportunity set and corporate financing in the industrial products sector of Malaysia. *Journal of Applied Finance & Banking*, *3*(1), 123–136.

Brealey, R. A., Myers, S. C., & Allen, F. (2011). *Principles of corporate finance* (10th ed.). New York: McGraw-Hill.

Duygun, M., Guney, Y., & Moin, A. (2018). Dividend policy of Indonesian listed firms: The role of families and the state. *Economic Modelling*, *75*(0), 336–354. https://doi.org/10.1016/j.econmod.2018.07.007

Easterbrook, F. H. (1984). Two Agency-Cost Explanations of Dividends. *The American Economic Review*, *74*(4), 650–659. https://www.jstor.org/stable/1805130

Fairchild, R. (2010). Dividend policy, signalling and free cash flow: an integrated approach. *Managerial Finance*, *36*(5), 394–413. https://doi.org/10.1108/03074351011039427

Field, A. (2013). *Discovering Statistics Using IBM SPSS Statistics* (4th ed.). London: SAGE Publications Ltd.

Fitriningrum, A. (2020). The impacts of government and management conflicting objectives on the state-owned enterprises (SOEs) Performances: the case of Indonesia publicly listed SOEs. *Jurnal Aplikasi Manajemen*, *18*(4), 632–644. https://doi.org/10.21776/ub.jam.2020.018.04.03

Florackis, C., Kanas, A., & Kostakis, A. (2015). Dividend policy, managerial ownership and debt financing: A non-parametric perspective. *European Journal of Operational Research*, *241*(3), 783–795. https://doi.org/10.1016/j.ejor.2014.08.031

Ghozali, I. (2016). *Aplikasi analisis multivariate dengan program IBM SPSS 23 Edisi 8*. Semarang: Badan Penerbit Universitas Diponegoro.

Godfrey, J., Hodgson, A., Tarca, A., Hamilton, J., & Holmes, S. (2010). *Accounting theory* (7th ed.). New York: John Wiley and Sons Inc.

Goyal, A., Jategaonkar, S. P., & Muckley, C. B. (2019). Why do privatized firms pay higher dividends? *Journal of Corporate Finance*, *60*, 101493. https://doi.org/10.1016/j.jcorpfin.2019.101493

Gudono. (2015). *Analisis Data Multivariat*. Yogyakarta: BPFE.

Hermansjah, R., Sugiarto, Ugut, G. S. S., & Hulu, E. (2021). The effect of government ownership on Indonesia's state-owned enterprises' (SOE) firm performance. *Accounting*, *7*(6), 1347–1352. https://doi.org/10.5267/j.ac.2021.4.003

International Monetary Fund. (2020). *World economic outlook update, June 2020: A Crisis Like No Other, An Uncertain Recovery*.

James, H., Benson, B. W., & Wu, C. (Ken). (2016). Does CEO ownership affect payout policy? Evidence from using CEO scaled wealth-performance sensitivity. *Quarterly Review of Economics and Finance*, *65*, 328–345. https://doi.org/10.1016/j.qref.2016.10.003

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, *3*(4), 305–360. https://doi.org/10.1016/0304-405X(76)90026-X

Jones, S., & Sharma, R. (2001). The association between the investment opportunity set and corporate financing and dividend decisions: Some Australian evidence. *Managerial Finance*, *27*(3), 48–64. https://doi.org/10.1108/03074350110767097

La Porta, R., Lopez-De-Silanes, F., Shleifer, A., & Vishny, R. W. (2000). Agency problems and dividend policies around the world. *Journal of Finance*, *55*(1), 1–33. https://www.jstor.org/stable/222549

Lam, K. C. K., Sami, H., & Zhou, H. (2012). The role of cross-listing, foreign ownership and state ownership in dividend policy in an emerging market. *China Journal of Accounting Research*, *5*(3), 199–216. https://doi.org/10.1016/j.cjar.2012.06.001

Nofitasari, S., & Gunarsih, T. (2022). Are managerial ownership and financial performance affect dividend policy? *Int. J. Econ. Bus. Manag. Res*, *6*(10). http://dx.doi.org/10.51505/ijebmr.2022.7007

Rahmawati, A., Moeljadi, Djumahir, & Sumiati. (2018). The effects of managerial ownership, leverage, dividend policy in minimizing agency problem. *Investment Management and Financial Innovations*, *15*(4), 273–282. https://doi.org/10.21511/imfi.15(4).2018.22

Rizqia, D. A., Aisjah, S., & Sumiati. (2013). Effect of managerial ownership , financial leverage , profitability , firm size , and investment opportunity on dividend policy and firm value. *Research Journal of Finance and Accounting*, *4*(11), 120–130.

Savitri, E., Riau, U., & Gumanti, T. A. (2018). Determinants of dividend policy and capital structure of state-owned companies and non-state-owned. *SOCIAL SCIENCES & HUMANITIES*, *December 2014*.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill-building approach* (7th ed.). Chichester: John Wiley & Sons, Ltd.

Setiawan, D., Bandi, B., Kee Phua, L., & Trinugroho, I. (2016). Ownership structure and dividend policy in Indonesia. *Journal of Asia Business Studies*, *10*(3), 230–252. https://doi.org/10.1108/JABS-05-2015-0053

Sharma, C. K. (2020). Economic governance: Does it make or break a dominant party equilibrium? The case of India. *International Political Science Review*, *41*(3), 451–465. https://doi.org/10.1177/0192512119866845

Sharma, S., Durand, R. M., & Gur-Arie, O. (1981). Identification and analysis of moderator variables. *Journal of Marketing Research*, *8*(3), 291–300. https://doi.org/10.2307/3150970

Sianturi, Y. H., & Dianawati, W. (2018). *The effect of state ownership and independent board of commissioners toward dividend policy moderating with political connections*. 37–44. https://doi.org/10.17758/erpub2.er0718411

Subramaniam, R., Devi, S. S., & Marimuthu, M. (2011). Investment opportunity set and dividend policy in Malaysia. *African Journal of Business Management*, *5*(24), 10128–10143. https://doi.org/10.5897/AJBM11.687

Susanti, N., Affandi, A., & Herwany, A. (2019). Implications of ownership structure on firm value with financial decision as intervening variable (state-owned enterprise sector of Indonesia stock exchange). *International Journal of Innovation, Creativity and Change*, *9*(12), 347–363.

Ullah, H., Fida, A., & Khan, S. (2012). The impact of ownership structure on dividend policy evidence from emerging markets KSE-100 Index Pakistan. *International Journal of Business and Social Science*, *3*(9), 298–307.

Wang, X., Manry, D., & Wandler, S. (2011). The impact of government ownership on dividend policy in China. *Advances in Accounting*, *27*(2), 366–372. https://doi.org/10.1016/j.adiac.2011.08.003

World Bank. (2020). *The Global Economic Outlook During the COVID-19 Pandemic: A Changed World*.