# Ownership Structure and Firm Performance: The Mediating Role of Firm Size

I Gede Cahyadi Putra[1*], I Kadek Bagiana[2], Kadek Indah Kusuma Dewi[3] and I Dewa Made Arik Permana Putra[4]

[1,2,3,4] Universitas Mahasaraswati Denpasar, Bali, Indonesia
*gdcahyadi@unmas.ac.id

**Abstract.** The primary objective of this study is to explore the correlation between managerial ownership and institutional ownership in relation to firm performance. Additionally, it seeks to investigate the mediating role of company size in this association. The methodology employed in this research involves path analysis, analyzing a dataset comprising 129 research entries. The findings from the data analysis reveal a positive impact of managerial ownership, institutional ownership, and firm size on firm performance. Conversely, managerial ownership and institutional ownership exhibit a negative influence on firm size. Furthermore, company size acts as a mediator in the relationship between managerial ownership and firm performance, as well as between institutional ownership and firm performance. From a practical standpoint, it is recommended that companies formulate ownership policies that motivate managers to commit to long-term performance, taking into account the impact of company size in strategic decision-making. While this study provides valuable insights, it is essential to acknowledge its limitations, particularly in terms of sample size and the time frame considered, which could serve as areas for future research.

**Keywords:** Managerial Ownership, Institutional Ownership, Firm Size, Firm Performance.

## 1 Introduction

In the contemporary and intricate business landscape, the structure of company ownership holds substantial influence over strategic and operational decision-making processes (Alabdullah, 2018). The dynamics of managerial ownership, representing the engagement of major shareholders in company management, and institutional ownership, denoting the involvement of institutional investors, have emerged as focal points in research across economics, management, and accounting (Detthamrong et al., 2017). However, the challenge in comprehending the correlation between ownership structure and firm performance lies in the inconsistency of findings within the literature.

This inconsistency presents practical challenges (Ducassy & Guyot, 2017). Companies often grapple with difficult decisions when determining their ownership structures (Kao et al., 2019). Shareholders and institutional investors wield significant

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influence in corporate decision-making, and the right ownership strategy can profoundly impact company growth, profitability, and overall value (Le & Phan, 2017). Therefore, gaining a deeper understanding of how managerial and institutional ownership shapes company performance is crucial for informed decision-making.

In addition to practical challenges, theoretical issues pervade the literature. Previous studies on the relationship between corporate ownership and performance yield mixed results. While some, like Alabdullah (2018), Detthamrong et al. (2017), Ducassy & Guyot (2017), Kao et al. (2019), and Le & Phan (2017), establish a positive relationship between managerial or institutional ownership and company performance, others fail to find a significant correlation or even demonstrate opposing outcomes. These disparities underscore a complexity in the relationships among these variables that remains incompletely understood.

Firm size, whether measured by total assets or revenue, can exert influence on various operational and strategic facets of a company. Larger companies may possess more resources for project development, cost reduction, and access to broader markets (Nguyen & Nguyen, 2020). Consequently, company size has the potential to mediate the impact of company ownership on performance. Using company size as a mediating variable seeks to elucidate the mechanisms linking ownership structure with company performance, thereby contributing to a deeper understanding of the factors shaping corporate performance within the context of ownership structure.

This research aims to address the aforementioned practical and theoretical challenges. Its primary goal is to explore the relationship between managerial ownership, institutional ownership, and company performance while assessing whether company size acts as a mediator in this association. Essentially, the research aims to elucidate why and how ownership structure influences company performance and whether company size plays a role in explaining this relationship.

Diverging from prior studies, this research distinguishes itself in several aspects. Firstly, it employs the latest datasets and advanced analysis methods to yield more precise and pertinent results. Secondly, the focus on the mediating role of firm size, a relatively underexplored dimension in the literature, promises fresh insights into the dynamics of the relationship between ownership structure and company performance. Thus, this research presents a novel and timely contribution to our comprehension of the role of ownership structure in the contemporary business and economic landscape.

## 2 Literature Review and Hypotheses Development

Agency theory serves as a pertinent conceptual framework for comprehending the link between a company's ownership structure and its performance (Dawar, 2014). This theory delves into the dynamics between shareholders, who aim to maximize company value, and managers, acting as agents managing the company on behalf of shareholders (Laiho, 2011). It sheds light on potential conflicts of interest arising between shareholders, who own the company, and managers, who oversee its day-to-day operations.

According to agency theory, managerial ownership can act as a mechanism to mitigate agency conflicts. When managers possess substantial shares in the company, their vested interest in enhancing company performance aligns to maximize their investment (Khan et al., 2021). Essentially, managerial ownership can harmonize the interests of managers with those of shareholders. In the same vein, institutional ownership in agency theory assumes a significant monitoring role (Ngatno et al., 2021). Institutional investors, such as pension funds or insurance companies, are motivated to ensure efficient company management and decisions that align with shareholder interests, given their responsibility to prudently manage funds (Alabdullah, 2021).

Agency theory underscores the potential for conflicts of interest between managers and shareholders in the absence of significant managerial ownership or weak institutional oversight (Dawar, 2014). Without strong incentives, managers may prioritize personal gains over the company's well-being (Laiho, 2011). Transparency and information disclosure to shareholders, as emphasized by agency theory, can mitigate information asymmetry, thereby reducing potential conflicts (Khan et al., 2021).

Within the realm of research on ownership structure and company performance, agency theory provides insights into the varying relationships among managerial ownership, institutional ownership, and company performance. Existing literature aims to understand how ownership structures can either mitigate agency conflicts or hinder their effectiveness in optimizing company performance. This analysis is pivotal for examining the impact of ownership structure on company performance within the agency theory framework.

The correlation between managerial ownership and company performance is grounded in the idea that managers, with ownership stakes, are incentivized to take actions that enhance performance (Nguyen & Nguyen, 2020). This alignment arises from managers experiencing a direct impact on the value of their shares based on the company's performance. Consequently, managerial ownership can curtail conflicts of interest between managers and other shareholders (Sakawa & Watanabel, 2020). Managers with ownership stakes are more likely to make decisions in line with shareholder interests, fostering long-term goals and rational decision-making (Shan, 2019). Numerous studies support the positive impact of managerial ownership on company performance (Alabdullah, 2018; Detthamrong et al., 2017; Ducassy & Guyot, 2017), leading to the hypothesis:

H1: Managerial ownership has a positive effect on firm performance.

The relationship between managerial ownership and company size pertains to situations where top-level executives own substantial shares in the company (Yasser et al., 2017). Managers with significant ownership have a vested interest in business development and expansion, promoting long-term investment decisions (Lin & Fu, 2017). This ownership structure can alleviate agency conflicts by encouraging managers to prioritize the long-term interests of shareholders (Merendino & Melville, 2019). This leads to the hypothesis:

H2: Managerial ownership has a positive effect on firm size.

Institutional ownership's connection to company performance involves institutional investors actively managing customer or shareholder funds (Dawar, 2014). These investors engage in rigorous supervision of company management, ensuring

decisions align with shareholder interests (Laiho, 2011). Long-term investment plans by institutional investors support rational decision-making and careful calculations, positively influencing company management and performance (Kao et al., 2019). The hypothesis is:

H3: Institutional ownership has a positive effect on firm performance.

Institutional ownership enhances a company's access to financial resources, facilitating growth and expansion (Rashid, 2020). These institutions bring substantial funds for investments, fostering market confidence and increasing liquidity (Kao et al., 2019). Institutional ownership demands active monitoring, ensuring effective operations, and decisions supporting long-term growth (Dang et al., 2018). This leads to the hypothesis:

H4: Institutional ownership has a positive effect on firm size.

Larger companies enjoy economies of scale, resulting in lower average production costs and higher profit margins (Dang et al., 2018). Diversified business portfolios safeguard against market fluctuations, enhancing consistent performance (Oktafianti & Rizki, 2020). Company size influences access to resources, talent, and global markets, with larger companies having advantages in obtaining loans, attracting top talent, and international expansion (Septiani & Daryanti, 2023). Larger companies can invest more in R&D, innovation, and have greater market influence, supporting better performance (Dawar, 2014). The hypothesis is:

H5: Company size has a positive effect on firm performance.

The advantages of larger companies, including greater resources and market influence, complemented by managerial and institutional ownership, incentivize managers to pursue growth strategies, leading to improved performance (Rashid, 2020). Larger companies can achieve operational efficiencies and have easier access to resources, further supporting initiatives for improved performance (Alabdullah, 2021). This leads to the hypotheses:

H6: Firm size mediates the effect of managerial ownership on firm performance.

H7: Firm size mediates the effect of institutional ownership on firm performance.

# 3 Method

The study encompasses all manufacturing firms listed on the Indonesian Stock Exchange from 2018 to 2020 as the research population. Employing a purposive sampling method, the sample selection criteria included manufacturing companies listed on the Indonesia Stock Exchange (BEI) during 2018-2020, those presenting consecutive annual financial reports, those reporting financial data in rupiah currency, and those having managerial and institutional ownership between 2018 and 2020. Forty-three companies met these criteria, resulting in a sample size of 129 data points over the three-year observation period. The research relies on secondary data extracted from the annual reports of these companies.

The measurement of managerial ownership involves determining the proportion of company shares owned by executive managers, including the CEO, CFO, COO, and other functional directors. This includes common shares, preferred shares, option

shares, or convertible shares, with data sourced from annual reports or ownership reports submitted to regulatory authorities. According to Arianpoor & Yazdanpanah (2022) and Tenggono et al. (2023), the percentage of managerial ownership per individual is calculated using the formula (Number of Shares Owned by Executive Managers/Total Company Shares)×100%.

Institutional ownership is gauged as the proportion of a company's shares held by institutional entities, such as pension funds, insurance companies, investment funds, and other investment managers. The calculation considers both common and preferred shares, with data gathered from annual reports, ownership reports filed with regulatory authorities, or financial databases. According to Khairunnisa et al. (2022), the percentage of institutional ownership is determined using the formula (Number of Shares Owned by Institutional Entities/Total Company Shares)×100%.

Company performance, evaluated through Return on Assets (ROA), assesses the efficiency of profit generation based on owned assets. According to Bagiana et al., (2023), ROA is computed as the ratio of a company's net profit to its total assets during a specific period, expressed as ROA=(Company Net Profit/Company Total Assets)×100%.

Firm size is quantified by taking the natural logarithm (ln) of a company's total assets during a specific period, a method commonly used to address variations in company asset data. According to Bagiana and Agustina (2021), the formula for this measure is Company Size=Ln (Total Company Assets).

To elucidate the relationships between variables, the research employs path analysis, with the SmartPLS tool used for data analysis. According to Nasution et al. (2021) SmartPLS undergoes external model testing and internal model testing, making it a suitable tool for evaluating complex models, especially in the context of social and business research.

## 4 Results and Discussion

This research used 129 observation data over three years of observation. Mean, Minimum, maximum, and standard deviation values are presented in Table 1.

**Table 1.** Descriptive Statistics

| Variable | Mean | Minimum | Maximum | Std. Deviation |
|---|---|---|---|---|
| MO | 0.110 | 0.0000 | 0.700 | 0.170 |
| IO | 0.588 | 0.0200 | 0.980 | 0.225 |
| ROA | 0.032 | -0.440 | 0.260 | 0.084 |
| SIZE | 13.380 | 10.300 | 35.980 | 54.346 |

Source: Data processing by researchers (2023)

Testing the outer model is related to testing the validity and reliability of research indicators. The validity test uses convergent validity and discriminant validity (AVE), while the reliability test uses Cronbach-Alpha values and composite reliability. The results of validity and reliability testing in this study are shown in Table 2.

**Table 2.** Validity and Reliability Test

| Variable | AVE | Cronbach's Alpha | Composite Reliability | R Square |
|---|---|---|---|---|
| MO | 1.000 | 1.000 | 1.000 | |
| IO | 1.000 | 1.000 | 1.000 | |
| ROA | 1.000 | 1.000 | 1.000 | 0.055 |
| SIZE | 1.000 | 1.000 | 1.000 | 0.052 |

Source: Data processing by researchers (2023)

The validity test results in Table 2 show that all variables have an outer loading value > 0.7 and an AVE value > 0.5. Thus, all variables in this study are valid for use as construct measures. The reliability test results show a Cronbach's Alpha value > 0.7 and a Composite Reliability value > 0.7, which indicates that the indicators used to form the construct are reliable.

The next test is inner model testing to evaluate the accuracy of the research model as a whole. This measurement test uses the coefficient of determination or R Square value. R Square shows the ability of exogenous variables to explain endogenous variables. The results show that the R Square ROA value is 0.055 while the R Square SIZE is 0.052. Based on this information, Q Square can be calculated, namely Q2 =1 – (1- 0.055) (1- 0.052) = 0.1041. This figure means that the ROA and SIZE variables are 10.41 percent influenced by MO and IO. Furthermore, the results of hypothesis testing are shown in Table 3.

**Table 3.** Testing the Direct Effect and The Role of Moderating Variables

| Model | Original Sampel | T-Statistic | P-Value | Hypothesis Decision |
|---|---|---|---|---|
| MO → ROA | 0.213 | 2.101 | 0.018 | H1 Accepted |
| MO → SIZE | -0.274 | 3.347 | 0.000 | H2 Accepted |
| IO → ROA | 0.269 | 2.935 | 0.002 | H3 Accepted |
| IO → SIZE | -0.234 | 2.829 | 0.002 | H4 Accepted |
| SIZE → ROA | 0.143 | 3.942 | 0.000 | H5 Accepted |
| MO → SIZE → ROA | -0.039 | 2.150 | 0.016 | H6 Accepted |
| IO → SIZE → ROA | -0.033 | 1.978 | 0.024 | H7 Accepted |

Source: Data processing by researchers (2023)

Table 3 shows the results of direct tests of MO, IO, and SIZE on ROA and the mediation effect of SIZE. Hypothesis 1 proposes that MO has a positive effect on ROA. These findings state that MO has a positive effect on ROA. The original sample is 0.213, the T-statistic is 2.101>1.96 and the p-value is 0.018, so the first hypothesis is

accepted. Hypothesis 2 proposes that MO has a positive effect on SIZE. This finding states that MO has a negative effect on SIZE. The original sample was -0.274, the T-statistic was 3.347>1.96 and the p-value was 0.000, so the second hypothesis was rejected. Hypothesis 3 proposes that IO has a positive effect on ROA. These findings state that IO has a positive effect on ROA. The original sample is 0.269, the T-statistic is 2.925>1.96 and the p-value is 0.002, so the third hypothesis is accepted. Hypothesis 4 proposes that IO has a positive effect on SIZE. This finding states that IO has a negative effect on SIZE. The original sample was -0.234 and the T-statistic was 2.829>1.96 and the p-value was 0.002, so the fourth hypothesis was rejected. Hypothesis 5 proposes that SIZE has a positive effect on ROA. These findings state that SIZE has a positive effect on ROA. The original sample is 0.143, the T-statistic is 3.941>1.96 and the p-value is 0.000, so the fifth hypothesis is accepted. Hypothesis 6 proposes that SIZE mediates the effect of MO on ROA. These findings suggest that SIZE mediates the influence of MO on ROA. The original sample is -0.039, the T-statistic is 2,150>1.96 and the p-value is 0.016, so the sixth hypothesis is accepted. Hypothesis 7 proposes that SIZE mediates the effect of IO on ROA. These findings suggest that SIZE mediates the influence of IO on ROA. The original sample is -0.033, the T-statistic is 1.978>1.96 and the p-value is 0.024, so the seventh hypothesis is accepted.

**Managerial Ownership and Firm Performance**

The outcomes of hypothesis testing reveal a positive correlation between managerial ownership and firm performance, carrying significant implications. Previous studies conducted by Alabdullah (2018), Detthamrong et al. (2017), and Ducassy & Guyot (2017) lend support to these findings. The evidence suggests that when executive managers hold substantial shares or ownership in a company, they are more motivated to efficiently manage the company and achieve favorable financial outcomes. This affirmation aligns with the principles of agency theory in economics, indicating that managerial ownership serves as a mechanism to mitigate conflicts between managers and shareholders (Khan et al., 2021). Managers with a stake in the company possess a heightened personal incentive to enhance company performance, given the potential for increased profits with improved company outcomes. The findings also imply that companies with significant managerial ownership are inclined toward sustaining positive performance (Alabdullah, 2021). Managers who have a vested interest in the company are more likely to commit to long-term operational excellence rather than pursuing immediate profits. These results underscore the importance of formulating managerial ownership policies that encourage managers to prioritize the firm's long-term interests. Potential strategies include issuing stock options to managers or implementing performance-based incentives linked to achieving the company's long-term objectives (Sakawa & Watanabel, 2020).

**Managerial Ownership and Firm Size**

The findings from hypothesis testing indicate that managerial ownership exerts a detrimental impact on firm size, yielding several noteworthy implications. These results suggest that as managers or key executives increase their share ownership in a company, the likelihood of the company being large in terms of size or assets diminishes

(Lin & Fu, 2017). This adverse effect may signify a managerial focus on personal interests rather than on fostering the company's growth and expansion. Managers with substantial shares in the company might prioritize maximizing their profits as shareholders over the pursuit of company growth (Yasser et al., 2017). This outcome could also signify a conflict of interest between managers and other shareholders (Shao, 2019), where managers prioritize short-term profits over the necessary risks for long-term growth, potentially impeding the company's expansion efforts. Elevated managerial ownership might dampen managers' motivation to undertake risky growth initiatives (Merendino & Melville, 2019), fostering a preference for the status quo or risk limitation, which can impede innovation and business expansion.

**Institutional Ownership and Firm Performance**

The outcomes of hypothesis testing reveal that institutional ownership positively influences firm performance, carrying several significant implications. These findings find support in research conducted by Kao et al. (2019), Rashid (2020), Sakawa & Watanabel (2020), and Shao (2019). The evidence suggests that when institutions, such as pension funds, insurance companies, or investment funds, possess substantial ownership in a company, there is a tendency for an improvement in company performance. Significant institutional ownership is linked to enhanced supervision and influence, with these institutions vested in ensuring efficient company operations and positive financial outcomes (Nguyen & Nguyen, 2020). Additionally, institutional ownership opens avenues for companies to access extra resources, including capital, talent, and business networks (Kao et al., 2019), facilitating performance improvement through investment, innovation, and business expansion. Substantial institutional ownership often aligns with long-term shareholder investments, creating incentives for company management to prioritize sustained long-term performance over immediate profits (Rashid, 2020). Robust institutional ownership also fosters trust in capital markets, benefiting companies in terms of increased access to capital and reduced capital costs (Alabdullah, 2018).

**Institutional Ownership and Firm Size.**

The outcomes of hypothesis testing indicate that institutional ownership adversely affects firm size, giving rise to several significant implications. This interpretation suggests that institutional investors often adopt a conservative strategy in managing their portfolios, displaying a preference for companies with lower risk over those emphasizing aggressive growth (Shao, 2019). Consequently, institutional investors may hold substantial shares in companies that offer stability but have slower growth potential. This outcome may also signify the considerable influence or control exerted by institutional investors in a company, leading them to manage the company with a focus on minimizing risk rather than maximizing growth (Yasser et al., 2017). Elevated institutional ownership can result in decisions geared towards maintaining investment stability and security, potentially hindering the pursuit of growth initiatives by the company (Lin & Fu, 2017). This negative impact may further impede a company's inclination toward adopting risky or innovation-oriented growth strategies if institutional investors advocate a more conservative approach (Merendino & Melville, 2019).

**Company Size and Firm Performance.**
The outcomes of hypothesis testing reveal that company size positively influences company performance, carrying several significant implications. This finding finds support in the research conducted by Nguyen & Nguyen (2020), indicating that larger company sizes are associated with better overall company performance. These results align with the notion that larger firms typically enjoy advantages in economies of scale, enabling them to produce goods or services at lower average costs per unit. This, in turn, can boost profit margins and enhance overall financial performance (Oktafianti & Rizki, 2020). A larger company size often translates to improved access to resources such as capital, high-quality labor, and global markets (Almashhadani & Almashhadani, 2022), providing ample opportunities for development, innovation, and enhanced performance. Larger companies also tend to exhibit superior business diversification and better risk management capabilities, contributing to stability in performance even amidst uncertain market conditions. The positive perception of large company size by investors and the public fosters trust, aiding companies in accessing capital and attracting high-caliber talent (Septiani & Daryanti, 2023).

**Managerial Ownership, Firm Size, and Firm Performance.**
The outcomes of hypothesis testing reveal that the impact of managerial ownership on firm performance is moderated by firm size, leading to several significant implications. The mediation findings suggest that the relationship between managerial ownership and company performance is influenced by the intermediary role of company size. In this particular context, it becomes apparent that company size can elucidate a portion of the positive impact of managerial ownership on company performance. These findings suggest that a segment of the positive influence of managerial ownership on company performance can be clarified through the mediating influence of company size. Consequently, company size is instrumental in conveying a fraction of the positive impact of managerial ownership on company performance. These results underscore the significance of economies of scale and enhanced resource access inherent in larger firms. The size of a firm can shape how managerial ownership impacts performance, and this dynamic has strategic implications for company management. The findings contribute to a more profound comprehension of the interplay between managerial ownership, firm size, and firm performance. With the awareness that company size functions as a mediator, company management can contemplate strategies to optimize the joint influence of managerial ownership and company size on performance. Furthermore, these implications hold relevance for shareholders and investors in making informed decisions regarding investments and risk management.

**Institutional Ownership, Firm Size, and Firm Performance**
The outcomes of hypothesis testing reveal that institutional ownership's impact on firm performance can be mediated by company size, carrying significant implications. This suggests that when entities like pension funds, insurance companies, or investment funds hold substantial ownership in a company, there is a tendency for an improvement in firm performance. The mediation findings underscore that company size serves as an intermediary in the connection between institutional ownership and company performance. In this context, the size of the company can elucidate a portion of

the positive impact of institutional ownership on company performance. These findings indicate that a segment of the positive influence of institutional ownership on company performance can be clarified through the mediating role of company size. Therefore, company size contributes to transmitting a portion of the positive impact of institutional ownership on company performance. These results deepen our comprehension of the interplay between institutional ownership, company size, and firm performance. Recognizing that company size acts as a mediator, both company management and stakeholders can contemplate more effective strategies.

## 5 Conclusion, Implication and Limitation

Concluding the research findings, it is evident that managerial ownership positively impacts firm performance, suggesting that executives with shares in the company are more inclined to excel in managing the company. Nevertheless, managerial ownership also exerts a negative influence on firm size, implying that higher ownership by managers correlates with a smaller company in terms of size or assets. Additionally, institutional ownership has a positive effect on firm performance, indicating that institutions like pension funds or insurance companies with significant ownership can enhance performance through vigilant supervision and influence. However, institutional ownership negatively affects firm size, suggesting that institutional investors lean towards a conservative approach, favoring investments in lower-risk companies.

Moreover, firm size acts as a mediator in the relationship between managerial and institutional ownership and firm performance, highlighting the role of company size in influencing the connection between ownership structure and performance.

The practical and theoretical implications of these findings are substantial. Companies should consider implementing managerial ownership policies to boost managerial incentives for better performance and long-term focus. Seeking support from institutional investors can provide additional resources and oversight, positively impacting company performance. Acknowledging the influence of company size in business strategy design is crucial for leveraging economies of scale and additional resources for improved performance.

This research contributes to a deeper understanding of the relationships among managerial ownership, institutional ownership, company size, and firm performance. It offers valuable insights into agency theory and related literature, emphasizing the mediating role of company size in connecting ownership structure with performance.

However, this empirical research has limitations, focusing solely on manufacturing companies listed on the Indonesian Stock Exchange within a specific period. Generalizing findings to other industries or contexts may not be directly applicable. Measurement of variables using secondary data from annual reports raises concerns about data quality and information asymmetry. The use of the SmartPLS analysis method introduces potential variations in results with different analysis methods.

Addressing these limitations, future research could diversify by including various industries and contexts to enhance result generalization. Further exploration of mediating mechanisms beyond company size and employing diverse statistical analysis

methods could strengthen the consistency of research outcomes. Examining how other factors, such as board structure or capital market regulations, impact the relationship between corporate ownership and performance could be a promising avenue for future research.

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