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The Strategic Role of Innovation as a Mediator Between Internal Firm Factors and Value Creation

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Abstract

Introduction/Main Objectives: This study analyzes the role of innovation in bridging factors that influence firm value. As is known, COVID-19 has triggered manufacturing companies to innovate both processes and products. **Methods:** This study places the innovation variable as an intervening variable to examine whether companies with adequate profitability, assets, managerial ownership, and determinants of R&D activities can drive firm value. The sample in this study was 132 manufacturing companies with an observation period of 2021-2024. **Finding/Results:** The results of this study show that the role of managerial ownership influences corporate innovation. Firm size hurts innovation, and the ability to generate profits in period t-1 can drive innovation in period t. Firm value is proven to be influenced by managerial ownership, size, profitability, and innovation. Innovation can also act as an intervening variable. **Conclusions:** This study contributes a discourse that the role of innovation in manufacturing companies is quite significant. Government encouragement can increase R&D activities. Thus, manufacturing companies should consider R&D activities, which are a positive signal for investors.
Keywords: Firm-value; Innovation; Managerial ownership; Profitability; Size

JEL Classification: G32, M14, H26, M41

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INTRODUCTION

Previous research has shown that investors are interested in firm value. Firm value also reflects the misalignment between the interests of the agent and the principal. This conflict of interest can arise because firm value is influenced by several factors that are part of management performance, including those previously discussed by several researchers, namely good corporate governance (GCG), profitability, and corporate social responsibility (CSR) (Mai, 2017). Setiadharma & Machali (2017) added the company size factor. Other studies state that innovation factors, both products and processes, are one of the variables determining firm value (Connolly & Hirschey, 2005; Fernández & Velasco, 2018; Rong & Xiao, 2017). In the industrial era 4.0, companies are required to innovate in order to survive and develop better. There are quite a few examples of companies that were unable to survive due to a lack of innovation. Aaslaid (2018) mentioned 50 companies that failed to innovate, including those with trademarks that used to dominate the electronics market, such as Toshiba, Hitachi, Motorola mobile phone company, and Yahoo online site.

Yahoo can only survive with a short-term profit strategy and loses the opportunity to survive in the long term because it is less responsive to the very rapid changes in digital consumer needs. In Indonesia, starting in 2017, online business threats have emerged against conventional businesses. Department stores and supermarkets are threatened with closure due to the increasing number and ease of access to online stores. Conventional hotel and taxi revenues have declined with the presence of online transportation services and budget hotel applications. The Economic Research Institute for ASEAN and East Asia (ERIA) in 2018 launched a survey result showing that Indonesia has a low level of Innovation compared to countries in Asia (Ambashi, 2018). In spurring innovation, the Indonesian Government provides a Super Tax Deduction policy for companies conducting research and development. This effort is expected to encourage manufacturing companies to undertake research and development activities, resulting in product and process innovations that contribute to Indonesia's overall growth in innovation. Innovation is part of efforts to increase company value, as previous research has demonstrated that innovation can boost company value. (Umrie & Yuliani, 2015). In line with research in several other countries, Fernández & Velasco (2018) stated that innovation in companies in Spain and Portugal can increase firm value. Likewise, Rong & Xiao (2017) found that innovation can drive product diversification and increase firm value in Taiwan. Several studies find conflicting results. Pardue et al. (2000) and Rodríguez & Valcarcel (2012) stated that the publication of innovation results is unable to provide a positive effect on demand or stock prices in the capital market; in this case, the publication of innovation results is considered not to have a positive effect on shareholder prosperity value. While in Indonesia, Musa & Adamu (2018) stated that R&D as an indicator of company innovation is not a priority for investors, so it does not affect the company's value.

Factors that influence the implementation of innovation in companies include company size, profitability, intellectual capital, ownership structure, and capital structure. Damanpour (1992), Connolly & Hirschey (2005), Amin & Shoaib (2017), and Li et al. (2017) provide research conclusions that company size in manufacturing companies significantly influences innovation. Company size indicates the resources available; of course, the greater the resources available, the greater the company's ability to innovate, which aligns with research (Cohen & Klepper, 1996). On the other hand, the adoption of innovation in a company cannot be separated from the control of shareholders. The relationship between agent and principal, as explained in agency theory (Jensen and Meckling 1976), provides basis for understanding the interests of shareholders and managers in adopting innovation. Ownership characteristics will have an impact on the owner's control over management, thus influencing management's courage in making quite risky innovation decisions. As previous studies have demonstrated, different ownership structures have distinct performance implications for the company. Sakaki & Jory (2019) indicate that higher levels of institutional ownership are associated with increased patenting activity and greater patent citation intensity, reflecting stronger innovative performance. However, research conducted by Zeng & Lin (2011) states that government ownership in manufacturing companies is more capable of encouraging research and development activities and expenditures than institutional ownership. In other words, State-Owned Enterprises are more innovative than public companies. As Al-Najjar (2010), Saad et al. (2016), Shin & Shin

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(2013), and Yi et al. (2017), who also studied institutional ownership, argued that firms with strong innovative capabilities are more likely to attract potential institutional investors; however, existing institutional ownership does not necessarily promote innovation adoption within the firm. Baysinger et al. (1991) suggest that alignment of managerial ownership with operational control provides incentives that positively affect firms' research and development activities and innovation outcomes. The results of the study suggest that a managerial ownership structure can mitigate the conflict between agents and principals, allowing agents to allocate their spending on research and development activities with a long-term profit orientation. Owners who are also managers have the opportunity to achieve innovation incentives while being responsible for maintaining shareholder interests; this ownership structure is worth re-examining in relation to innovation decision-making.

Other factors that have been found to influence company innovation in previous research include profitability and company size. Company profitability measures a company's ability to generate profits from its owned resources. However, without innovation, large profits cannot be developed anymore. Profitability provides sufficient opportunities for companies to make innovation investments, such as conducting research and development, procuring intangible assets, and making patent citations. With large profits, companies will even be able to invest in technology for improved production processes, as a form of innovation, to drive value creation. (Kamasak, 2015) , (Mai, 2017) . However, not all companies with high profitability utilize their resources in research and development to innovate (Fernández and Velasco 2018).

Investment in the manufacturing industry sector in Indonesia has increased even during the COVID-19 period. Investment in the industrial sector in 2019 was 213.14 T, and in 2022, it increased to 457.60 (Waluyo, 2024). The manufacturing sector is a key component of the Indonesian economy due to its substantial contributions to gross domestic product (GDP), employment, and exports. This situation leads investors to view the manufacturing sector as having promising investment opportunities. Therefore, studying the value of manufacturing companies is essential, particularly in light of the economic dynamics and global uncertainties between 2021 and 2024. As competition becomes increasingly intense, manufacturing companies must innovate continuously to enhance their competitiveness and create added value for stakeholders. Innovation is not only vital for improving operational efficiency but also affects how the market perceives the company, which ultimately translates into increased company value. Thus, innovation deserves examination as a mechanism linking internal company factors to firm value. Based on prior research findings and observed trends in the manufacturing sector, this study investigates how managerial ownership structure, company size, and profitability influence firm value, with innovation acting as an intervening variable. The managerial ownership structure reflects the alignment of interests between management and shareholders, company size indicates the organization's capacity and resources, and profitability measures the company's ability to generate income.

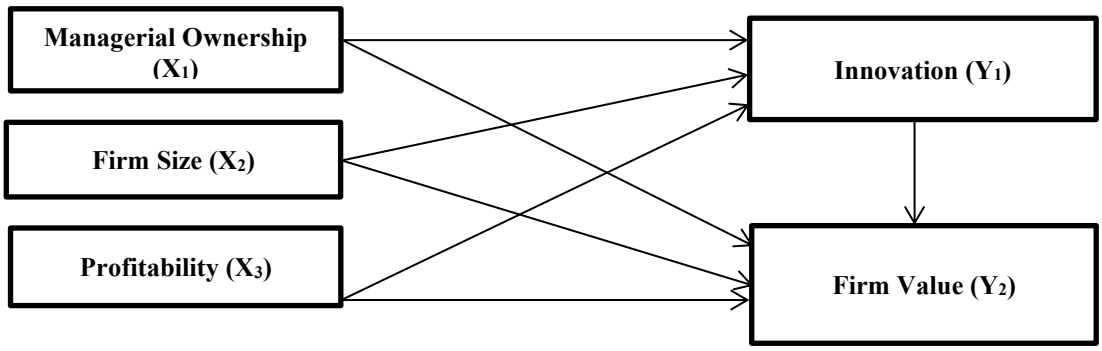

Figure 1. Research Model

RESEARCH METHOD

This study was conducted during the 2021-2024 observation period on all manufacturing companies listed Indonesian Capital Market from data on the idx.go.id webpage. The sample is determined with certain criteria (purposive sampling) as presented in Table 1:

Table 1. Research Sample Selection Procedure

Information	Number of Observations
Indonesian Manufacturing companies listed for the 2021-2024 are 165 companies.	660
There were 16 manufacturing companies whose annual financial reports could not be accessed in full during the 2021-2024 period.	(64)
Manufacturing companies that had negative profits during the 2021-2024 period were 11 companies.	(44)
Manufacturing companies used as samples There are 138 companies	552

The variables used in this study are:

1. Firm Value (Y_2) is the ratio of the market value of the company's assets measured using Tobin's Q (Bardhan et al. 2013) using the following formula:

   $$Q = \frac{EMV_{i,t} + D_{i,t}}{EBV_{i,t}} \quad (1)$$

   Notes :
   Q = firm value
   EMV = market value of equity of company *i* in year *t*
   EBV = book value of total assets of company *i* in year *t*
   D = book value of total debt of company *i* in year *t*
   The use of the book value of debt at D value can be done when not all companies have a market value of debt (Medlen, 2003) (Stulz, 1994)

   $$EMV = outstanding\ shares\ X\ closing\ price - yearly \quad (2)$$

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2. Innovation (Y_1) is measured by the R&D disclosure ratio, assuming that the more R&D disclosures a company makes (La Rosa & Liberatore, 2014) by giving a value of 1 for an item that is disclosed and a number 0 if it is not disclosed, then it is expressed as a percentage of the total index (Nekhili *et al.*, 2016). The calculation of the percentage of disclosure of the 58 *items* is formulated as follows:
$$R\&D\ disclosure\ ratio_{i,t} = \frac{number\ of\ item\ R\&D\ disclosure_{i,t}}{58\ item} \text{x}100\ \% \quad (3)$$
3. Managerial ownership structure (X_1) *is* the percentage of the number of shares owned by management to the total number of shares in circulation (Choi *et al.* , 2011)
$$Managerial\ Ownersip_{i,t} = \frac{\text{number of shares owned by management}_{i,t}}{\text{total outstanding share}_{i,t}} \quad (4)$$
4. Company size (X_2) is a measure of the total assets owned by the company, which can be calculated using the formula:
Size = $Ln\ (Aset\ total)_{i,t}$ (5)
5. Profitability (X_3) is the company's ability to generate profits. In this study, profitability is measured using the return on assets ratio (Scherer, 1965)

Path analysis is used to explain the direct and indirect effects of the causal variables on the effect variables with regression equations.

$$Y_1 = \rho_{y1x1} .X_1 + \rho_{y1x2} .X_2 + \rho_{y1x3} .X_3 + \varepsilon_1 \quad (6)$$
$$Y_2 = \rho_{y2x1} .X_1 + \rho_{y2x2} .X_2 + \rho_{y2x3} .X_3 + \rho_{y2y1} Y_1 + \varepsilon_1 \quad (7)$$

RESULTS AND DISCUSSION

The descriptive statistical results of the variables in this study are shown in Table 2 below:

Table 2. Descriptive Statistics Results

Variables	Average	Minimum	Maximum	Standard Deviation
Managerial Ownership	,0510	,00	,27	,07363
Company Size	22,7600	12.08	32.56	5.27264
Profitability	,0836	,00	,63	,09741
Innovation	,2784	,08	,69	,15894
Firm values	,8656	,32	1.37	,23272

Source: Financial Report Data-processed 2025

The condition of managerial ownership structure in Indonesia is, on average, not yet characterized by stock blocks; in the majority of sample companies, managerial ownership is very small, and some companies do not have a managerial ownership structure. In a small number of companies, particularly those that have implemented bonus shares, the managerial ownership structure can reach as high as 20%. Unlike Song et al. (2015), who highlight the value-enhancing role of managerial ownership up to a certain threshold, this study provides evidence of a negative relationship between managerial ownership and firm value. This suggests that beyond a specific level, managerial authority over investment decisions may lead to suboptimal outcomes. Empirical evidence further shows that firms with lower managerial ownership disclose less R&D activity, with disclosures increasing as managerial ownership rises. However, this has not been able to increase investor confidence; high

management ownership that is not balanced with strong supervision may create a conflict of interest. Investors lose confidence, which ultimately reduces the value of the company. The size of the manufacturing companies in this study shows a fairly large total asset figure, meaning that the company has sufficient resources to make R&D investments. This result is in line with Damanpour (1992) and Jiang et al. (2013), who state that assets are a determinant of the ability to innovate. The data shows that the availability of resources has a positive relationship pattern with the amount of R&D disclosure, meaning that the company uses resources to innovate, so that the higher the assets owned, the more disclosure of R&D activities. In terms of the ability to generate profits, on average, manufacturing companies show a level of profitability that is not optimal. In this study, there is a fairly large gap between companies in terms of minimum and maximum profitability positions. On average, manufacturing companies are unable to utilize assets to achieve maximum profits. The condition also reflects that the effectiveness of the company's resource management is still low. This condition can be caused by various factors, such as the dependence on imports of raw materials manufactured in Indonesia, which results in a fairly high production burden.

Innovation measured by R&D disclosure shows that companies have not disclosed much R&D activity. This condition can be caused first because no activity is occurring; the company does not conduct research and development but uses a license from another company. The second reason is that the level of R&D success cannot be ascertained, so the company does not want to show negative investment. Third, the company will only disclose R&D when the certainty of patent legality has been obtained; this is done to protect the originality of the idea, and this R&D disclosure condition is in line with (Dobrzanski & Bobowski, 2020). This low R&D disclosure condition is what drives the government to try to increase it through tax subsidies. The government provides subsidies of up to 300% of the disclosed R&D costs (Minister of Finance Regulation Number 128/PMK.010/2019).

The findings of this study offer several important implications for the design of fiscal policy in Indonesia. Although the government has introduced substantial tax incentives to stimulate research and development (R&D) activities, including significant tax reduction schemes and import duty exemptions for specific R&D inputs, the effectiveness of these policies remains limited. Empirical evidence suggests that the complexity of administrative and compliance requirements significantly limits firms' willingness to utilize these incentives. From a policy perspective, simplifying administrative procedures and improving regulatory clarity are crucial to enhancing the effectiveness of R&D-related tax incentives. Simplifying documentation requirements, reducing approval timeframes, and providing standardized guidelines for R&D classification can lower compliance costs and encourage broader participation, particularly among manufacturing firms. Furthermore, fiscal incentives must be complemented by institutional support mechanisms, such as technical assistance, digital tax reporting systems, and improved coordination between tax authorities and industry stakeholders. Without such supporting infrastructure, substantial tax incentives may fail to translate into significant increases in R&D investment or disclosure.

The Influence of Managerial Ownership Structure, Company Size, and Profitability on Innovation

The results of the statistical analysis of the research data to test the hypothesis are presented in Table 3. Table 3 shows that the coefficient of determination (Adjusted R Square) is

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obtained at 0.933. This means that 93.3% of innovation in sample companies is influenced by the variables of managerial ownership structure and company size, while the remaining 6.7% of innovation carried out by the company is influenced by other factors outside the scope of this study.

Table 3. t-test Result.

Variables	Standardized coefficients	Std. Error	t value	p-value
Managerial ownership structure (X_1)	0.406	0.068	12,832	0,000*
Company Size (X_2)	0.503	0,000	30,862	0,000*
Profitability (X_3)	0.135	0.049	4,542	0,000*
R^2	0, 934			
Adjusted R Square	0, 933			
F statistic	2575, 878			
Sig. F	0,000			

* Statistically significant at the α = 5% level
Source: Financial Report Data-processed 2025

Based on the results of sub-structure test 1, the following regression equation was prepared:

$$\text{Innovation}_{(Y_1)} = 0.406X_1 + 0.503X_2 + 0.135X_3$$

Managerial ownership structure plays a role in the adoption of innovation in manufacturing companies, as seen from the amount of R&D disclosure. The managerial ownership structure is able to reduce the effects of agency conflict, with the proportion of involvement of owners who are also managers who play a role in making decisions in the issuer company. The more shares owned by management, the more authority and confidence management has to develop investments made by investors. One way to increase investor prosperity carried out by management is through innovation, both process and product innovation. The main innovation activity carried out by the company is R&D; the more intensive the R&D activities are, the more disclosures the company can report. The disclosure of R&D dominated by pharmaceutical companies in this study also has an impact on consumer trust in pharmaceutical products, which can affect the company's profits and value. Research shows that the greater the proportion of shares owned by management, the more profit the management can gain by innovating. Managerial ownership enables management to obtain innovation-related incentives, while R&D disclosure simultaneously serves as a positive signal to the capital market, generating potential benefits for shareholders. This finding is consistent with Kamoto (2017), who argues that the relationship between managerial ownership structure and innovation is reinforced by incentive mechanisms that reward managerial efforts in developing product, process, and business management innovations. Such incentives motivate managers to pursue riskier projects in the expectation of achieving long-term economic gains (Nguyen, 2018). The implication of these findings for determining the optimal level of managerial ownership is that an appropriate ownership proportion allows management to balance the interests of agents and principals through strategic innovation decisions. When managerial ownership reaches an optimal threshold, incentive alignment dominates potential entrenchment effects, thereby supporting innovation without diminishing firm value. When other shareholders emphasize management innovation performance, management has a greater opportunity to make decisions to carry out research

and development activities as a means of creating superior corporate value. This finding is in line with Song *et al.* (2015), as in agency theory, these results indicate that a high level of managerial ownership structure has a positive interaction with R&D activities on innovation performance. High levels of managerial ownership structure can help companies that are better oriented in determining spending. The implication for shareholders and company owners is that they should offer stock incentives to the top management team to align the interests of managers with their interests. In this study, the percentage of managerial ownership structure is quite small. Still, this result is in line with the research of Chen *et al.* (2014), which states that ownership with a large percentage or block of shares does not encourage R&D activities. This means that it is not the large or small number of shares owned that can control R&D activities in a business unit; rather, it is the presence or absence of the owner's role in direct decision-making on R&D activities. Management authority is proven to be able to manage resources and infrastructure in R&D activities for product improvement.

Company size reflects the amount of assets owned by the company. Companies with larger assets can be more intensive in conducting research and development activities as a form of innovation. Given that the need for funds for research and development activities is generally quite high, it is natural that assets play a role in decision-making to conduct or postpone research and development activities. Research and development activities are activities that have a long-term impact and have quite high uncertainty of results. In such conditions, companies will be very careful when allocating their assets for this activity. Companies with large assets have a greater opportunity to take these risks for long-term goals. Research and development that is not necessarily successful requires sufficient resources. This result is in line with Damanpour's (1992) research, which explains that the size of manufacturing companies has a greater influence on innovation compared to service companies. Audretsch (1995) also found a significant influence on company size, but the total sales indicator measured the size. The direction of the relationship found *in* the study was actually the opposite; companies with smaller total sales were more intensive in carrying out innovation activities than companies with large total sales. If applied to the sample of pharmaceutical companies in this study, it can be interpreted that small sales occur because the patent period has expired, so the selling price becomes much lower. In this condition, the company will carry out R&D activities to produce new patents, which will drive sales in the following period.

This study provides results that support the ability to generate profits and R&D activities carried out and disclosed by the company, in line with the research of Bhattacharya & Bloch (2004), Who studied companies with low levels of technological change? (Audretsch, 1995), who studied companies with high levels of technological change. In companies with slow technological change, innovation activities are carried out based on retained earnings, meaning that the company will fund innovation activities if, in the previous period, it was able to generate profits. In companies with high levels of technological change, this condition occurs not because the company feels that it is already in a comfort zone but because the company innovates routinely, considering that innovation should be carried out continuously, whether the company is in a profitable condition or not. This study took a general sample of manufacturing companies and did not classify them

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based on technological sensitivity. In general, the company's ability to generate profit does not encourage nor does it reduce the intensity of R&D disclosure in the company. Profitable companies always want to maintain and increase their profits, so they will consider innovating through R&D activities. Companies that make a profit in period t-1 have the option to invest in in-place assets or future investments. Differences in product characteristics in manufacturing companies, in general, can have an impact on this condition. Still, the observation period of all manufacturing companies that were the samples of this study showed that one of their R&D activities was influenced by profitability.

The Influence of Managerial Ownership Structure, Company Size, Profitability, and Innovation on Firm Value

Table 4 shows the results of the research data analysis to test the influence of managerial ownership structure, company size, profitability, and innovation on firm value.

Table 4. The Influence of Managerial Ownership Structure, Company Size,

Variables	Standardized coefficients	Std. Error	t value	p-value
Managerial ownership structure (X_1)	-0.250	0.153	-5,160	0,000*
Company Size (X_2)	0.160	0.002	4,417	0,000*
Profitability (X_3)	0.094	0.097	2,318	0, 0 21*
Innovation (Y_1)	0.931	0.084	16,233	0,000*
R^2	0.880			
Adjusted R Square 0	0.881			
F statistic	1009,982			
Sig. F	0,000			

* Statistically significant at the α = 5% level
Source: Financial Report Data-processed 2025

Based on the results of the sub-structure test 2, the following regression equation can be compiled:

Firm value = $-0.250X_1 + 0.160X_2 + 0.094X_3 + 0.931Y_1$

The number of shares owned by management hurts the value of manufacturing companies. This result is different from C. R. Chen et al., (2003), which shows that with increasing ownership, there is greater alignment between managerial interests and shareholders, and managerial ownership positively impacts company value. McConnell & Servaes (1990) have previously studied the fact that managers who receive compensation in the form of additional share ownership tend to optimize value in the next period for the benefit of receiving incentives and, at the same time, investment profits. Although managerial share ownership is relatively small compared to the number of share blocks, management activities can boost company value. C. R. Chen & Steiner, (2000) stated that the managerial ownership structure can hurt company value due to the self-interested nature of managers who make higher investments in companies with high values, managers take advantage of two sides, first from incentives and second from the investment profits of the shares they own, this is not expected by investor. In this study, several companies, especially

those with high levels of R&D disclosure, also provide special innovation incentives to their management.

On the other hand, for investors outside management, this condition is still profitable and is considered to be able to maintain the balance of agent and principal interests. Investors and creditors give more appreciation to large companies. The condition can happen because investors are more interested in companies with adequate resources. In other words, the value of the company's assets will increase with a large value. The result is in line with Ehikioya (2009), who stated that this condition can occur because companies with large assets can provide prosperity to investors. Susanti & Restiana (2018) also proved the same results that in large companies the tendency to push the company's value higher, considering the leverage factor, arguing that in small companies the debt level does not have a positive effect on the company's value, the debt level will help the company increase its value only in large companies. Even though creditors provide sufficient funds, companies with small assets still cannot increase stock prices. A company's ability to generate profits from its assets is an important indicator used by investors to assess its performance. A high level of profitability reflects a company's strong financial performance, leading investors to believe that the company's prospects will also improve. Information regarding this high level of profitability serves as a positive signal for investors and can be a key consideration in making investment decisions. A positive investor response to the company's high level of profitability will drive increased demand for its shares in the market. This increased demand will ultimately lead to an increase in share prices, which in turn reflects an increase in the company's value. This finding aligns with research conducted by Iswajuni et al. (2018), which states that profitability has a positive influence on company value. The greater the profit generated from managing a company's assets, the greater the potential income that can be distributed to shareholders in the form of dividends. This condition will enhance the company's attractiveness to investors, thereby increasing its value. In this regard, Return on Assets (ROA) is an important indicator because it reflects the level of management efficiency in managing the company's assets to generate profits. A high ROA indicates that the company can utilize its assets optimally, thus becoming a positive measure in assessing the company's value

Disclosure of research and development activities in manufacturing companies provides a positive signal to investors. This finding is in line with Pauwels et al. (2004), who studied the influence of innovation measured by the publication of new products in automotive companies on firm value. As with the publication of new products, disclosure of research and development activities can also provide a positive signal to investors. Investors respond to research and development efforts carried out by companies as an expectation of the emergence of products or processes that have novelty and have a positive impact on company performance in the future, as the results obtained from the analysis of company innovation through textual disclosure of the highest R&D are pharmaceutical companies. This is in line with the nature of the pharmaceutical industry, which relies on discoveries in developing its products. The production process in the pharmaceutical industry has two phases: the first is when a product is being developed, going through basic research and development in the laboratory and product testing involving the public once the product has been proven safe and suitable for testing. The second phase is the drug's public launch, once

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open product testing has yielded satisfactory results. The second period will successfully reach the market if there is disclosure or publication in the first period. The pharmaceutical market has confidence in products that have gone through a mature research and development stage. Still, this publication is at risk of the impact of duplication or theft of ideas from competitors. In the second period, pharmaceutical companies strengthened themselves against competitors through patent law protection. When patents expire, pharmaceutical companies take advantage of generic market positions to maintain their sales levels. This mechanism is not available in other industries, so naturally, pharmaceutical companies occupy the highest position in R&D disclosure.

Overall, the existing concept of this research model reveals that increasing the number of shares owned by management can increase investor and creditor confidence through research and development activities carried out by the company. In other words, providing welfare for shareholders can be done by increasing the percentage of managerial ownership structure so that management has confidence in making decisions in research and development activities with a high level of uncertainty in the results. On the one hand, this condition shows management's desire to get innovation incentives. On the other hand, the ownership factor can encourage management to be more daring in making decisions for activities that have long-term impacts. This result is in line with Chen et al. (2014), who state The ownership factor determines the innovation carried out by the company, which ultimately has an impact on the prosperity of the owner himself. Managerial ownership structure indicates the extent to which a company's management also acts as shareholders. When managers have ownership in the company, their interests are more closely aligned with those of shareholders. This encourages management to be more careful and strategic in allocating company resources, including those used for innovation activities. Thus, managerial ownership plays a crucial role in ensuring that company resources can be effectively pooled and directed to improve innovation performance. Meanwhile, increased share ownership concentration, where a majority of shares are held by a specific shareholder, can initially strengthen management's oversight function and promote efficient decision-making. This can have a positive impact on increasing innovation. However, this positive effect only applies up to a certain level of concentration. If share ownership becomes too concentrated, additional control mechanisms become ineffective due to the dominance of the majority owner. Under these conditions, incentives to encourage innovation can weaken, making the effect of ownership concentration on innovation performance less visible or even disappear.

In companies with small assets, disclosure of research and development activities carried out can provide an increase in the market valuation of their investments. Disclosure of research and development activities can be a positive signal for investors, showing that the company has planned innovation for future sustainability. Investors not only look at the company from the size of its assets but also see how the company utilizes assets in R&D activities. The size of the company's assets illustrates the company's opportunity to innovate. If the opportunity is utilized well by the company, investors will have confidence in the company's ability to provide benefits from the investment made. This result is in line with Connolly & Hirschey (2005); the size of the company, as measured by total assets, provides a greater opportunity to carry out innovation activities, and with innovation or R&D

activities, the company has the opportunity to provide prosperity to its investors as measured by the Q ratio.

To prove the innovation variable as an intervening variable is based on the calculation of direct and indirect influences presented in Table 5.

Table 5. Mediation test of the innovation variable

Variable Relationship	p-value	Coefficient		
		Direct	Indirect	Total
$X_1 \rightarrow Y_2$	0,000*	-0.250		
$X_2 \rightarrow Y_2$	0,000*	0.160		
$X_3 \rightarrow Y_2$	0, 0 21*	0.094		
$Y_1 \rightarrow Y_2$	0,000*	0.931		
$X_1 \rightarrow Y_1$	0,000*	0.406		
$X_2 \rightarrow Y_1$	0,000*	0.503		
$X_3 \rightarrow Y_1$	0,000*	0.135		
$X_1 \rightarrow Y_1 \rightarrow Y_2$			0.377986	**0.127986**
$X_2 \rightarrow Y_1 \rightarrow Y_2$			0.468293	**0.62293**
$X_3 \rightarrow Y_1 \rightarrow Y_2$			0.125685	**0.219685**

* Statistically significant at the $\alpha = 5\%$ level

Source: Financial Report Data-processed 2025

Research and development activities as a form of innovation in a company are not determined by the company's ability to generate profits, as was studied by Pauwels *et al.* (2004) that companies in a profit condition are actually stagnant and do not conduct research and development to the limit of the market increase of existing products. Investors continue to pay attention to profitability; when a company's profit-generating ability increases, a positive investor response will increase the company's value. Profitability will boost investor trust in the company. The results of this analysis confirm investors' assumptions that companies that make a profit have the power to innovate in order to increase the company's value. R&D activities are important to carry out in order to maintain sustainability. Changes in the market, technology, and consumption patterns continue to encourage companies to innovate from time to time. Innovation is the key to winning the market. Evidently, without innovation, several large companies have slumped, such as Hitachi, Nokia, Motorola, and some that have been explained in the background of this study (Aaslaid, 2018) these companies are quite profitable but do not innovate. Pharmaceutical companies that reveal R&D activities are greater than other types of manufacturing in Indonesia, which shows proof of government support for drug innovation during the pandemic and post-pandemic. In addition to buying patents or licenses, pharmaceutical companies are active in independent research and patent production. Although R&D activities in order to create patents have a risk of failure, they provide hope for sustainable profitability in the future. Research also found that some non-pharmaceutical companies in the post-pandemic period made savings in research and development funds to maintain the consistency of their profitability in the future. Still, manufacturing companies used profitability as capital for

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innovation, and disclosure of R&D activities in sustainability reports was able to provide a positive signal for investors (Hirdinis, 2019; Osazuwa & Ahmad, 2016).

The findings of this study point to how shares owned by management provide authority in managing the company. The result strengthens management's confidence in innovation. Innovation is carried out by utilizing existing resources through R&D activities. The disclosed R&D leads to product innovation; even process innovation is ultimately directed at creating products that are in accordance with market desires. This is in accordance with the characteristics of manufacturing companies. From the average disclosure value, many manufacturing companies have not realized that the disclosed R&D process has the power to create value in the consumer market. The disclosed R&D has proven to be able to support companies in surviving in the manufacturing business. The R&D process is a place to process management ideas to create customer satisfaction value. Companies have yet to realize that disclosed R&D is a form of transparency and an effort to listen to customers. Through the disclosure of R&D activities to the market, companies can obtain direct input from consumers. Some advanced companies make this a form of innovation in itself; with the Voice of the Customer service, the company explores consumer desires and receives consumer complaints as a form of feedback from R&D disclosure. Facing negative input directly from customers will trigger companies to develop products, improve processes, solve problems, create goodwill, and grow long-term customer loyalty.

In the framework of corporate value through this research model, investors assess the company from 2 sides, namely trust and confidence in line (Tonkiss, 2009). First, trust emerges as an important factor in the effect of managerial ownership on firm value. Who are the actors in company management, and how does management provide prosperity for investors? These are considerations for investors' decisions when investing. Second, the confidence factor is how the company performs, including the size of assets, the ability to generate profits, and the innovations carried out. The company has proven to be a consideration for investors when purchasing the company's shares.

CONCLUSION

Drawing on the analysis of the empirical results and discussion, this study concludes that managerial ownership structure, company size, and profitability affect R&D activities as an indicator of innovation. Although the average percentage of managerial ownership is quite low, the role of management, which is also an owner, is able to decide to innovate and disclose R&D activities in sustainability reports (Song et al., 2015). The assets of manufacturing companies in this research sample are quite large and have the potential to carry out research and development activities. The size of the company, as measured by total assets, shows that the greater the company's assets, the greater its ability to carry out R&D activities. So, on average, companies that have large assets have a larger percentage of R&D disclosure, which is a benchmark for innovation. The profitability of manufacturing companies affects R&D disclosure, indicating that most manufacturing companies realize the importance of innovating to maintain sustainability. Large profits in period t-1 encourage companies to innovate. The percentage of R&D activity disclosure is a favourable signal to the investment community, and support from the government in the form of tax subsidies, and innovation incentives, especially for several manufacturing companies in the health sector during the post-pandemic period. The value of manufacturing companies during the

pandemic and post-pandemic still shows that the stock market value is smaller than the book value of the shares, meaning that investors and creditors have not given the company proper appreciation. Empirical evidence shows a negative effect of managerial ownership on firm value. This condition can occur because investors are concerned that the autonomy owned by management will tend to pursue personal interests rather than corporate interests through incentives. Then, the size or assets owned, and the profits obtained, as well as the innovative activities of a company, are able to encourage investors to appreciate positively in the form of increasing the stock market value and the value of the company as a whole. Companies that have high assets and profitability, supported by management that dares to make the right innovation decisions, can promote an increase in firm value (Chaganti & Damanpour, 1991; Damanpour, 1996).

The limitation of this study is that, in terms of voluntary disclosure, it produces reporting that provides very little R&D information carried out by the sample companies. This results in the picture of company innovation obtained from the research and development disclosure index, which only provides a picture of the intensity of activities, but cannot provide a picture of the cost intensity inherent in these activities. This fact means that the activity items disclosed by one company may be smaller than those of another company, but the nominal value is greater. If there is a balance between nominal and textual disclosure, it will provide more complete results in economic meaning.

AUTHORSHIP CONTRIBUTION STATEMENT

PA: Developing research concepts, interpreting results, and presenting them in articles. DSC: Collecting and processing data. KT: Assisting in processing data and interpreting results.

REFERENCES

Aaslaid, K. (2018). 50 Examples of Corporations That Failed to Innovate. *Valuer+*, 108. https://valuer.ai/blog/50-examples-of-corporations-that-failed-to-innovate-and-missed-their-chance/

Al-Najjar, B. (2010). Corporate governance and institutional ownership: evidence from Jordan. *Corporate Governance: The International Journal of Business in Society*, *10*(2), 176–190. https://doi.org/10.1108/14720701011035693

Ambashi, M. (2018). *Innovation Policy in ASEAN*.

Amin, S., & Shoaib, A. (2017). Intellectual Capital, Innovation and Firm Performance of Pharmaceuticals: A Study of the London Stock Exchange. *Journal of Information and Knowledge Management*, *16*(2), 1–20. https://doi.org/10.1142/S0219649217500174

Audretsch, D. B. (1995). Firm Profitability, Growth, and Innovation. *Review of Industrial Organization*, *10*(5), 579–588. http://www.jstor.org/stable/41798600

Bardhan, I., Viswanathan Krishnan, & Lin, S. (2013). Business value of information technology: Testing the interaction effect of IT and R&D on Tobin's Q. *Information Systems Research*, *24*(4), 1147–1161. https://doi.org/10.1287/isre.2013.0481

Baysinger, B. D., Kosnik, R. D., & Turk, T. A. (1991). Effects of Board and Ownership Structure on Corporate R&D Strategy. *Academy of Management Journal*, *34*(1), 205–214. https://doi.org/10.5465/256308

p-ISSN: 2085-9643 DOI: 10.26740/jaj.v17n2.p.244-260
e-ISSN: 2502-6380 https://journal.unesa.ac.id/index.php/aj

Bhattacharya, M., & Bloch, H. (2004). Determinants of Innovation. *Small Business Economics*, *22*(2), 155–162. https://doi.org/10.1023/B:SBEJ.0000014453.94445.de

Chaganti, R., & Damanpour, F. (1991). Institutional ownership, capital structure, and firm performance. *Strategic Management Journal*, *12*(7), 479–491. https://doi.org/10.1002/smj.4250120702

Chen, C. R., Guo, W., & Mande, V. (2003). Managerial ownership and firm valuation: Evidence from Japanese firms. *Pacific Basin Finance Journal*, *11*(3), 267–283. https://doi.org/10.1016/S0927-538X(03)00024-6

Chen, C. R., & Steiner, T. L. (2000). Tobin's Q, managerial ownership, and analyst coverage: A nonlinear simultaneous equations model. *Journal of Economics and Business*, *52*(4), 365–382. https://doi.org/10.1016/S0148-6195(00)00024-2

Chen, V. Z., Li, J., Shapiro, D. M., & Zhang, X. (2014). Ownership structure and innovation: An emerging market perspective. *Asia Pacific Journal of Management*, *31*(1), 1–24. https://doi.org/10.1007/s10490-013-9357-5

Choi, S. B., Lee, S. H., & Williams, C. (2011). Ownership and firm innovation in a transition economy: Evidence from China. *Research Policy*, *40*(3), 441–452. https://doi.org/https://doi.org/10.1016/j.respol.2011.01.004

Connolly, R. A., & Hirschey, M. (2005). Firm size and the effect of R&D on Tobin's q. *R and D Management*, *35*(2), 217–223. https://doi.org/10.1111/j.1467-9310.2005.00384.x

Damanpour, F. (1992). Organizational Size and Innovation. *Organization Studies*, *13*(3), 375–402. https://doi.org/10.1177/017084069201300304

Damanpour, F. (1996). Organizational complexity and innovation: Developing and testing multiple contingency models. *Management Science*, *42*(5), 693–716. https://doi.org/10.1287/mnsc.42.5.693

Peraturan Menteri Keuangan Nomor 128/PMK.010/2019, (2019).

Dobrzanski, P., & Bobowski, S. (2020). The efficiency of r&d expenditures in ASEAN countries. *Sustainability (Switzerland)*, *12*(7), 1–26. https://doi.org/10.3390/su12072686

Fernández, M. G., & Velasco, C. G. (2018). Innovation and corporate performance in the Spanish regions. *Journal of Policy Modeling*, *40*(5), 998–1021. https://doi.org/https://doi.org/10.1016/j.jpolmod.2018.05.005

Hirdinis, M. (2019). Capital structure and firm size on firm value moderated by profitability. *International Journal of Economics and Business Administration*, *7*(1), 174–191. https://doi.org/10.35808/ijeba/204

Iswajuni, I., Manasikana, A., & Soegeng Soetedjo. (2018). The effect of enterprise risk management (ERM) on firm value in manufacturing companies listed on Indonesian Stock Exchange year 2010-2013. *Asian Journal of Accounting Research*, *3*(2), 224–235. https://doi.org/10.1108/AJAR-06-2018-0006

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

Jiang, L. (Alice), Waller, D. S., & Cai, S. (2013). Does ownership type matter for innovation? Evidence from China. *Journal of Business Research*, *66*(12), 2473–2478. https://doi.org/https://doi.org/10.1016/j.jbusres.2013.05.037

Kamasak, R. (2015). Determinants of innovation Performance: A Resource-based Study. *Procedia - Social and Behavioral Sciences*, *195*, 1330–1337. https://doi.org/10.1016/j.sbspro.2015.06.311

La Rosa, F., & Liberatore, G. (2014). Biopharmaceutical and chemical firms' R&D disclosure, and cost of equity: The impact of the regulatory regime. *European Management Journal*, *32*(5), 806–820. https://doi.org/10.1016/j.emj.2014.01.003

Li, M., Chen, X., & Zhang, G. (2017). How does firm size affect technology licensing? Empirical evidence from China. *Scientometrics*, *112*(3), 1249–1269. https://doi.org/10.1007/s11192-017-2451-6

Mai, M. U. (2017). Mediation of CSR and Profitability on the Influences of GCG Mechanisms To the Firm Value. *Jurnal Keuangan Dan Perbankan*, *21*(2), 253–264. https://doi.org/10.26905/jkdp.v21i2.393

McConnell, J. J., & Servaes, H. (1990). Additional evidence on equity ownership and corporate value. *Journal of Financial Economics*, *27*(2), 595–612. https://doi.org/https://doi.org/10.1016/0304-405X(90)90069-C

Medlen, C. (2003). Veblen's Q: Tobin's Q. *Journal of Economic Issues*, *37*(4), 967–986. http://www.jstor.org/stable/4227960

Musa, A., & Adamu, J. (2018). Determinants of firms innovation in Nigeria. *Kasetsart Journal of Social Sciences*, *39*(3), 448–456. https://doi.org/10.1016/j.kjss.2017.07.006

Nekhili, M., Hussainey, K., Cheffi, W., Chtioui, T., & Tchakoute-Tchuigoua, H. (2016). R&D Narrative Disclosure, Corporate Governance And Market Value: Evidence From France. *Journal of Applied Business Research*, *32*(1), 111–128. https://doi.org/https://doi.org/10.19030/jabr.v32i1.9527

Osazuwa, N. P., & Ahmad, A. C. (2016). The moderating effect of profitability and leverage on the relationship between eco-efficiency and firm value in publicly traded Malaysian firms. *Social Responsibility Journal*, *12*(2), 295–306. https://doi.org/10.1108/SRJ-03-2015-0034

Pardue, J. H., Higgins, E., & Biggart, T. (2000). The Impact of New Product Annauncements on Firm Value in Information Technology Producing Industries : An Examination Of Industry - Level Evolutionary Eras. *The Enginering Economist*, *45*(2), 144–157.

Pauwels, K., Silva-Risso, J., Srinivasan, S., & Hanssens, D. M. (2004). New Products, Sales Promotions, and Firm Value: The Case of the Automobile Industry. *Journal of Marketing*, *68*(4), 142–156. http://www.jstor.org/stable/30162022

Rodríguez, J. V. P., & Valcarcel, B. G. L. (2012). Do product innovation and news about the R&D process produce large price changes and overreaction? The case of pharmaceutical stock prices. *Applied Economics*, *44*(17), 2217–2229. https://doi.org/10.1080/00036846.2011.562172

Rong, Z., & Xiao, S. (2017). Innovation-Related Diversification and Firm Value. *European Financial Management*, *23*(3), 475–518. https://doi.org/10.1111/eufm.12110

Saad, N. M., Haniff, M. N., & Ali, N. (2016). Firm's Growth and Sustainability: The Role of Institutional Investors in Mitigating the Default Risks of Sukuk and Conventional Bonds. *Procedia Economics and Finance*, *35*, 339–348. https://doi.org/https://doi.org/10.1016/S2212-5671(16)00042-3

Sakaki, H., & Jory, S. R. (2019). Institutional investors' ownership stability and firms'

p-ISSN: 2085-9643 DOI: 10.26740/jaj.v17n2.p.244-260
e-ISSN: 2502-6380 https://journal.unesa.ac.id/index.php/aj

innovation. *Journal of Business Research*, *103*, 10–22. https://doi.org/https://doi.org/10.1016/j.jbusres.2019.05.032

Scherer, F. M. (1965). Firm Size, Market Structure, Opportunity, and the Output of Patented Inventions. *The American Economic Review*, *55*(5), 1097–1125. http://www.jstor.org/stable/1809230

Setiadharma, S., & Machali, M. (2017). The Effect of Asset Structure and Firm Size on Firm Value with Capital Structure as Intervening Variable. *Journal of Business and Finance Affairs*, *6*(4), 1–5. https://doi.org/10.4172/2167-0234.1000298

Shin, J., & Shin, H. (2013). Institutional ownership and technological relatedness: A test of endogeneity. *Journal of Business Research*, *66*(11), 2279–2286. https://doi.org/https://doi.org/10.1016/j.jbusres.2012.02.041

Song, J., Wei, Y. (Susan), & Wang, R. (2015). Market orientation and innovation performance: The moderating roles of firm ownership structures. *International Journal of Research in Marketing*, *32*(3), 319–331. https://doi.org/https://doi.org/10.1016/j.ijresmar.2015.03.005

Stulz, R. M. (1994). Tobin's q, Corporate Diversification, and Firm Performance. *Journal of Political Economy*, *102*(6), 1248–1280. https://doi.org/10.1086/261970

Tonkiss, F. (2009). Trust, confidence and economic crisis. *Intereconomics*, *44*(4), 196–202. https://doi.org/10.1007/s10272-009-0295-x

Umrie, H. R. H., & Yuliani, Y. (2015). Ownership structure, innovation to firm value with the financing decision as mediation. *Journal of Economics, Business, and Accountancy | Ventura*, *17*(2), 245. https://doi.org/10.14414/jebav.v17i2.307

Waluyo, D. (2024). *Investasi di Sektor Manufaktur Terus Naik*. Porta Informasi Indonesia. https://indonesia.go.id/kategori/editorial/7989/investasi-di-sektor-manufaktur-terus-naik?lang=1

Yi, J., Hong, J., Hsu, W. chung, & Wang, C. (2017). The role of state ownership and institutions in the innovation performance of emerging market enterprises: Evidence from China. *Technovation*, *62–63*, 4–13. https://doi.org/https://doi.org/10.1016/j.technovation.2017.04.002

Zeng, T., & Lin, H. C. (2011). Ownership structure and R&D spending: Evidence from China's listed firms. *Chinese Management Studies*, *5*(1), 82–93. https://doi.org/10.1108/17506141111118471