

## Intellectual Capital Disclosure: Empirical Evidence of Ownership Structure, Firm Size, and Business Risk

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**ABSTRACT:** *Disclosure of intellectual capital plays a very important role in providing information needed by related parties in the business decision-making process. This study aims to empirically test the factors that influence intellectual capital disclosure. These factors include ownership structure, consisting of institutional ownership, managerial ownership, and government ownership, as well as business risk and company size. The research sample was taken from state-owned companies listed on the IDX in the period 2018-2023. The results of the analysis using multiple linear regression show that institutional ownership and company size have a positive effect on intellectual capital disclosure. On the other hand, managerial ownership, government ownership, and business risk do not show any effect on intellectual capital disclosure. The findings of this study provide important implications for state-owned companies to pay more attention to institutional share ownership and business risk in decision making. Since managers may focus more on short-term interests and financial gains than on disclosing intellectual information. Governments may have different objectives such as economic stability or public policy, which do not necessarily support disclosure of intellectual property information. Companies with high business risks may be more cautious about sharing intellectual information so as not to reveal weaknesses or threats that competitors could rely on.*

**Keywords:** *Intellectual capital disclosure, ownership structure, company size, business risk.*

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## INTRODUCTION

Intangible assets such as intellectual capital play a significant role in creating value for an industry. Industries will have difficulty competing in the market if they continue to use outdated approaches. Therefore, simulations in the form of nominal money are often used to evaluate the Company's performance. Financial assets can no longer be fully relied on as a driver of business progress, and this also influences investors' decisions in investing, especially in difficult economic conditions. A company's competitive advantage depends not only on tangible assets, but also on other factors such as innovation, information systems, and resource management. Therefore, companies need to pay more attention to knowledge assets, and one way to assess and measure them is through the concept of intellectual capital. Intellectual capital in the era of technological progress like today has become something very valuable for the Company because it can be used as a means to increase the value of the company (Konno & Schillaci, 2021). Although some people consider it something important and needed by the Company to grow and develop, until now there has been no clear framework for disclosing intellectual capital in the company's financial reporting. Due to this, Abhayawansa & Azim (2014) suggested that companies provide reports on intellectual capital voluntarily so that stakeholders can still access the widest possible information about the company's condition in order to make business decisions. Another problem with the disclosure of intellectual capital information is its measurement and reporting in financial statements. Until now, there has been no clarity and basic rules related to this (Dalwai et al., 2023).

Shares of public companies are usually owned by many parties known as ownership structures. Based on previous studies, this ownership structure can affect the disclosure of intellectual capital. Based on agency theory which explains the relationship between principals (shareholders) and agents (managers), it can be explained that there are differences in interests between principals and agents that sometimes conflict with each other. Because the company owner cannot run the company himself, they will give authority to the agent (management) to run the business in accordance with the agreed agreement (Jensen & Meckling, 1976). The first ownership structure to be discussed in this study is managerial ownership, namely the ownership of company shares by the company's management. If management share ownership is higher, the greater the incentive for management to report more information about the company, including intellectual capital. However, conversely, if the level of management ownership is lower or smaller, management is also likely to not disclose much information about the company, including intellectual capital disclosure. This may be because management feels that the disclosure will not have a direct impact on them. Previous studies have found that high managerial ownership is directly proportional to high intellectual capital disclosure (Afiad, et al., 2023; Putri & Amanah, 2017). However, other studies have found different results where the size of managerial ownership has no effect on the size of intellectual capital disclosure (Maulana, et al., 2020; Putri & Herawaty, 2019).

The next ownership structure is share ownership by external institutions, namely institutional ownership. Based on agency theory, it can be concluded that agency problems that occur in companies can be minimized by institutional ownership. Institutional share ownership can be used as a tool to direct management actions to avoid opportunistic management actions related to management performance. In order to increase the trust of institutional investors, management will provide broader information related to the condition of the company. Thus, increasing institutional share ownership can encourage management to disclose more company information including information about intellectual capital disclosure (Tatang et al., 2022). The existence of relatively large investors in the ownership structure can be a reason for management to convince shareholders that the company's performance is optimal. The results of previous studies concluded that intellectual capital disclosure is influenced by institutional ownership (Tatang et al., 2022; Alfariza & Hermawan, 2021). However, the results of other studies concluded that intellectual capital disclosure is not influenced by the size of institutional ownership (Munir & Marina, 2022; Suyono, 2019).

Most of the shares of state-owned companies are owned by the government, therefore the disclosure of company information can also be influenced by government ownership. The government has a great responsibility towards the community in managing its investments. Entities with large government ownership are obliged to provide transparent information to the government. Company managers are required to provide more and broader information about the condition of the company. With greater government ownership, intellectual capital disclosure also increases. Previous studies have concluded that if government ownership increases, intellectual capital disclosure also increases, there is a direct relationship between government ownership and intellectual capital disclosure (Fajrianto & Raharja, 2021;

Aisyah & Sudarno, 2014), but other studies have shown that government ownership does not affect intellectual capital disclosure (Latusura & Muid, 2021).

The size of the company is the next factor that influences the disclosure of intellectual capital. Large-scale companies will also receive greater attention from the wider community, so that companies feel obliged to provide more information related to the company. In addition, companies want to be considered good by the public. With wider disclosure, the public's assessment will also be better. In contrast to small-scale companies, where attention to them is also not that much, they tend not to disclose much company information. The more disclosure of company information is expected to reduce the information asymmetry that occurs. Conditions like this are supported by previous studies conducted by Lama, et al. (2024), and Syarifudin, et al. (2023), which revealed that company size is directly proportional to intellectual capital disclosure. However, different results were obtained in the study of Dewi & Nahar (2020) which stated that company size is inversely proportional to intellectual capital disclosure, meaning that the larger the company scale, the smaller the intellectual capital disclosure.

This study is based not only on agency theory but also on signal theory, where the information provided by the company will be responded to by investors. This signal is in the form of business risk. Business risk is the level of uncertainty faced by the Company in the future due to the operations that have been carried out. If business risk is not managed properly, it can cause the company to experience financial distress. The greater the problem of company uncertainty, the greater the company must handle its overall business risk management. Companies with high levels of business risk are likely to disclose less intellectual capital information, because the company does not want the public to know about the problems the company is facing. Likewise, companies with small or low business risk, management tends to provide more information. This statement is supported by the results of a previous study conducted by Jayanti, et al. (2021) which revealed that business risk affects intellectual capital disclosure. However, a study conducted by Neill & Purwanto (2017) concluded that business risk has no effect on intellectual capital disclosure.

In practice, companies often do not disclose intellectual capital continuously (Kamath, 2017). This makes research on intellectual capital disclosure interesting to conduct. In addition, there is still not much research on intellectual capital disclosure in state-owned companies. This study is intended to examine the effect of ownership structure consisting of managerial ownership, institutional ownership, and government ownership, as well as business risk and company size on intellectual capital disclosure in state-owned companies. The results of this study are expected to provide a positive contribution to state-owned companies regarding the importance of intellectual capital disclosure in order to attract investors and increase public trust in state-owned companies.

## LITERATURE REVIEW

### Managerial Ownership and Intellectual Capital Disclosure

Management ownership is the ownership of shares by the board of commissioners and directors, measured as a percentage of the total management shares. The disclosure of public company information is closely related to the influence of major shareholders in decision-making as indicated by management ownership (Akhtaruddin & Haron, 2010). Providing shares to management is a way for companies to align the interests of principals and agents. Greater involvement of management in the company can help reduce problems arising from differences in interests between the two. The more shares owned by management, the higher the incentive they have to improve company performance, because they have a responsibility to fulfill the wishes of shareholders, which ultimately also benefits themselves. To prove good management performance, management will be more open in disclosing information to the public, including information about intellectual capital. Thus, the higher the managerial ownership, the wider the disclosure of intellectual capital is made, and conversely, the lower the managerial ownership, the more limited the disclosure. Research conducted by Putri & Amanah (2017), and Putri & Herawaty (2019), shows that managerial ownership affects the level of intellectual capital disclosure. Based on this description, the following hypothesis can be formulated:

**H1: Managerial share ownership affects intellectual capital disclosure.**

### **Institutional Ownership and Intellectual Capital Disclosure**

According to [Rahayuni, et al. \(2018\)](#), institutional ownership can function as an effective monitoring tool. Institutions are important players in the capital market, and their actions have a major influence on company policies, including policies related to corporate information disclosure. Based on agency theory, institutional investors as funding parties give the authority to manage the company to management, and then hold management accountable for managing their funds. Therefore, institutional investors are very interested in all relevant and in-depth information for proper decision making. High institutional ownership can encourage companies to be more transparent in disclosing intellectual capital. Companies with large levels of institutional ownership generally receive stricter supervision from investors, which can ultimately reduce the potential for opportunistic behavior by managers. This decrease in opportunistic behavior will encourage managers to be more optimal in increasing intellectual capital disclosure. This finding is also supported by previous studies conducted by [Alfariza & Hermawan \(2021\)](#) and [Tatang, et la. \(2022\)](#), which showed that there was a positive influence of institutional ownership on intellectual capital disclosure. Based on this, the research hypothesis can be formulated:

**H2: Institutional share ownership affects intellectual capital disclosure.**

### **Government Ownership and Intellectual Capital Disclosure**

State-owned enterprises whose shares are mostly owned by the government can comply with and comply with regulations, because the board of directors in the company is selected by the government. However, because the company is a public company, all forms of company operations are free from public supervision. In accordance with agency theory, where the government as the principal gives a mandate to management as an agent to be able to run the company well. Government investment in the business world aims to improve the welfare of the community, so that companies where the government invests are required to have a high level of accountability to the community ([Mohd Ghazali, 2007](#)). Companies whose shares are significantly owned by the government provide the government with the flexibility to be actively involved in managing the company. [Haddad et al. \(2015\)](#) and [Khlif & Achek \(2017\)](#) show a positive relationship between government ownership and the level of voluntary disclosure. This means that the greater the government's share ownership, the more incentive it provides for company management to make more voluntary disclosures, including disclosure of intellectual capital. Previous studies conducted by [Fajrianto & Raharja \(2021\)](#) and [Aisyah & Sudarno \(2014\)](#) concluded that government ownership affects intellectual capital disclosure. Based on this explanation, the following hypothesis can be proposed:

**H3: government share ownership affects intellectual capital disclosure.**

### **Company Size and Intellectual Capital Disclosure**

Company size is a measure that shows the size of a company observed from the value of assets, sales value, and equity value. Large-scale industries tend to have more activities and wider area networks compared to small-scale industries. Agency theory ([Jensen & Meckling, 1976](#)) informs that large-scale companies have more agency costs compared to small companies. Large companies will generally disclose more voluntary information in an effort to reduce agency costs. Not only that, large industries have demands to always carry out information transparency as desired by stakeholders, both financial and non-financial information compared to small industries. The information disclosed can be used to improve the quality and reputation of the industry. Based on this explanation, the following hypothesis can be formulated:

**H4: Company size affects intellectual capital disclosure.**

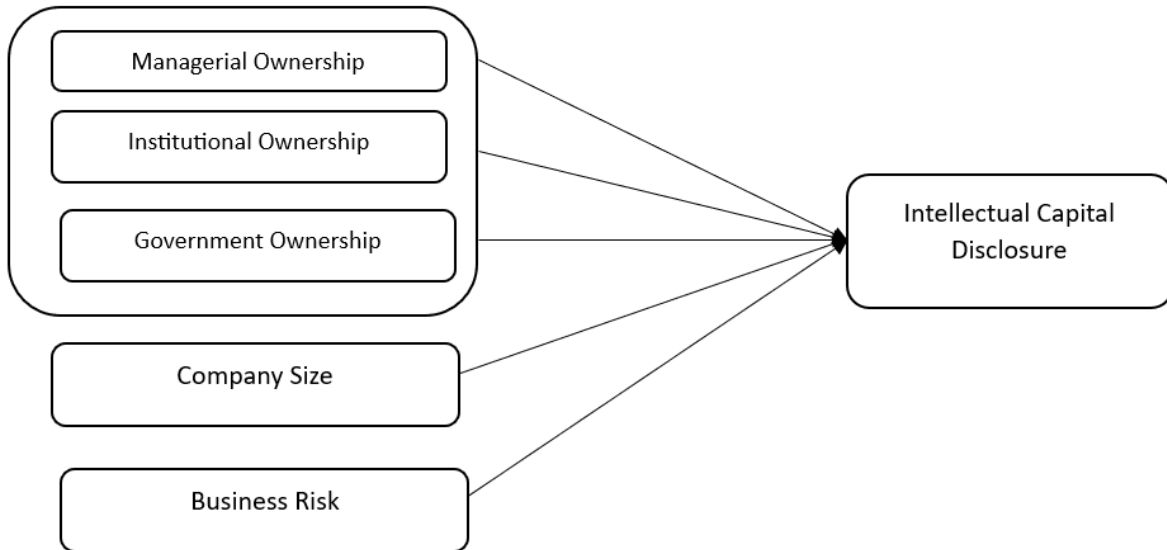
### **Business Risk and Intellectual Capital Disclosure**

In carrying out its operations, companies will experience a high level of uncertainty, which is called business risk. In an effort to reduce this uncertainty, companies have the option of providing more open, more and broader information about any condition of the company, including the intellectual capital owned by the company. However, many public companies choose the option of not disclosing much information related to intellectual capital if the uncertainty is high. This is due to the company's concern that the information shared openly can be used by competitors to take advantage of them ([Neill & Purwanto, 2017](#)). In addition, according to signal theory, companies that face high risks tend to be more careful in disclosing information, including intellectual capital. This is because investors can find out the level of risk in the company through the information disclosed, including in terms of intellectual capital disclosure. Therefore, companies with

high levels of risk are usually more reluctant to disclose information about intellectual capital. Based on this explanation, the following hypothesis can be formulated:

**H5: business risk affects intellectual capital disclosure**

Figure 1 shows the relationship between the independent variables and dependent variable. The independent variables include ownership structure – managerial share, institutional share, and government share, company size, and business risk. While the dependent variable is intellectual capital disclosure.



**Figure 1. Research Framework**

**RESEARCH METHOD**

**Research Variables**

This study uses a quantitative approach. Quantitative research is a scientific investigation conducted systematically to analyze factors, phenomena, and causal relationships between these factors. The purpose of quantitative research is to develop and apply mathematical models, theories, or hypotheses related to the phenomena studied. This study aims to identify factors that influence the level of intellectual capital disclosure, such as management ownership, institutional ownership, foreign ownership, government ownership, and stock market risk.

Intellectual capital is the knowledge or ability to think of a company, has no physical form (intangible), and with this intellectual capital the company will gain more profit or stability of the business process and provide an advantage for the company compared to its competitors or other companies. The level of intellectual capital disclosure is measured using the Intellectual Capital Disclosure Index (Mamun, & Aktar, 2020), often referred to as the Intellectual Capital Disclosure Index (ICDIndex). ICDIndex is a scoring method, where information disclosed in the annual report is given a score of 1, while information that is not disclosed is given a score of 0.

$$ICD = \left( \frac{D_i}{M} \right) 100\% \dots\dots\dots (1)$$

ICD = Extent of intellectual capital disclosure  
 di = 1 if ICD items are disclosed in the annual report and 0 if not disclosed  
 Mi = Total number of items disclosed

Managerial ownership refers to the proportion of a company's shares owned by executive managers and members of the board of directors.

$$MANOWN = \frac{\text{Total Managerial Ownership}}{\text{Total Outstanding Stock}} \times 100\% \dots\dots\dots (2)$$

Institutional ownership refers to the percentage of a company's shares owned by various institutions, such as private companies, investment firms, securities firms, banking institutions, and other organizations.

$$INSOWN = \frac{\text{Total Institutional Ownership}}{\text{Total Outstanding Stock}} \times 100\% \dots\dots\dots (3)$$

Government ownership is measured by the percentage of share ownership held by government agencies and related government institutions.

$$GOVOWN = \frac{\text{Total Government Ownership}}{\text{Total Outstanding Stock}} \times 100\% \dots\dots\dots (4)$$

Company size describes how large or small a company is based on nominal value, which is measured by the total assets or wealth owned by the company.

$$SIZE = \ln(\text{Total Assets}) \dots\dots\dots (5)$$

Business risk is an opportunity for investors to gain greater profits from the investments made. However, business risk can also cause losses for investors.

$$s = \left( \frac{\sum (X - \bar{X})^2}{n - 1} \right)^{1/2} \dots\dots\dots (6)$$

- S = Standard Deviation
- X = Each value in the data population
- $\bar{X}$  = Average of the data population
- N = Total number of data population

**Population and Sample**

The population of this study is BUMN companies that went public on the IDX for the 2018-2023 period, totaling 22 companies, so that the total population is 132 observations. With the sampling technique using the purposive sampling method, namely the sampling method with the following criteria:

1. Companies in the financial sector, basic material sector, infrastructure, energy sector, transportation & logistics sector, and health sector that have personal websites and include annual financial reports on the company website.
2. The company has a stock price on yahoo finance or investing
3. Has complete annual report data.

Of the total 132 population data, 6 do not have stock price data on yahoo finance or investing and 29 data are indicated as outliers, so that a sample that meets the criteria is 97 observation data.

**Research Analysis**

This study uses multiple regression analysis techniques to test the research hypothesis. The dependent variable is intellectual capital disclosure, while the independent variables include managerial ownership, institutional ownership, government ownership, company size, and business risk. The regression equation used in this study is as follows:

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + e \dots\dots\dots (7)$$

- Legend:
- Y = company intellectual capital disclosure
  - $\alpha$  = constant



$\beta$  = regression coefficient  
 X1= managerial share ownership  
 X2= institutional share ownership  
 X3= government share ownership  
 X4= company size  
 X5 = business risk  
 e = error

## RESULTS AND DISCUSSION

### Descriptive Analysis

Table 1 shows the descriptive statistics of each research variable. Managerial share ownership shows an average value of 2%, this shows that the shares owned by BUMN company management are quite low. This is not much different from the average institutional share ownership which also only shows a figure of 7%. Meanwhile, government share ownership is still quite high at 63.2%, this shows that BUMN companies Most of their shares are still owned by the government. The average business risk is still quite low at 14.45% although the highest value reaches 56.44%. The disclosure of intellectual capital of BUMN companies on average shows a very high figure, reaching 81.67%.

**Table 1. Descriptive Statistics**

Variables	Minimum	Maximum	Mean	Std. Deviation
Managerial Ownership	0.000000	0.489928	0.02027343	0.097907880
Institutional Ownership	0.000000	0.560034	0.07886809	0.138985428
Government Ownership	0.000000	0.900252	0.63200062	0.158597821
Business Risk	0.036091	0.564356	0.14446156	0.100866492
Company Size	12.31	31.68	22.0956	5.06919
Intellectual Capital Disclosure	0.71	0.88	0.8167	0.04869

Source: Processed Data (2024)

### Classical Assumption Test

Table 2 shows the results of the classical assumption test before hypothesis testing is carried out using multiple linear regression analysis. The results of the normality test indicate that the residual data is normally distributed with a significance level of one sample KS  $0.087 > 0.05$ . The Durbin Watson value also shows a value of 2.129 which is between the  $du$  and  $4-du$  values so that the model is free from the assumption of autocorrelation. All independent variables also show VIF values below 10 so that all independent variables are free from the assumption of multicollinearity. Likewise, the results of the test using the Glejser test for all independent variables show a significance result above 0.05 so that it is free from the assumption of heteroscedasticity.

**Table 2. Classical Assumption Test**

Variables	Tolerance	VIF	Sig (Heteroscedasticity)
Managerial Ownership	0.928	1.078	0.086
Institutional Ownership	0.714	1.400	0.524
Government Ownership	0.668	1.497	0.396
Business Risk	0.844	1.184	0.132
Company Size	0.922	1.085	0.091
One Sample KS	0.087		
Durbin Watson	2.129		

Source: Processed Data (2024)

### Hypothesis Testing Results

Based on Table 3, the value  $F_{\text{count}}$  is 6.864 with a significance level of 0.000, indicating that the regression model can predict the disclosure of a company's intellectual capital. The coefficient of determination value of 0.234 indicates that 23.4% of the variability in intellectual capital disclosure can be explained by ownership structure, business risk, and company size factors. The remaining 76.6% is explained by other

factors not examined in this study. Therefore, further research can add other factors such as value creation and value capture, with a primary focus on investigating the relationship between Intellectual Capital, the SDGs perspective, green accounting, and firms' performances (e.g. economic, financial and organizational performance) or can also explain the possibility of mediating or moderating variables (Baima et al., 2021; Alvino et al., 2021; Rezaei et al., 2021; Anik et al., 2021). It can also consider the Islamic industries (Asutay & Ubaidillah, 2024).

**Table 3. Hypotheses Testing**

Variables	Beta	Sig
Constanta	0.869	0.000
Managerial Ownership	0.051	0.273
Institutional Ownership	0.123	0.001
Government Ownership	0.031	0.352
Business Risk	-0.012	0.802
Company Size	0.004	0.000
F-count: 6.864 sig. 0.000		
Adjusted R Square: 0.234		

Source: Processed Data (2024)

The regression results are as follows:

$$Y = 0.869 + 0.051 X_1 + 0.123 X_2 + 0.031 X_3 - 0.012 X_4 + 0.004 X_5 \dots\dots\dots (8)$$

Based on the equation of regression analysis, it can be explained that:

- a) The constant value explains that intellectual capital disclosure will increase by 0.869 for one unit if all variables are constant.
- b) The regression coefficient of institutional ownership ( $X_2$ ) of 0.123 which has a positive value states that every increase in the institutional ownership variable by one percent will increase intellectual capital disclosure (Y) by 0.123 percent.
- c) The regression coefficient of company size ( $X_5$ ) of 0.004 explains that every one unit increase in the company size variable will cause an increase in intellectual capital disclosure by 0.004.

**The Effect of Managerial Ownership on Intellectual Capital Disclosure**

Managerial share ownership in a company can reduce the conflict between principal and agent. In other words, share ownership by managers will encourage them to reduce opportunistic behavior and focus more on the same interests as shareholders, namely maximizing the value of the company. However, the test results show that managerial share ownership does not affect intellectual capital disclosure, which means that the first hypothesis ( $H_1$ ) is rejected. This study concludes that managerial share ownership is not related to intellectual capital disclosure, which means that a high level of managerial share ownership does not guarantee high intellectual capital disclosure by the company. One of the reasons behind this finding is the fact that not all companies have managerial share ownership, because many companies in the sample do not have it. Even though there is managerial share ownership, the proportion of managerial share ownership owned by the company is still low on average, so that management does not have full authority in decision making. Based on the results of descriptive statistics, the average managerial share ownership is only 2%. This shows that managerial share ownership does not have a significant effect on the extent of intellectual capital disclosure made by managers. This finding supports the research of Maulana, et al. (2020) and Putri & Herawaty (2019), which stated that managerial ownership has no effect on intellectual capital disclosure. Managers may focus more on short-term interests and financial gains than on disclosing intellectual information. However, the results of this study contradict the research of Afriad, et al. (2023) and Putri & Amanah (2017), which found that managerial ownership affects intellectual capital disclosure.

**The Effect of Institutional Ownership on Intellectual Capital Disclosure**

Institutional ownership generally acts as a party that monitors company performance. Companies with higher levels of institutional share ownership tend to have greater ability to monitor management performance. The results of the hypothesis test show that institutional ownership affects intellectual capital



disclosure, so the second hypothesis ( $H_2$ ) is accepted. Companies with high institutional ownership usually receive stricter supervision from investors, which in turn reduces opportunistic actions by managers. This reduction in opportunistic actions encourages managers to work harder in increasing intellectual capital disclosure. This finding supports agency theory, which states that high institutional ownership can expand the disclosure of a company's intellectual capital, thereby reducing the conflict between principal and agent. This is because the higher the institutional ownership, the smaller the share ownership by outside parties (minorities), which in turn reduces the demand for corporate information disclosure compared to companies with more dispersed share ownership or larger outside party ownership (Erika et al., 2023). This study supports the findings in the research of [Tatang, et la. \(2022\)](#) and [Alfariza & Hermawan \(2021\)](#). However, the results of this study differ from the research of [Munir & Marina \(2022\)](#) and [Suyono \(2019\)](#), which stated that institutional ownership has no effect on intellectual capital disclosure.

### **The Effect of Government Ownership on Intellectual Capital Disclosure**

The existence of government share ownership makes company directors more focused on the welfare of the company, through the development of human resources and intellectual capital that provide overall benefits. Company management tends to be more transparent if there is great pressure from the government. However, the test results show that government share ownership does not affect intellectual capital disclosure, so the third hypothesis ( $H_3$ ) is rejected. This finding contradicts agency theory, which states that the higher the government ownership, the greater the disclosure of intellectual capital. It turns out that government ownership is not enough to influence management to disclose more of the company's intellectual property. The government as the majority shareholder is unable to encourage management to disclose intellectual capital. This is likely because the government only demands management to succeed in financial performance, but does not consider things that are not related to financial conditions. Governments may have different objectives such as economic stability or public policy, which do not necessarily support disclosure of intellectual property information. The results of this study support the research results of [Latusura & Muid \(2021\)](#) and do not support the research of [Fajrianto & Raharja \(2021\)](#) and the research of [Aisyah & Sudarno \(2014\)](#) which state that government share ownership has a positive effect on intellectual capital disclosure.

### **The Effect of Company Size on Intellectual Capital Disclosure**

Company size can reflect company performance. This size is measured using the natural logarithm of the total assets owned by the company. Large assets allow the company to meet operational and investment costs. This study shows that company size has a positive effect on intellectual capital disclosure, which means that hypothesis  $H_4$  is accepted. This is due to the fact that large companies tend to carry out more activities than small companies, thus attracting the attention of investors in making decisions. The larger the company, the higher the demand for information transparency when compared to smaller companies. By disclosing more information, companies are trying to show that they are implementing good corporate governance principles. This finding supports previous studies by [Lama, et al. \(2024\)](#) and [Syarifudin, et al. \(2023\)](#) which also showed that company size has a positive effect on intellectual capital disclosure. However, this finding is not in line with the research of [Dewi & Nahar \(2020\)](#), which states that company size has a negative effect on intellectual capital disclosure.

### **The Effect of Business Risk on Intellectual Capital Disclosure**

Business risk is the possibility of adverse conditions that can be experienced by a company due to the operations carried out. This study found that business risk does not affect the extent of intellectual capital disclosure made by the company. Thus, the fifth hypothesis ( $H_5$ ) is rejected. The business risk that is likely to be experienced by the company does not affect the level of intellectual capital disclosure. The results of this study can be caused because companies that experience high risks prefer not to disclose more information, including information about intellectual capital. Companies are concerned that if a lot of information is disclosed to the public, it can cause outsiders to know the high risks faced by the company. Based on the results of descriptive statistics, it states that the business risk of the sample companies is still quite low, this is likely because most of the shares of state-owned companies are owned by the government so that in terms of risk it is lower than other public companies. This results in management paying less attention to intellectual capital disclosure. Although intellectual capital disclosure can provide an overview of the company's value and create wealth, it is still voluntary and has not been regulated in a standard

manner. The results of this study support the research of Neill & Purwanto (2017) which states that business risk does not affect intellectual capital disclosure. Companies with high business risks may be more cautious about sharing intellectual information so as not to reveal weaknesses or threats that competitors could rely on. However, the results of this study do not correspond to the research of Jayanti, et al. (2021) which revealed that business risk affects the disclosure of intellectual capital.

## CONCLUSION

This study aims to examine the effect of ownership structure, including managerial, institutional, and government ownership, as well as business risk factors and company size on intellectual capital disclosure in state-owned enterprises listed on the Indonesia Stock Exchange. The results of the study indicate that institutional ownership and company size have an effect on intellectual capital disclosure, while managerial ownership, government ownership, and business risk have no effect on intellectual capital disclosure.

The limitations need to be disclosed to identify the weaknesses of this research. First, this study did not consider in advance the components of intellectual capital disclosure used in this study, whether they were appropriate or not for state-owned enterprises. Second, the study also only relies on individual abilities in calculating the intellectual disclosure index so that it is likely to be different if done by other individuals.

Future research can consider using samples of all public companies, or can also compare the level of intellectual capital disclosure between state-owned enterprises and non-state-owned enterprises or in Islamic industries. It is also necessary to consider using tools or software as an aid to calculate the intellectual capital disclosure index. Future research might also consider other factors or factors that may have a mediation or moderator effect in influencing the intellectual capital disclosure.

## Abbreviations

Indonesian Stock Exchange (IDX), Sustainable Development Goals (SDGs).

## Author Contribution

*DA* and *DP* created the concept, *DA* created the draft article. *DA* and *DP* collected the data. *DA* processes data and performs analysis. *DP* made the necessary additions and completes the article.

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## Conflict of Interest

The authors declare that there is no conflict of interest in writing this article.

## Data and Material Availability

Data is available in IDX and the company website.

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