

Impact of intellectual capital on financial performance with company size moderation

Ilyas Alfian Suhadi

Universitas Islam Indonesia, Indonesia

alfianilyasss97@gmail.com



Article History

Received on 17 December 2023

1st Revision on 21 December 2023

2nd Revision on 4 January 2024

3rd Revision on 8 January 2024

4th Revision on 17 January 2024

Accepted on 19 January 2023

Abstract

Purpose: This study aims to determine the effect of intellectual capital and company size on financial performance and the moderating role of company size on intellectual capital on the financial performance of state-owned companies in the infrastructure sector for the 2017-2022 period.

Research methodology: This type of research is quantitative research that uses descriptive static methods, classical assumption tests, and hypothesis tests. In total, 42 samples were included in the study.

Results: The results show that Intellectual capital has a significant positive effect on financial performance, while company size has a significant negative effect on financial performance. The company size in this study was not able to moderate intellectual capital to financial performance.

Limitations: This study only used data from the IDX for 2017-2022 which allows data not to be obtained in detail. The sample in this study uses only infrastructure sector companies that use rupiah currency.

Contribution: This study reveals that intellectual capital has a positive and significant effect on financial performance, whereas company size does not moderate this relationship, providing important insights for the management of intellectual capital and strategy for state-owned companies in the infrastructure sector.

Novelty: Company size is used as a moderating variable because it is thought to be able to support the company's operational activities in supporting the management of its resources.

Keywords: *Intellectual Capital, Company Size, Profitability*

How to Cite: Suhadi, I. A. (2024). Impact of intellectual capital on financial performance with company size moderation. *International Journal of Financial, Accounting, and Management*, 6(1), 47-59.

1. Introduction

Good economic growth helps a company increase its profitability. However, the Indonesian economy is often subject to change. This will increase performance competition for survival between companies. Therefore, companies are motivated to improve their performance. A company's performance can be understood through its financial performance, which makes it possible to determine the company's ability to generate profits, which is reflected in its profitability (Fajaryani & Suryani, 2018). Return on assets is a fundamental profitability statistic that gauges a company's profit and demonstrates the company's capacity to create profits before adopting debt (Chika, Promise, & Werikum, 2022). The company's performance in the financial sector is important in supporting its goals, especially in State-Owned Enterprises (SOEs), especially in the infrastructure sector. Financial performance describes and explains a company's success based on various measures of action (Rosiana & Mahardhika, 2021).

Quoted *Kontan.id*, a phenomenon that occurs in 2023, namely the debt burden and performance of the financial sector, SOEs, the construction sector, and infrastructure, which are in a weakened condition, has an impact on the decline in stock prices of the construction or infrastructure sectors. Analysts estimate that the performance of the construction sector for this year is still quite heavy. Based on the

RTI data until Friday (23/6), the share prices of construction issuers weakened. The PT Waskita Karya (WSKT) weakened by 43% *year to date* to 202. Meanwhile, PT Wijaya Karya (WIKI) weakened by 34% to Rp 525. Meanwhile, PT PP (PTPP) decreased by 17% to Rp 590. Kompas, PT Adhi Karya (ADHI) weakened by 4.96% ytd to Rp 460. Leonardo Lijuwardi, Analyst of NH Korindo Sekuritas, said that currently all state-owned entities in the medium to long term are located in a *downtrend*.

During this period, the financial performance of the infrastructure sector, especially in construction, significantly reduced. PT Waskita Karya had a net loss of IDR 374.93 billion and a revenue of 0.36% yoy to IDR 2.73 trillion. PT Wijaya Karya also had a net IDR loss of 521.26 billion. Meanwhile, PT Adhi Karya's revenue decreased by 30% to Rp 3.78 trillion. Meanwhile, only PT PP recorded an increase in revenue of 1.94% to Rp 4.36 trillion and net profit increased by 21.45% to Rp 34.22 billion. From the explanation of the trending news phenomenon, it is evident that financial performance is a very important foundation for the progress of companies, especially state-owned companies, which are the mainstays of the government in building economic stability. Financial performance can be reflected through profitability, which is a ratio that measures a company's ability to achieve profit targets. Profit, or profitability, is very important for companies to maintain growth and strengthen finances (Pratiwi, Nurulrahmatia, & Muniarty, 2020). A company's profitability is its ability to generate profits. When a business makes more money, the dividends paid to shareholders increase. Profitability ratios can be used to determine how well management manages a company to maximize profits.

Some factors can affect financial performance, including intellectual capital. Intellectual capital is an intangible asset that includes patents, intellectual rights, copyrights, and franchises that provide added value to businesses and society (Andriana, 2014). Intellectual capital is also a resource that can be used to increase competitive advantage and contribute to organizational performance. Intellectual capital itself is a part of intangible assets and is divided into three main components: human capital, organizational capital, and customer capital. These three elements are measurable resources that companies must maximize their performance. Without scientific factors, the entire company is unable to organize its performance. Intellectual capital is relevant to the resource base theory because companies that want to achieve good value targets must, of course, have good resource management. However, previous research by Purwanto and Mela (2021) on intellectual, as measured by VAICTM in manufacturing companies in 2016-2018 stated that the results of intellectual capital did not affect financial performance as a proxy for ROA because manufacturing companies did not fully utilize their tangible and intangible assets. With an increase in the value of Intellectual Capital (VAICTM), company profits increase. Undoubtedly, this can be achieved by companies that can build Intellectual Capital (VAICTM). However, companies that are new to implementing it in their businesses need time to understand the results, and as a result, the expected performance from implementing VAICTM is not achieved.

Previous research from Christina (2022), Siska and Faliany (2021), Wulandari, Suryani, and Sani (2022), Bayraktaroglu, Calisir, and Baskak (2019), Wardifa and Yanthi (2022), and Xu and Li (2019) stated that intellectual capital affects financial performance. However, this is contrary to research by Purwanto and Mela (2021), Rosella and Nugroho (2023), and Fariyah and Setiawan (2020) which states that there is no influence of intellectual capital on financial performance.

The company's size at this time was also the focus of the company's attention. According to Sartono (2010), company size is a measure of the ability of business entities, and if it is a large and established company, it is easier for them to raise funds in the capital market than for small and medium companies. This means that a large company has greater flexibility than a small company, so a large company is a company with large funding conditions as well. Large-scale companies have an outstanding depiction in the public eye and are usually closely monitored by interested parties (Ramdani and Prayitno, 2023). The more assets a company has, the more funds it can manage. According to Fajaryani and Suryani (2018), a company with large assets can be considered long-established. Research by Melania and Tjahjono (2022) on the influence of company size on the financial performance of mining companies

listed on the IDX shows that company size does not affect financial performance. This means that the larger the company, the less influence it has on financial performance.

Companies that are already prosperous certainly have easier access to capital markets and greater flexibility to achieve superior operational performance than small companies. If a company manages its assets well, it can improve its performance. Research from Ningsih (2021), Jonathan (2018), Fajaryani and Suryani (2018), and Amalia and Khuzaini (2021) size does not affect financial performance. Company size is thought to be a factor that can strengthen the intellectual capital relationships. From an investor perspective, company size can provide support for resource management and make it easier to obtain external funding sources if the company size is good. The easier it is to obtain financial assistance, the more it will be able to support company resource management operations.

The results of previous studies have shown inconsistent results, and most tend to be conducted in manufacturing, mining, and banking companies. From the explanation of the factor and background above, researchers will now review the effect of intellectual capital on financial performance with company size as a moderation variable. The size of the company is used as a moderation variable because the size of the company is thought to be able to support the company's operational activities in supporting the management of its resources. The purpose of this study is to determine the effect of intellectual capital and company size on financial performance and the moderating role of company size on the relationship between intellectual capital and the financial infrastructure sector listed on the IDX because it is related to the phenomenon that has been described. The current research will use the 2017-2022 financial statement period.

2. Literature review

2.1 Stakeholder Theory

Stakeholder theory states that a company is not an entity that only operates for its interests, but must provide benefits to all its stakeholders, such as shareholders, creditors, consumers, suppliers, government, and society (Chariri & Ghazali, 2007). The purpose of stakeholder theory is to help managers understand and effectively manage the company environment. Furthermore, the main aim of stakeholder theory is to increase the value of the impact of stakeholder activities and minimize losses for these stakeholders (Ulum, 2012). Management is expected to carry out important activities and report them to the stakeholders. All interested parties have the right to provide information about the company's activities. Stakeholders are a company's consideration in whether or not to disclose information in the company's financial reports

2.2 Resource-based theory

Resource-based theory is used to determine companies' competitive advantage through knowledge capabilities or intangible assets (Wijayanti, 2013). If the company has effective resource management, then it can maintain its life through superior operational performance, which can lead to an increase in company performance (Dewi & Dewi, 2020). Intellectual capital in resource base theory meets the criteria as the basis of a company's competitive advantage because it has rare, unique, imitable and irreplaceable properties (Ulum, Kharismawati, & Syam, 2017). *Resource Base Theory* supports intellectual capital research because it is based on intangible assets, such as employee capabilities, consumer relations, management system models, and relatable relationships, as well as information through human resources that can create company performance excellence.

According to Angela (2016), resource-based theory (RBT) provides several criteria, including: 1) these Resources These support the company's ability to meet customer needs better than competitors, and 2) resources that are available in limited or rare quantities and are not easily imitated. Four characteristics make resources difficult to imitate, namely that the resource is physically unique, requires a long time and large costs to obtain, is a unique resource that is difficult for competitors to own and utilize, and requires a large capital investment to produce. 3) These resources can benefit companies: the more profits a company has as a result of utilizing certain resources, the more valuable those resources are;

and 4) resource durability: the slower a resource experiences depreciation, the more valuable that resource is.

2.3 Signaling theory

Signalling theory is an economic science that was developed to take into account the reality of internal companies or insiders. Signalling theory explains the company's desire to provide information to external parties of the company. The availability of information can create investor interest in investing in capital (Brigham and Houston, 2018). Signalling Theory states that the information disclosed by a company can influence investor decisions (Guntoro & Arrozi, 2020). The information signals revealed are certainly based on better quality than their competitors (Mulyadi & Panggabean, 2017). Signal theory deals with intellectual capital and company size, where if a company has good resource management, it can give positive signals to investors. Similar to the size of the company, if the company is large, it can also give a positive signal to investors' decisions in making a decision. From this explanation, there can be a mechanism: if investors receive a positive signal regarding the company's performance, then investors can make decisions more easily. Then, the company can obtain external funds from investors so that it can expand or strengthen its performance in generating targeted profits.

2.4 Profitability

Profitability is the net final result of various policies and decisions made by Brigham Company, where this ratio is used as a measuring tool for the company's ability to earn profits. Thus, measuring the profitability of a company shows the overall level of management effectiveness; indirectly, long-term investors will be very interested in this analysis. In addition, profit (profitability) is very important for a company not only to continue to maintain its business growth but also to strengthen its financial condition (Pratiwi et al., 2020). The ability of a company to generate profit is known as its profitability. When a company makes more money, the more dividends it pays to shareholders. Profitability ratios can be used to determine how well management is running a business to generate maximum profits.

Profitability indicates business performance by optimizing resources. With a higher level of profitability, the company achieves the expected profit level. Such improvements will increase the company's value, which will automatically attract investors and other stakeholders.

2.5 Intellectual Capital

Ulum (2012) states that in general there are three main components of intellectual capital, namely: human capital, structural capital, and customer capital. In simple terms, human capital represents the individual knowledge stock of an organization represented by its employees. Structural capital includes all nonhuman knowledge storehouses in an organization. Meanwhile, customer capital is the knowledge inherent in customer relationships that an organization develops through the course of its business. The resource-based theory suggests that if a company's resources are managed effectively and efficiently, it can ultimately create a competitive advantage. Intellectual capital plays an important role in improving financial performance. Managing physical capital effectively and efficiently is part of a company's intellectual capital (Febriany, 2020). Companies with strong intangible assets will be better able to handle resource management problems, and good management will certainly improve operational performance, so they can generate greater profits. Companies that do not have superior knowledge or intangible assets find it difficult to achieve over time.

Intellectual capital is a form of resource management that can support company performance. If a company has high intellectual capital, it can impact its financial performance. This is because good resource management will certainly provide effective support for company performance. Christina (2022), Siska and Faliyany (2021) and Wulandari et al. (2022), Wardifa and Yanthi (2022), Bayraktaroglu et al. (2019) and Li (2019) states that intellectual capital affects financial performance. However, it is contrary to Purwanto and Mela (2021), Rosella and Nugroho (2023), and Fariyah and Setiawan (2020).

2.6 Company size

Company size, related to signal theory, can support company performance because it can provide information or signals to investors' decisions. The size of the company can be considered to be affected by the company's financial results, because the greater the size and scale of the company, the greater the company's breadth when obtaining sources of funds, which have an internal or external nature (Hasti, Maryani, & Makshun, 2022). Company size is a scale that can classify companies by examining the value of a company's assets (Oktaviani & Sembiring, 2021). A larger company can automatically create good information for investors so that investors will invest in the company, which can create an increase in financial performance and business value. From this statement, it is clear that the company's size can affect its financial performance. Research from Ningsih (2021), Jonathan (2018), Fajaryani and Suryani (2018), and Amalia and Khuzaini (2021) size does not affect financial performance.

The size of the company in this study is also used as a moderating variable in the relationship of intellectual capital to the company's financial performance. Intellectual capital is a form of knowledge-based resource management, and if the company has a large size, the intellectual capital factor can strengthen and support the resource management process to improve financial performance in obtaining profits that the company expects. If the company size is good from an investor's perspective, it can help manage resources and make it easier to obtain external funding. The larger the company size, the easier it is to obtain funds, and, of course, it can help manage company resources. From this statement, intellectual capital can be strengthened by company size factors to obtain the desired profit. Thus, company size can moderate or strengthen the relationship between intellectual capital and financial performance.

Based on this theory, the hypotheses presented in this study are as follows:

H₁= Intellectual Capital positively affects financial performance

H₂= Company size positively affects financial performance

H₃= Company size can strengthen intellectual capital towards financial performance

Based on the explanation of theory and hypothesis development, here is the framework of thinking in this study.

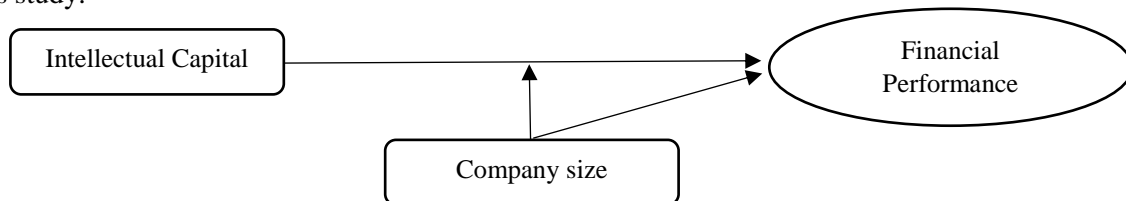


Figure 1. Frame of Mind

3. Research methodology

This is a type of quantitative research that uses secondary data processed using SPSS 25, including descriptive statistical methods, classical assumption tests, and moderated analysis regression (MRA). This research uses secondary data, namely, the financial statements of state-owned companies in the infrastructure sector recorded on the IDX during the 2017-2022 period. Secondary data are obtained indirectly, and the data collection technique is a documentation technique. Subsequently, 42 data samples were tested.

Here are the variable measurements of intellectual capital, company size and profitability

Table 1. Measurement of variables of intellectual capital, firm size and profitability

Variable	Indicators	Scale
Intellectual Capital	$VAIC = HCE + SCE + CEE$	Ratio
Company size	$SIZE = \text{Logarithm Natural of Total Asset}$	Ratio

The VAIC method was developed by Pulic et al.(1998). The VAICTM model was used to measure and calculate capital utilization efficiency, human capital efficiency, and structural capital efficiency, followed by measuring intellectual capital. For the initial measurement, Value Added was used.

The VAIC approach is designed to present information on the efficiency of value creation from a company's tangible and intangible assets. The VAIC calculation involves three components: value-added capital employed (VACA), value-added human capital (VAHU), and structural capital value-added (STVA), which starts with the company's ability to create added value. Value added is the most objective indicator for assessing business success and shows a company's ability to create value. The VAIC is measured using the following formula:

$$VAIC = VAHU + STVA + VACA$$

Information:

VAIC	: Value-added intellectual coefficient
VAHU	: VA/HCt, Value Added Human Capital
STVA	: SC/VA, Structural Capital Value Added
VACA	: VA/ CE, Value Added Capital Employed
VA	: OUT-IN
HC	: Salary expense
SC	: VA-HC

According to Setyowati and Sari (2019), company size is one of the reasons for funding decisions to cover the size of ownership assets. The size of a company is represented by a value called the company size. Many capital owners believe that investing in shares is safer for large companies than for smaller companies. Company size is applied using the natural logarithm of total assets (Ln Total Assets) because of the large nominal value of total assets (Muzharoatiningsih and Hartono, 2022). Harahap (2013) states that a company's measurement is based on total assets, and assumes that total assets can clarify or reflect the size of the company to affect timeliness.

Profitability ratio is used to measure the level of sales and capital to obtain the company's net profit. Companies with the ability to generate high profits provide a good signal to shareholders regarding the dividends that will be distributed, as well as indicating that the company's financial condition is healthy. ROA is a comparison ratio based on the profit after tax with total assets to measure a company's performance in generating profits from the assets that have been used. According to Kasmir (2016), ROA can be assessed using the profit after tax divided by total assets. ROA provides an overview of how efficiently a company uses its assets to generate profit. The higher the ROA, the more efficient the company is in generating profits from its assets (Mandasari 2023). According to Aprilia and Wahjudi (2021), if a company has a high Return on Assets (ROA), many investors prefer the stock. Thus, the company's stock price will also increase. The independent variables in this study were intellectual capital and company size, while company size was used as a moderating variable. The financial performance of a company serves as a proxy for the dependent variable in this study. Here is a multiple linear analysis and *moderated regression analysis* (MRA)

$$ROA = \alpha + \beta_1 VAIC_t + \beta_2 SIZE_t + e$$

$$ROA = \alpha + \beta_1 VAIC_t + \beta_2 SIZE_t + \beta_3 VAIC*SIZE_t + e$$

Information:

α	: Constanta
$\beta_1 - \beta_3$: coefficient regression
VAIC	: intellectual capital
SIZE	: company size
E	: error

4. Result and discussion

4.1. Descriptive Statistics

Table 2. Descriptive Statistics

Variable	Average	Maximum	Minimum	Std Deviation
Intellectual capital	-0.314	26.67	-34.10	8.0812
Company Size	31.319	32.45	29.59	0.8520
Financial Performance	-0.046	0.064	-0.246	0.0461

Source: Processed data by SPSS (2023)

Intellectual capital has an average value of -0.314, the highest value of 26.67, in PT Adhi Karya Tbk in 2019, and the highest value of -34.10 in PT Adhi Karya Tbk in 2018. Company size had an average of 31,319, with the highest value of 32.45 in PT Waskita Karya Tbk in 2018, and the lowest value of 29.59 in PT Wika Beton Tbk in 2017. Financial performance has an average value of -0.046, with the highest value of 0.064 in PT Wika Beton Tbk in 2017, and the lowest value of -0.246 in PT PP Tbk in 2017. The results of the descriptive statistics above provide information that companies are still minimal in utilizing intellectual capital, not only that, the most focused point is the financial performance section as measured by ROA, namely that many companies experience negative financial performance ratios.

4.2. Classical Assumption Test

4.2.1. Normality Test

Table 3. Normality Test

Kolmogorov Smirnov	Border	Information
0.173	0.05	Usual

Source: Processed data by SPSS (2023)

This study used a normality test (Kolmogorov-Smirnov test) to determine the distribution of data. Data were normally distributed if the resulting significance level was greater than 0.05. The significance value is 0.173, which means that it is greater than 0.05, indicating that the data are normally distributed.

4.2.2. Multicollinearity Test

This study used the VIF test to determine whether there were symptoms of multicollinearity in the research model. The study is said to be symptom-free if it has a VIF value of less than 10. Good research is a model that is free from the symptoms of multicollinearity (Ghozali, 2018).

Table 4. Multicollinearity Test

Variable	Tolerance	VIF	Information
VAIC	0.944	1.046	Multicollinearity does not occur
SIZE	0.951	1.059	Multicollinearity does not occur

Source: Processed data by SPSS (2023)

All independent and moderated variables have a VIF value below 10. So it is said that there is no multicollinearity.

4.2.3. Heteroscedasticity Test

The Glesjer test was used to determine whether the research model had symptoms of heteroscedasticity or not. Research is said to be free from symptoms if it has a significance value greater than 0.05.

Table 5. Heteroscedasticity Test

Variable	Sig	Border	Information
VAIC	0.477	0.05	No heteroscedasticity occurs
SIZE	0.994	0.05	No heteroscedasticity occurs

Source: Processed data by SPSS (2023)

The independent and moderation variables have a significance value above 0.05, so heteroscedasticity does not occur.

4.2.4 Autocorrelation Test

Table 6. Autocorrelation Test

DU	DW	(4-DU)	Information
1.606	2.210	2.393	No autocorrelation occurs

Source: Processed data by SPSS (2023)

Nilai Du < DW < (4-DU) or 1,606 < 2,210 < 2,393 thus the variables proposed in the study did not occur autocorrelation.

4.3 Test the hypothesis

Table 7. Multiple Linear Analysis, Partial Test, F Test and R-Square Test

Variable	Coefficient	Standard error	T-count	Sig
Constanta	0.449	0.171	2.617	0.013
VAIC	0.001	0.00023	2.920	0.006
SIZE	-0.015	0.005	-2.657	0.011
Test F	0.000			
R Square	0.339			
Dependent variables	ROA			

Source: Processed data by SPSS (2023)

Table 8. Moderated Regression Analysis (MRA)

Variable	Coefficient	Standard error	T-count	Sig
Constant	0.450	0.174	2.592	0.013
VAIC	0.005	0.017	0.286	0.776
SIZE	-0.015	0.006	-2.633	0.012
VAIC*SIZE	0.000	0.001	-0.242	0.810

Source: Processed data by SPSS (2023)

Table 7 shows that the F Test in this study has a significance value of 0.000, which is less than 0.05. This shows that the independent variables affected the dependent variable. The Glesjer test was used to determine whether the research model had symptoms of heteroscedasticity or not. Research is said to be free from symptoms if it has a significance value greater than 0.05. The R Square test in Table 7 has

a value of 0.339 or 33.9%, which indicates that the dependent variable, ROA, can be influenced by the VAIC and SIZE variables by 33.9%, and the rest is influenced by other variables outside the study.

4.4 Discussion

The VAIC variable in Table 8 has a positive coefficient of 0.005 and significance value of 0.006. This shows that the intellectual capital variables have a positive and significant effect on financial performance. These results make the first hypothesis accepted, so intellectual capital is a very important factor in financial performance. The better the intellectual capital owned by the company, the better the company's performance in obtaining the expected profit or profit, and automatically, financial performance will increase. Companies with strong intangible assets are better able to handle resource-management problems. Companies with good management will certainly improve their operational performance so that they can generate greater profits. In contrast to companies that do not have superior knowledge or intangible assets, over time they will find conditions where the company will find it difficult to achieve operational targets.

Regardless of how great the technology a company has, if it does not have good intellectual capital, it will have difficulty building and establishing efficient and effective management. Thus, if resource management is achieved, all operational activities related to profit targets will be easily achieved; automatically, the company's profitability will be good for investors and stakeholders. This study is in line with Christina (2022), Siska and Faliany (2021), and Wulandari et al. (2022), Wardifa and Yanthi (2022), Xu and Li (2019), and Bayraktaroglu et al. (2019) which states that intellectual capital has a positive effect on financial performance.

The size variable in Table 9 has a negative coefficient of -0.015 and a significance of 0.011; thus, the company size variable has a significant negative effect on financial performance. This result does not correspond to the second hypothesis; hence, it is rejected. These results indicate that a larger company reduces its financial performance. A company that is too large can allow for a lack of effective oversight that can trigger differences in interests, such as agency conflicts. Due to the lack of supervision, the company's operations will be disrupted, which will reduce its financial performance.

A company size that can help in any form is considered a good company size; however, if the company is too large, it will cause problems for management, as owners are worried about managing too many assets. Therefore, risks arise, such as weakening supervision in the asset sector. A lack of supervision and the risk of less effective assets can create gaps in achieving good operations. Disruption of operational activities will certainly disrupt a company's ability to earn profit.

Moreover, profits are the main targets of all the companies. If the company has a problem with decreasing profits due to its size being too large, it will also pose a risk to investors' perspectives. The company size does not guarantee good performance. Larger companies will be the focus of attention of the public and stakeholders. The results of this study are in line with Aghnitama, Aufa, and Hersugondo (2021) and Damayanti and Sulindawati (2022) which state that company size has a significant negative effect on financial performance.

Company size as a moderation variable in Table 9 shows that firm size cannot moderate the relationship between intellectual capital variables and financial performance; thus, the third hypothesis is rejected. The results of this study are contrary to those of Fitriani, Suriyanti, and Ramashar (2022), who state that the size of the company can moderate intellectual capital towards financial performance. The results of this research show that a larger company size does not affect the relationship between intellectual capital and financial performance. State-owned companies in the construction and infrastructure sector, in strengthening their resource management, are more inclined to use external capital, such as loans to banks.

This is due to previously trending news that several BUMNs in the infrastructure sector were in a state of swelling debt, which shows that the companies concerned prefer to use external debt rather than their

funds. The size of the company is a big picture of a business, but it does not significantly affect the company's intellectual capital. State-owned infrastructure companies that strengthen their intellectual capital do not use company size as a supporting factor. This company may use factors such as capital structure or other factors as drivers of intellectual to improve its financial performance.

5. Conclusion

5.1. Conclusion

The intellectual capital variable in this study has a positive and significant effect, so the intellectual capital factor must be owned by companies to improve financial performance. High intellectual capital can certainly boost financial performance because if a company has good scientific resources, it will improve its performance. Companies with superior intangible assets can face problems managing resources. A company with good management will certainly support operational performance so that it can generate the desired profits.

The size of the company in this study has a significant negative effect on financial performance. A company that is too large can lead to a lack of effective oversight, so it can allow differences of interest, such as agency conflicts in agency theory. A good company size is one that can provide support in any form to the company. However, a company that is too large will cause management problems. This is, of course, due to concerns on the part of the owner who is wary of managing assets that are too large.

The moderating role of firm size in this study is that it is not able to moderate the relationship of intellectual capital to financial performance. State-owned companies in the infrastructure sector in strengthening intellectual capital use other factors to support this, such as capital structure and other factors.

The implications of these findings are twofold. First, it underscores the pivotal role of intellectual capital as a critical strategic factor for companies, particularly in the infrastructure sector of state-owned enterprises, emphasizing its positive and significant impact on financial performance. This suggests that companies should prioritize the development and management of intellectual capital to enhance their overall performance and effectively address resource management challenges. Second, the negative impact of firm size on financial performance highlights the potential pitfalls associated with excessively large companies, indicating the need to carefully consider effective oversight mechanisms to mitigate agency conflicts. Additionally, the finding that firm size does not moderate the relationship between intellectual capital and financial performance suggests that in the context of state-owned companies in the infrastructure sector, reliance on factors such as capital structure may be more influential in bolstering intellectual capital than the sheer size of the company itself.

5.2. Limitation

This study only uses data from the IDX for 2017-2022 which allows data not to be obtained in detail, and the sample in this study uses only infrastructure sector companies that use the rupiah currency.

5.3. Suggestion

State-owned companies, specifically in the infrastructure sector, can further increase intellectual capital in their operational activities because it can improve a company's financial performance. On the other hand, state-owned companies should be more careful and vigilant in having company sizes or assets that are exceeded large, so that they can certainly improve the supervision sector so that the assets utilized can develop and be utilized effectively.

Investors should be more careful when investing in companies, especially in companies with large assets. A large company does not necessarily have good financial performance results, so investors must be more careful and wise in calculating the decision-making process. The government should pay more attention to the factors of resources, assets, and financial performance in state-owned companies in the infrastructure sector so that companies engaged in the sector can maximize their performance, especially in improving financial performance.

For future research, other variables, such as profit management and dividend policy, can be added so that the results obtained are wider. Future research can increase the range of research periods to obtain more samples.

References

- Aghnitama, R. D., Aufa, A. R., & Hersugondo, H. (2021). Pengaruh ukuran perusahaan terhadap profitabilitas perusahaan pada Indeks Investor33 di BEI. *Jurnal Akuntansi dan Manajemen (JAM)*, 18(2), 1-11.
- Amalia, A. N., & Khuzaini, K. (2021). Pengaruh Ukuran Perusahaan, Leverage Dan Struktur Modal Terhadap Kinerja Keuangan. *Jurnal Ilmu dan Riset Manajemen (JIRM)*, 10(5).
- Andriana, D. (2014). Pengaruh intellectual capital terhadap kinerja keuangan perusahaan. *Jurnal Riset Akuntansi Dan Keuangan*, 2(1).
- Angela, C. P. (2016). *PENGARUH INTELLECTUAL CAPITAL DAN GOOD CORPORATE GOVERNANCE TERHADAP KINERJA PERUSAHAAN PERBANKAN*. Universitas Katolik Musi Charitas.
- Aprilia, N., & Wahjudi, E. (2021). Pengaruh Kinerja Keuangan Terhadap Nilai Perusahaan Dengan Variabel Moderasi Corporate Governance. *Jurnal Riset Akuntansi dan Keuangan Vol*, 9(3).
- Bayraktaroglu, A. E., Calisir, F., & Baskak, M. (2019). Intellectual capital and firm performance: an extended VAIC model. *Journal of Intellectual Capital*, 20(3), 406-425.
- Brigham, E. F., & Houston, J. F. (2018). *Dasar-Dasar Manajemen Keuangan*: Salemba Empat.
- Chariri, A., & Ghozali, I. (2007). Teori akuntansi. *Semarang: Badan Penerbit Universitas Diponegoro*, 409.
- Chika, O. V., Promise, E., & Werikum, E. V. (2022). Influence of Liquidity and Profitability on Profits Growth of Nigerian Pharmaceutical Firms. *Goodwood Akuntansi dan Auditing Reviu*, 1(1), 1-13.
- Christina, C. (2022). Pengaruh Modal Intelektual dan Struktur Modal Terhadap Kinerja Keuangan Perusahaan Perkebunan. *Perspektif: Jurnal Ekonomi dan Manajemen Akademi Bina Sarana Informatika*, 20(1), 36-41.
- Damayanti, P. P., & Sulindawati, N. L. G. E. (2022). Pengaruh Biaya Operasional, Pinjaman Perusahaan, Ukuran Perusahaan, dan Struktur Modal Terhadap Kinerja Keuangan Dimasa Pandemi Covid-19 (Studi Kasus pada PT. Usada Pak Oles):(Studi Kasus pada PT. Usada Pak Oles). *Jurnal Ilmiah Akuntansi dan Humanika*, 12(2), 364-374.
- Dewi, H. R., & Dewi, L. M. C. (2020). *Modal intelektual dan nilai perusahaan pada industri jasa dan pertambangan di Indonesia*. Paper presented at the Proceeding of National Conference on Accounting & Finance.
- Fajaryani, N. L. G. S., & Suryani, E. (2018). Struktur modal, likuiditas, dan ukuran perusahaan terhadap kinerja keuangan perusahaan. *Jurnal Riset Akuntansi Kontemporer*, 10(2), 74-79.
- Farihah, S. M., & Setiawan, S. (2020). Determinan Intellectual Capital terhadap Profitabilitas di Bank Syariah: Pengujian Mediasi Kinerja Keuangan dan Kinerja Non Keuangan. *Jurnal Samudra Ekonomi dan Bisnis*, 11(2), 151-165.
- Febriany, N. (2020). Pengaruh intellectual capital terhadap kinerja keuangan perusahaan. *Kompartemen: Jurnal Ilmiah Akuntansi*, 17(1).
- Fitriani, F., Suriyanti, L. H., & Ramashar, W. (2022). Pengaruh Intellectual Capital Terhadap Kinerja Keuangan Dengan Ukuran Perusahaan Sebagai Variabel Moderasi. *ECOUNTBIS: Economics, Accounting and Business Journal*, 2(1), 27-40.
- Ghozali, I. (2018). Aplikasi analisis multivariate dengan program IBM SPSS 25.
- Guntoro, R., & Arrozi, M. (2020). Pengaruh Intellectual Capital dan Earning Per Share terhadap Harga Saham. *JCA of Economics and Business*, 1(01).
- Harahap, S. S. (2013). *Analisis Kritis atas Laporan Keuangan*: PT. RajaGrafindo Persada.
- Hasti, W. W., Maryani, M., & Makshun, A. (2022). Pengaruh Leverage, Struktur Modal, dan Ukuran Perusahaan terhadap Kinerja Keuangan pada Perusahaan Sektor Pertambangan. *Reviu Akuntansi, Manajemen, dan Bisnis*, 2(2), 139-150.

- Jonathan, I. B. (2018). Pengaruh Struktur Modal, Ukuran Perusahaan, Pertumbuhan Perusahaan Terhadap Kinerja Keuangan Pada Perusahaan Non Keuangan Dengan Menggunakan Dupont System. *Jurnal Muara Ilmu Ekonomi dan Bisnis*, 2(2), 419-426.
- Kasmir, K. (2016). *Analisis laporan keuangan*. Jakarta: Rajawali Pers.
- Mandasari, R. (2023). The Impact of Capital Structure, Investment Growth, and Liquidity on Financial Performance of Automotive Companies and Its Components on The Indonesia Stock Exchange (2018-2022). *Journal of Multidisciplinary Academic Business Studies*, 1(1), 115-128.
- Melania, S., & Tjahjono, A. (2022). PENGARUH CORPORATE SOCIAL RESPONSIBILITY, UKURAN PERUSAHAAN, UMUR PERUSAHAAN DAN BOARD SIZE TERHADAP KINERJA KEUANGAN:(STUDI KASUS PERUSAHAAN PERTAMBANGAN YANG TERDAFTAR DI BEI TAHUN 2016-2020). *Jurnal Riset Akuntansi dan Bisnis Indonesia*, 2(1), 199-219.
- Mulyadi, M. S., & Panggabean, R. R. (2017). Intellectual capital reporting: Case study of high intellectual capital corporations in Indonesia. *International Journal of Learning and Intellectual Capital*, 14(1), 1-10.
- Muzharoatiningsih, M., & Hartono, U. (2022). Pengaruh rasio keuangan, sales growth dan ukuran perusahaan terhadap financial distress pada sektor industri barang konsumsi yang terdaftar di BEI 2017-2020. *Jurnal Ilmu Manajemen*, 747-758.
- Ningsih, D. A. (2021). Kepemilikan Institusional, Leverage Dan Ukuran Perusahaan Terhadap Kinerja Keuangan. *Jurnal Akuntansi AKUNESA*, 9(2).
- Oktaviani, E., & Sembiring, F. M. (2021). Pengaruh Likuiditas, Leverage, Profitabilitas dan Ukuran Perusahaan terhadap Financial Distress: Studi Pada Perusahaan Sub Sektor Wholesale di BEI Periode 2014-2020. *Reviu Akuntansi, Manajemen, dan Bisnis*, 1(2), 127-144.
- Pratiwi, A., Nurulrahmatia, N., & Muniarty, P. (2020). Pengaruh Corporate Social Responsibility (CSR) Terhadap Profitabilitas Pada Perusahaan Perbankan Yang Terdaftar di BEI. *Riset & JURNAL AKUNTANSI*, 4(1).
- Pulic, A. (1998). *Measuring the performance of intellectual potential in knowledge economy*. Paper presented at the 2nd McMaster word congress on measuring and managing intellectual capital by the Austrian team for intellectual potential.
- Purwanto, P., & Mela, N. F. (2021). Pengaruh Modal Intelektual Dan Keunggulan Bersaing Terhadap Kinerja Keuangan. *Current: Jurnal Kajian Akuntansi Dan Bisnis Terkini*, 2(2), 339-362.
- Ramdani, D., & Prayitno, Y. H. (2023). The leverage and company size impact on delay in the audit. *International Journal of Financial, Accounting, and Management*, 5(3), 265-279.
- Rosella, N., & Nugroho, D. S. (2023). Pengaruh Intellectual Capital, Kepemilikan Manajerial dan Ukuran Perusahaan Terhadap Kinerja Keuangan Perbankan. *Indonesian Journal of Innovation Multidiscipliner Research*, 1(3), 283-294.
- Rosiana, A., & Mahardhika, A. S. (2021). Pengaruh good corporate governance dan intellectual capital terhadap kinerja keuangan. *Jurnal SIKAP (Sistem Informasi, Keuangan, Auditing Dan Perpajakan)*, 5(1), 76-89.
- Sartono, A. (2010). *Manajemen Keuangan Teori dan Aplikasi (Keempat)*. Yogyakarta: BPFE.
- Setyowati, W., & Sari, N. R. N. (2019). Pengaruh Likuiditas, Operating Capacity, Ukuran Perusahaan Dan pertumbuhan Penjualan Terhadap Financial Distress (Studi Pada Perusahaan Manufaktur Yang Terdaftar Di Bei Tahun 2016-2017). *Magisma: Jurnal Ilmiah Ekonomi dan Bisnis*, 7(2), 73-84.
- Siska, S., & Faliyany, L. J. (2021). ANALISIS DAMPAK MODAL INTELEKTUAL, KEPEMILIKAN MANAJERIAL, KEPEMILIKAN INSTITUSIONAL, DAN DEWAN KOMISARIS INDEPENDEN TERHADAP KINERJA KEUANGAN DI MASA DEPAN. *Jurnal Manajemen*, 18(2), 109-131.
- Ulum, I. (2012). Investigasi Hubungan antara Kinerja Modal Intelektual dan Praktik Pengungkapannya dalam Laporan Tahunan Perusahaan. *Jurnal Ekonomi Bisnis*, 17(1), 36-45.
- Ulum, I., Kharismawati, N., & Syam, D. (2017). Modified value-added intellectual coefficient (MVAIC) and traditional financial performance of Indonesian biggest companies. *International Journal of Learning and Intellectual Capital*, 14(3), 207-219.

- Wardifa, I. K. S., & Yanthi, M. D. (2022). Kontribusi Intellectual Capital Terhadap Kinerja Keuangan, Nilai Perusahaan dan Harga Saham. *Jurnal Akuntansi AKUNESA*, 11(1), 11-24.
- Wijayanti, P. (2013). Pengaruh Intellectual Capital Terhadap Harga Saham Melalui Kinerja Keuangan pada Perusahaan Perbankan yang Terdaftar di Bursa Efek Indonesia (BEI) pada Tahun 2009-2011. *Jurnal Ilmiah Mahasiswa FEB*, 1(2), 12-27.
- Wulandari, K., Suryani, Y., & Sani, A. (2022). Pengaruh Leverage, Ukuran Perusahaan Dan Likuiditas Terhadap Corporate Social Responsibility Disclosure Dengan Profitabilitas Sebagai Variabel Moderasi. *Inovatif: Jurnal Ekonomi, Manajemen, Akuntansi, Bisnis Digital dan Kewirausahaan*, 1(5), 372-393.
- Xu, J., & Li, J. (2019). The impact of intellectual capital on SMEs' performance in China: Empirical evidence from non-high-tech vs. high-tech SMEs. *Journal of Intellectual Capital*, 20(4), 488-509.