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The Effect of Intellectual Capital Investment, Corporate Governance, and Barriers to Entry on the Intellectual Capital Performance of Banking Companies

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A B S T R A C T

Intellectual capital is an important element in determining the performance of banking companies. This study aimed to examine the effect of intellectual capital investment, good corporate governance (proxied by foreign ownership and institutional ownership), and barriers to entry on intellectual capital performance. This research was conducted on conventional banking companies listed on the Indonesia Stock Exchange from 2015 to 2019. The sample was selected using a purposive sampling method based on specific criteria. Eighty-nine banking companies met the criteria. Data analysis was performed using multiple linear regression analysis. The results of this study indicate that intellectual capital investment and barriers to entry have a negative effect on intellectual capital performance. On the other hand, foreign ownership and institutional ownership have no significant effect on intellectual capital performance. These findings recommend that banking companies pay attention to efficiency in investment in human resource development to improve bank performance. Inefficient investment in human resources can lead to a decrease in intellectual capital performance. Banking companies also need to continuously innovate service products to maintain their competitiveness and no longer rely on fixed asset investment as an element of a barrier to entry.

A B S T R A K

Modal intelektual diakui sebagai elemen penting dalam menentukan kinerja bank. Tujuan dari penelitian ini adalah untuk menguji pengaruh investasi modal intelektual, tata kelola perusahaan yang baik (diproksikan dengan kepemilikan asing dan kepemilikan institusional), dan hambatan masuk terhadap kinerja modal intelektual. Penelitian ini dilakukan pada perbankan konvensional yang terdaftar di Bursa Efek Indonesia pada tahun 2015-2019. Metode pemilihan sampel adalah purposive sampling berdasarkan kriteria tertentu dan terdapat 89 bank yang memenuhi kriteria. Analisis data menggunakan analisis regresi linier berganda. Hasil penelitian ini menunjukkan bahwa investasi pada modal intelektual dan hambatan masuk berpengaruh negatif terhadap kinerja modal intelektual. Sedangkan kepemilikan asing dan kepemilikan institusional tidak berpengaruh signifikan terhadap kinerja modal intelektual. Temuan ini menyarankan bank untuk memperhatikan efisiensi dalam investasi untuk pengembangan sumber daya manusia dalam rangka meningkatkan kinerja bank. Investasi sumber daya manusia yang tidak efisien menyebabkan penurunan kinerja modal intelektual. Perbankan juga perlu melakukan inovasi produk layanan secara terus menerus untuk menjaga daya saingnya dan tidak lagi bergantung pada investasi aset tetap, sebagai elemen barrier to entry.

1. INTRODUCTION

One of the reasons for the low competitiveness of the business world in Indonesia is the less possessing competitive advantages in terms of innovation. The Global Competitiveness Index (GCI) report released by the World Economic Forum in 2019 shows that Indonesia's competitiveness ranking is currently relatively low, or at 50 out of 141 countries. Singapore takes first place in the world rank, Malaysia is in the 27th position, and Thailand is in the 40th position (Schwab, 2019). According to this report, the contributing factors are the low skills of

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human resources and the quality of access to technology adoption.

Business actors are starting to realize that business improvement is no longer focused on ownership of industrial equipment and machines but on the expertise of human resources in developing innovation on an ongoing basis. Human capital is widely recognized as the most important component of company performance (Andersén, 2021; Chabbouh & Boujelbene, 2020). Therefore, business actors must immediately shift their business systems from labor-based businesses to knowledge-based businesses (Maji & Goswami, 2016). The success of a company's business can be viewed from the capability and effectiveness of science and technology utilization. It makes knowledge, capital, and technology more important than traditional capital, such as natural resources, financial resources, and other tangible assets (Andersén, 2021).

The phenomenon of intellectual capital in Indonesia began to develop after the issuance of the Statement of Financial Accounting Standards (PSAK) No. 19 of 2020 concerning intangible assets, which defines intangible assets as identifiable non-monetary assets without physical form (Indonesian Institute of Accountants / Ikatan Akuntan Indonesia, 2020). This condition is encouraged by the development of technology and the business world, which demands a change from labor-based business to knowledge-based business. This change forces companies to no longer prioritize the number of workers but the added value that can be generated from non-physical assets, such as intellectual capital (e.g., knowledge, values in the organization, and relationships).

According to Alhassan & Asare (2016), the banking sector is an ideal research object. The banking industry is one of the most intensive sectors of intellectual capital. Employees are the most important element in the banking sector because all bank activities require employees. It is supported by the statement submitted by Supradnya & Ulupui (2016) that the intellectual capital performance in the financial industry is higher than that in the non-financial industry.

Intellectual capital investment is expected to create firm value (Meles et al., 2016). It can happen if various employee development programs, such as training and competency certification, can provide benefits that are greater than the costs. Nawaz & Haniffa (2017) and Shahveisi et al. (2017) proved that efficiency in intellectual capital investment has a significant positive effect on the intellectual performance of banking companies. However, according to Bontis et al. (2018), the cost of training per employee reduces the company's financial performance. Furthermore, Ozkan et al. (2017) research showed that capital efficiency contributes more than human capital efficiency in improving bank performance. The difference in the results of previous studies is a gap that needs to be studied further.

The intellectual capital performance of a bank cannot be separated from its management (Makki & Lodhi, 2014). Two elements of bank governance that play an important role in improving intellectual capital performance are institutional ownership and foreign ownership. Institutional investors, such as banks, insurance, pension funds, and mutual funds, have good financial competence to monitor and encourage bank performance (Sakawa & Watanabel, 2020). According to Lin & Fu (2017), large institutional investors can improve company performance, but small institutional investors do not affect company performance. In contrast, Tsouknidis (2019) proved that institutional investors have a negative effect on company performance, reflecting non-strategic institutional ownership. Foreign ownership is a substitute for institutional ownership in monitoring bank performance. Foreign-owned banks also have more profit opportunities. According to Rehman et al. (2022), foreign ownership contributes positively to the performance of Islamic banks.

Meanwhile, Lensink & Naaborg (2007) suggested that foreign ownership has a negative effect on bank performance, indicating a home bias. Meilani et al. (2021) proved that foreign ownership positively affects intellectual capital performance. However, Oktavian & Ahmar (2019) showed that foreign ownership has no significant effect on intellectual capital performance. Once again, these inconclusive results become a research gap underlies further research.

Barriers to entry protect against the entry of new competitors. This protection can make employees lazy to innovate and negatively affect intellectual capital performance (El-Bannany, 2012). However, the barriers to entry created by superior products and technology will encourage employees to continue innovation to improve intellectual capital performance. Kim et al. (2018) showed that innovation creates barriers to entry and positively influences intellectual capital performance.

This research has several contributions. First, this research fills a gap related to the effect of intellectual capital investment, foreign ownership,

and barriers to entry on intellectual capital performance. Second, no previous research examines the effect of barriers to entry on the performance of intellectual capital in Indonesia. Thus, this is the novelty of this research.

2. THEORETICAL FRAMEWORK AND HYPOTHESES

Resources–Based Theory (RBT)

Resources-based theory (RBT) is a theory that views resources as the main factor in realizing superior company performance. The resource-based theory states that companies' resources can create a competitive advantage and enable them to focus on long-term performance (Ulum, 2020: 23). This theory views that company performance is determined by internal resources, which are classified into three categories: physical resources, human resources, and organizational resources. These resources are beneficial for companies to take advantage of opportunities and neutralize threats (Adnan et al., 2018). In order to be valuable, resources must meet three categories: rare, difficult to imitate, and not easily replaceable. These three categories will be able to realize a sustainable competitive advantage (Hossain et al., 2021). Based on these three criteria, intellectual capital is expected to be a key resource to achieving a competitive advantage.

Agency Theory

According to Bendickson et al. (2016), agency theory is a theory that explains the relationship between principals and agents. Agency theory separates the principal from the agent. Such separation will tend to cause conflict within the organization, which can be minimized by aligning the interests between the principal and the agent. The ownership structure minimizes agency problems resulting from differences in interests between managers and owners or shareholders (Panda & Leepsa, 2017). The presence of one ownership structure can reduce agency problems because shareholders will help control the company so that managers do not take actions that can harm shareholders (Lozano et al., 2016). In addition, foreign ownership of shares can be used to monitor management and minimize agency conflicts (Desender et al., 2016).

Intellectual Capital Performance

Intellectual capital is the result of three main organizational components, consisting of human capital, structural capital, and customer capital, which relate to knowledge and technology that can create value added for the organization in the form of competitive advantage (Cleary, 2015; Sardo et al., 2018; Yaseen et al., 2016).

Human capital refers to the ability, competence, and knowledge of company employees that can produce more added value for the company. Structural capital includes knowledge, information infrastructure, and intellectual property of the company that supports human capital to carry out the functions that have been determined by top management. Intellectual capital is a resource that equips companies to succeed in the industry competition (Liu, 2017; Todericiu & Stăniț, 2015). Therefore, the performance of intellectual capital can be defined as the ability of a company to create value by managing the elements of intellectual capital owned by the company. Customer capital is all values related to customers and suppliers: networking, contracts, and agreements between companies and customers and suppliers (Kamath, 2014).

In sum, intellectual capital is an intangible asset consisting of human capital, structural capital, and customer capital. If they are appropriately managed, intellectual capital will become a valuable asset that can provide added value for the company in the form of competitive advantage.

Intellectual Capital Investment and Intellectual Capital Performance

According to RBT, company performance will mainly be determined by internal resources, which are classified into three categories: physical resources, human resources, and organizational resources. These resources are beneficial for companies to take advantage of opportunities and neutralize threats. In order to be valuable, resources must meet three criteria, i.e., rare, difficult to imitate, and not easily replaceable. These three requirements will be able to realize a sustainable competitive advantage (Hossain et al., 2021). In this case, the company's employees are one of the critical resources that can provide a competitive advantage and focus on good long-term performance (Adnan et al., 2018).

Intellectual capital investment is an investment in human capital expected to create value for the company (El-Bannany, 2012). Human capital is recognized in the literature on RBV (RBT) as an important resource for organizations (Meles et al., 2016). Investing in human capital and providing incentives can encourage employees to carry out their duties and create innovations for banks that improve intellectual capital performance (Eftekhare et al., 2014). Chronologically, the motivation of bank

employees will increase if their competence is improved through training and development. It will further increase employee innovation, such as offering new services to customers in order to develop intellectual capital performance (Nawaz & Haniffa, 2017; Shahveisi et al., 2017).

Each investment made is expected to have a better contribution to creating value. In order to increase human capital, a company must be able to manage the knowledge of its employees efficiently because human capital is the company's wealth. If a company can efficiently manage its employees' knowledge to increase human capital, it can also improve intellectual capital performance. Thus, human capital can create added value for the company to excel in competition. In contrast, if investment in human capital is not managed properly, it will reduce intellectual capital performance. In other words, the costs will outweigh the benefits. According to Bontis et al. (2018), improper employee development management will lead to inefficient development costs and reduce the company's financial performance.

H_1: Intellectual capital investment affects intellectual capital performance

Foreign Ownership and Intellectual Capital Performance

Foreign ownership shows the number of shares owned by foreign investors. Foreign ownership is one of the mechanisms for updating corporate technology in developing countries through transmitting insights, competencies, and management (Javorcik, 2015; Kaimowitz et al., 2019). Foreign investors generally have better technological innovations, providing better returns for local companies (Adu-Danso & Abbey, 2022; Joe et al., 2019). The presence of foreign investors can increase supervision not only on company performance but also on management performance because foreign investors have sufficient knowledge in conducting supervision (Chen et al., 2022; Hamdan, 2018). Foreign ownership can be used as an effective way to monitor management because it tends to determine policies that can provide long-term benefits for the company, one of which is a policy in intellectual capital management (Meilani et al., 2021; Temouri et al., 2021).

Foreign ownership can also minimize agency conflicts. Agency theory arises when shareholders (principal) hand over the business to other parties (management). Then, the management will carry out activities to achieve company goals by managing intellectual capital resources. Thus, foreign ownership can bridge the conflict of interest between the principal and the agent. Foreign ownership, as the component of the principal, will motivate agents or company management to work harder in managing the company (Alabdullah et al., 2014; Lassoued et al., 2016; Muttakin et al., 2015). As a result, it will produce high intellectual capital performance (Ozkan et al., 2017). Thus, the company's management will not take actions that can harm foreign investors.

The greater the foreign ownership in a company, the greater the supervision carried out by foreign parties; thus, the company will produce greater intellectual capital performance. Therefore, foreign ownership helps increase intellectual capital performance (Supradnya & Ulupui, 2016).

H_2: Foreign ownership affects intellectual capital performance

Institutional Ownership and Intellectual Capital Performance

Institutional ownership is proxied by the number of company shares owned by institutional investors, which include investment companies, banks, insurance companies, and other financial institutions (Oktavian and Ahmar, 2019). These financial institutions are seen as having better financial competence than public investors to encourage management to improve company performance (Sakawa & Watanabel, 2020). Foreign investors can improve bank efficiency due to tighter supervision (Chan et al., 2015; Doan et al., 2018).

Institutional ownership is also very important in minimizing agency conflicts between managers and shareholders. The presence of foreign investors encourages information disclosure or reduces asymmetric information (Gerged, 2021). Company management will be careful in making decisions that can harm the interests of shareholders when institutional ownership is getting bigger (Lassoued et al., 2016). Foreign ownership can increase investment efficiency (Chen et al., 2017). Thus, foreign ownership will improve the company's performance, including the performance of intellectual capital.

H_3: Institutional ownership affects intellectual capital performance

The Effect of Barriers to Entry on Intellectual Capital Performance

Barriers to entry reflect potential competitors' reduced possibility, opportunity, or speed to enter a market (Kasman & Kasman, 2015). Barriers to entry result in new competitors losing their competitive advantage, while the existing companies in the market benefit from this condition. Potential competitors who enter an industry bring in and increase new product capacity and intend to seize and dominate market share. In addition, they are also trying to replace the considerable resources owned by their competitors (Mathooko & Ogutu, 2015; Zigraiova & Havranek, 2016).

The high barrier to entry in business competition is caused by various factors, such as government policies/regulations or old producers who monopolize the market. It causes new competitors to be difficult to enter the market due to the hurdle that does not allow the entry of new competitors easily (Borne et al., 2018; Triki et al., 2017). In addition, the high barrier to entry can also be caused by the high costs incurred (Lahti et al., 2018; Zhu & Zhou, 2016). It happens in oligopoly markets where new competitors are difficult to enter because they have to pay much money to compete.

Barriers to entry are very important in managing intellectual capital because they enable to defend existing competitors and create barriers to entry for new competitors through business innovations. El-Bannany (2012) argued that the higher the barriers to entry in a sector, the lower the motivation to compete through increasing intellectual capital performance. Suppose a company can block the entry of new competitors through innovations developed based on the elements of its intellectual capital, such as human capital. In that case, the company will be able to focus more on improving the performance of its intellectual capital. Thus, the company can maintain its competitive advantage and make new competitors lose their competitive advantage. It is in line with the RBT that competitive resources will enable the company to have good long-term performance. Hidayah & Adityawarman (2017) supported the statement that barriers to entry influence intellectual capital performance.

However, the barriers to entry created by regulatory protections can make management and company employees lazy. El-Bannany (2012) supported this argument and proved that barriers to entry reduce intellectual capital performance. Barriers to entry in the form of fixed assets can have a negative impact on the bank's performance (Mergaerts & Vander Vennet, 2016). It is because investment in fixed assets incurs high fixed costs. In addition, in the current digital era, the competitiveness and performance of banks are more determined by digital technology investment (Mbama, 2018).

H_4: Barriers to entry affect intellectual capital performance

3. RESEARCH METHOD

Research Variables and Measurement

The dependent variable in this study is intellectual capital performance, while the independent variables are intellectual capital investment, foreign ownership, institutional ownership, and barriers to entry. Intellectual capital performance is the creation of value obtained through the management of intellectual capital (Oktavian & Ahmar, 2019). This study's measurement of intellectual capital performance uses the formula model of Extended Value Added Intellectual Capital Plus (E-VAIC Plus) developed by Nazari & Herremans (2007). According to the VAIC model, value added (VA) is the difference between output and input:

$$VA = OUT - IN \quad (1)$$

Where OUT is the total revenue and IN is the total cost of materials, components, and services. Employee expenses are not considered in the VAIC. E-VAIC Plus is calculated using the following formula:

$$\text{E-VAIC Plus} = ICE - CEE \quad (2)$$

Where ICE is intellectual capital efficiency, and CEE is capital employed efficiency. ICE consists of human capital efficiency (HCE), structural capital efficiency (SCE), and relation capital efficiency (RCE), which can be calculated using the following formula:

$$HCE = VA / HC \quad (3)$$
$$SCE = InCE + PCE \quad (4)$$
$$RCE = RC / VA \quad (5)$$

Where HC is the total cost of salary and training, InCE is innovation capital efficiency, PCE is the process of capital efficiency, and RC is promotional and marketing costs. InCE and PCE can be calculated using the following formula:

$$InCE = InC / VA \quad (6)$$
$$PCE = PC / VA \quad (7)$$

InC is research and development expense, and PC is depreciation and amortization expense.

Intellectual capital investment is an investment in human capital expected to create value for the company (El-Bannany, 2012). The measurement of intellectual capital investment is based on the ratio of employee costs to the bank's total income. Foreign ownership is the percentage of shares invested by foreign investors of the total outstanding shares (Oktavian & Ahmar, 2019). Institutional ownership reflects the percentage of the number of shares owned by the institution to the number of shares issued (Oktavian & Ahmar, 2019). Barriers to entry reflect barriers that are built to stem competitors who have the possibility of entering the market. According to El-Bannany (2012), barriers to entry are measured by the ratio of investment in fixed assets to total bank assets.

Population and Sample

The population of this study is all conventional banking companies listed on the Indonesia Stock Exchange (IDX) from 2015 to 2019. The sampling used the purposive sampling technique, where the researcher sets specific criteria. The criteria applied to the sample must be conventional banking companies that issue audited financial statements during the research period (from 2015 to 2019) and that present complete data relating to the variables in this study, which include income statements, statements of financial position, and the notes to the financial statements.

Data and Data Analysis

The type of data used in this study is secondary data sourced from the financial statements of conventional banking companies that have been audited and listed on the Indonesia Stock Exchange through the official website of the Indonesia Stock Exchange. Data were accessed through www.idx.co.id and the official websites of each company. The data collection strategy in this study is included in the archival strategy, where data is collected from existing records or databases. Once collected, the data is processed using the SPSS software program. Hypothesis testing is done using multiple linear regression analysis.

4. DATA ANALYSIS AND DISCUSSION

From a total of 210 observations over five years, there are 115 incomplete data and six outliers, so the total data that can be processed are 89 observations. Table 1 shows that the intellectual capital performance of conventional banks has relatively low variation. The ratio of employee costs to bank revenues is around 30 percent. At the same time, the two most prominent data are foreign ownership and institutional ownership. The mean score for foreign ownership is 25 percent. It is in line with the increasing number of national banks owned by foreign banks. Institutional ownership in public banks in Indonesia is relatively large. It is because many banks in Indonesia are owned by national business groups and international banks or financial institutions.

Table 1. Descriptive statistics of research variables

Variables	Minimum	Maximum	Mean	Std. Deviation
Intellectual Capital Performance	1.0500	13.4600	5.8107	0.5538
Intellectual Capital Investment	0.1200	0.5700	0.2922	0.0118
Foreign Ownership	3.6700	78.7100	25.3198	2.1212
Institutional Ownership	5.2900	95.0400	58.5964	1.2431
Barriers to Entry	0.0041	0.0733	0.0267	0.5538

Source: Data processed, 2021

Linear Regression Assumption

The classical assumption test of a linear regression model generally covers normality, multicollinearity, autocorrelation, and heteroscedasticity tests. Table 2 presents the results of the classical assumption test of the regression model. The normality test is used to see whether the residual value in the regression model is normally distributed or not. This table shows that the normality test using the Kolmogorov-Smirnov statistical test (K-S) after screening outliers resulted in 89 observations. The test results show a significance value of 0.200 (> 0.05). So it can be concluded that the residuals are normally distributed.

The multicollinearity test determines whether there is a correlation between the independent variables. The presence of multicollinearity is if the VIF value is> 10 and the tolerance number is ≤ 0.10. Table 2 also shows that each independent variable has a VIF value of < 10 and a tolerance value of ≥ 0,10, meaning there is no multicollinearity between independent variables.

Table 2. Classical assumption test

Types of Test			Decision
Normality Test	Test Statistic	Asymp. Sig.	
	0.068	0.200	Normally distributed
Multicollinearity Test	Tolerance	VIF	
Intellectual Capital Investment	0.928	1.077	No Multicollinearity
Foreign Ownership	0.652	1.533	No Multicollinearity
Institutional Ownership	0.696	1.437	No Multicollinearity
Barriers to Entry	0.893	1.120	No Multicollinearity
Autocorrelation Test	Durbin-Watson	D-W Test Bound	
	2.137	1.562 – 1.750	No Autocorrelation
Heteroscedasticity Test		Sig.	
Independent Variables		0.084	No Heteroscedasticity

Source: Data processed, 2021

The autocorrelation test is used to determine whether, in the linear regression model, there is a correlation between the confounding error in period t and the confounding error in the previous period. If the Durbin-Watson (DW) value is lower than the down limit (dL), there is a positive autocorrelation. On the other hand, if the DW value is above 4-dL, there is a negative autocorrelation. The Durbin-Watson (DW) test results show that the regression model formed is free from positive and negative autocorrelation problems.

The heteroscedasticity test aims to see if there is an inequality of variance from the residuals. A heteroscedasticity test utilizes the Glejser method. The way to detect heteroscedasticity is to check its significance value. If the significance value is < 0.05, it can be concluded that in the regression model, there is heteroscedasticity. However, if the significance value is ≥ 0.05, it can be concluded that in the regression model, there is no heteroscedasticity. Table 2 shows that the significant value of the independent variable resulting from the regression between the absolute residual and the independent variable is > 0.05. So it can be concluded that the regression model is free from heteroscedasticity problems.

Hypotheses Test

Hypotheses testing is carried out using multiple regression analysis. An independent variable is said to influence the dependent variable if the significance value is <0.05. On the other hand, if the significance value is ≥ 0.05, the independent variable does not affect the dependent variable. Table 3 presents the results of hypothesis testing.

Table 3. Results of hypothesis testing

Variable	Coefficient	t-value	Sig.	Decision
Constant	11.910	8.535	0.000	
IC Investment Efficiency	-13.092	-4.178	0.000	Supported
Foreign Ownership	-0.009	-0.557	0.579	Not Supported
Institutional Ownership	-0.003	-0.296	0.768	Not Supported
Barriers to Entry	-66.579	-4.030	0.000	Supported
F-value	8.590			
R-Square	0.257			

Source: Data processed, 2021

Based on the test results, the effect of intellectual capital investment has a t-value=-4.178, with a significance value of 0.000. It means that intellectual capital investment significantly negatively affects intellectual capital performance. The results of this study are not in line with the views of the resource-based theory (RBT) that when a company can manage its employees' knowledge efficiently, human capital will be able to contribute to improving intellectual capital performance. This finding is also conversely the RBT that efficiency in intellectual capital investment positively affects intellectual capital performance.

This study measures intellectual capital investment using the ratio of employee costs to bank income. The negative effect of intellectual capital investment on intellectual capital performance indicates the inefficiency in managing employee costs at commercial banks in Indonesia. Table 1 shows that the bank employees' expenses ratio is around 30 percent of income, some even reaching 57 percent. In general, employee costs are not followed by the employee's performance in increasing the bank's income. In

addition, this negative effect may also occur because banks carry out employee development only to meet regulatory requirements. According to the Indonesian Financial Services Authority (OJK, 2017) regulation, banks must provide employee development funds of at least five percent of their income. These funds are required to increase at least five percent per year. As a result of regulations, banks involve employees in development programs that sometimes do not provide added value for the bank. Even in certain cases, most of these costs are spent on transportation, accommodation, and allowances for the training of bank officials. Thus, the benefits obtained from training are not worth the costs incurred. The results of this study support the results of research conducted by Bontis et al. (2018) proving that employee development that is not managed properly will lead to inefficient development costs and reduce the company's financial performance.

The results show that foreign ownership does not affect intellectual capital performance. It indicates that foreign investors have not been able to encourage the company's management to improve the performance of its intellectual capital. The results of this study are also supported by the percentage of foreign ownership in conventional banking companies, which is about 25 percent on average. The relatively low foreign ownership makes the supervisory function not optimal. The decision becomes less precise when the bank's decision is based on a majority vote. The bank's important decisions, such as credit expansion, additional capital, opening branch offices, and adding new products, are often based on a majority vote. In addition, decisions regarding costs and employee development are made by the directors and executive officers of the bank without the approval of the commissioners, who are representatives of shareholders. Therefore, foreign ownership in conventional banking companies is considered an ineffective control mechanism for the company's management performance. It can be concluded that foreign ownership cannot increase the performance of intellectual capital in obtaining value added. This study's results align with the results of the research conducted by Oktavian & Ahmar (2019) and Nassar et al. (2018) that foreign ownership does not affect intellectual capital performance.

The results of this study indicate that institutional ownership does not affect intellectual capital performance. Table 1 shows the percentage of institutional ownership in conventional banking companies, which is more than 50% on average. However, this high institutional ownership is due to ownership by the parent company, not independent financial institutions. Thus, this institutional ownership does not necessarily reflect the expertise in finance which is indispensable in controlling and improving the performance of employees and the company. This finding is in line with the results of research conducted by Masry (2016), Nassar et al. (2018), and Oktavian & Ahmar (2019) that institutional ownership by banks, insurance, and mutual funds does not affect bank performance. Furthermore, Daryaei & Fattahi (2020) state that institutional ownership initially improves performance, but the impact gets smaller when this ownership gets bigger. It is in line with the study's average institutional ownership data, which is more than 50 percent.

The results of this study also show that barriers to entry have a negative effect on intellectual capital performance. This study measures barriers to entry based on the ratio of fixed assets to total bank assets. In the current digital banking era, investment in technology will provide greater benefits than investment in fixed assets in the form of buildings, which creates a very large fixed expense (Mbama, 2018). Barriers to entry in the form of fixed assets can have a negative impact on the bank's performance (Mergaerts & Vander Vennet, 2016). In addition, the negative effect of barriers to entry can be caused by the protection obtained from government regulations. This condition causes employees and management to feel that the bank's future is guaranteed and competitors will not enter. As a result, employees tend to be lazy and less innovative. It adversely affects the company's performance. When regulatory protection is abolished, banks cannot compete with new competitors, and performance will suffer. This study's results align with the research conducted by El-Bannany (2012) that barriers to entry negatively affect intellectual capital performance.

Table 3 also shows that the coefficient of determination (R^2) is 0.257 or 25.7%. It means that barriers to entry, efficiency in intellectual capital investment, foreign ownership, and institutional ownership affect intellectual capital performance by 25.7 percent. In comparison, the remaining 74.3 percent variance is determined by other variables that are not included in the regression model of this study. This coefficient of determination also shows that the intellectual capital performance model produced is relatively weak.

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

The results of this study indicate that the research model on intellectual capital performance is still weak. Based on the results of the data analysis and discussion described above, it can be concluded that

intellectual capital investment and barriers to entry have a negative effect on intellectual capital performance. In contrast, foreign ownership and institutional ownership do not affect intellectual capital performance.

The results of this study have implications regarding the need for banking companies to reduce investment in fixed assets because this has a negative impact on intellectual capital performance. However, banks need to increase investment in technology, which determines bank competitiveness in this digital era. Furthermore, banks must be more careful about employee remuneration and development policies. Employee development that does not meet the bank's needs will lead to inefficient employee costs, reduce competitiveness, and worsen bank performance.

The limitation of this study is mainly related to the measurement of barriers to entry using fixed asset ratios. Future research is expected to use investment in technology that better reflects the competitiveness of banks in the digital era. In addition, this study uses a linear model so that it cannot see the impact of foreign ownership and institutional ownership in various ranges. Therefore, further research needs to consider using the quadratic model in assessing the effect of foreign and institutional ownership.

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