

The Effect of Intellectual Capital (IC) on Financial Performance (Financial Sector Listed on Indonesian Stock Exchange)

Nia Gusna^{1*}, Erni Masdupi²

^{1,2} Universitas Negeri Padang, Padang, Indonesia

*Corresponding author. Email: Gusnania47@gmail.com

ABSTRACT

The research examines effect of Intellectual Capital (IC) on financial performance (financial sector listed, on Indonesian Stock Exchange). This study used method was the explanatory. The data source used is secondary data. This study used a purposive sampling technique. Population is all financial companies listed in the Indonesian Stock, Exchange in 2014-2018. The number of sample use are 340 samples (68 company in 5 years). Multiple linear regression is the analytical method used application of SPSS 16. The result indicated that an intellectual capital variable using HCE has a negative, and significant effect Return On Asset (ROA). The intellectual capital variable using SCE has a positive and significant effect Return On Asset (ROA). Intellectual capital variable using CEE has a positive and significant effect Return On Asset (ROA).

Keywords: HCE, SCE, CEE and ROA.

1. INTRODUCTION

The level of investor confidence in a company is not only seen from financial statements or financial performance, but there are other factors to consider, which is intellectual capital. According to [1] good company performance will show high company value, this will generate investor interest in investing. To increase the attractiveness of investors to a company, company have a competitive advantage can add value to the company, namely intellectual Capital (IC). IC is one of important elements a company has in assessing its human resources. Knowledge based resources are major factor in the continuity competition between company, due to changes in word economic conditions [2].

IC in this study was measured using a model introduced by [3], namely Value-Added Intellectual Coefficient, (VAIC). The following is a graph of average intellectual capital using the VAIC calculation in the financial sector period 2014-2018.

In 2014, saw a decrease in the VAIC average. From 2015 to 2018 the VAIC average has increased. Meanwhile, based on Figure 1, previously it shows that the average return on asset (ROA) has decreased from 2014 to 2018. The average value of VAIC with the average Return On Asset (ROA) in the financial sector

are incompatible. The VAIC value initially decreased but in 2015 it increased but the average ROA value decreased from 2014-2018. This shows that it is contrary to the resourced based theory, if the Intellectual Capital increases, the ROA will also increase. It can be concluded that not every empirical event is in accordance with the existing theory. Researchers found a mismatch between theoretical and empirical gaps in the financial sector in the 2014-2018 period.

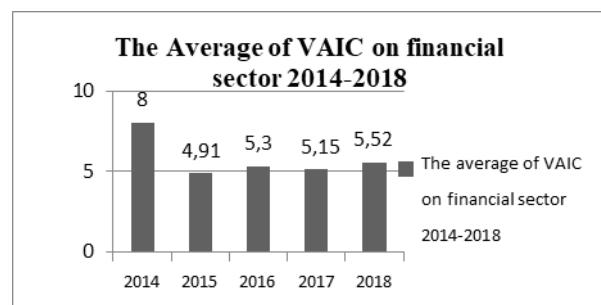


Figure 1. The average of VAIC on financial sector 2014-2018

Meanwhile, researchers from the recent era discovered IC as a major factor of competitive advantage and increase firm value [4], [5]. IC efficiency is more important to achieve high success and competitive advantage in the financial sector company

than any other sector. According to [6] IC is an important resource for Social Cooperative Enterprises (SCEs) to can develop effectively by implementing company strategy, managing, long term maintains competitive advantage and improve corporate performance.

According to [7] a business or activity in the financial sector requires higher knowledge, especially in terms, competence, skills, high level technological innovation, and interactions between employees and stakeholders to produce a competitive strategy based on level service and assistance provided to stakeholders. IC efficiency is more important to achieve high success and competitive advantage in the banking sector than any other sector.

This study will contribute for human capital development theory. This study describes a positive economic performance influenced by employees and value added of the company's employees. However, the annual training for employees that is held has a negative impact on company performance. Structural, and relational capital contribute to account for positive mission, based performance that was exposed to annual training, value added among employees and quality of customer relationship. Each component intellectual capital is considered important but the use between component is different.

1.1. Resource-based-theory

This theory explains the existence of two views regarding the company's strategy formulation tools. The first is a market-based view and the second is a resource-based view. The development of the two tools resulted in a new perspective, namely a knowledge-oriented view.

This theory can be used as a basis for explaining the relationship IC with financial performance. Resource-based-theory, if the companies can effectively manage its resources. It will be able to, create a competitive advantage over its competitors. If a competitive advantage can be leveraged and well managed by an employee's potential, it can increase employee productivity. With an increase in productivity, the company's performance will increase and expenses will be more effective and efficient [8].

1.2. Financial performance

Financial performance is financial performance of financial sector that the companies has achieved and that is included in the financial statement of the company. Financial performance can be measured by the return on assets (ROA), as a ratio that measures effectiveness of company in generating profits through the use of its assets is the ROA.

Financial performance is an analysis conducted to see the extent to which a company has applied good financial and sound operating rules. If the company's financial performance shows good prospects, it will be attractive to investors and the company's share price will rise [9].

This study, ROA is an indicator of financial performance. The ROA was defined as total assets divided by net income calculated. The advantage of using a ROA is the ability to demonstrate the effective use of existing assets in the company to make a profit [10]. In line with previous researchers that generally used as the main performance indicator of a company's profitability in their annual reports is ROA.

1.3. Intellectual Capital

The main source for wealth generation and growth is also a strong corporate financial performance, and market value promoter called intellectual capital [11], [12]. IC obtained through the management of knowledge, experience, intellectual property, and information can be used to create added value, to become relevant to organizational performance [13]. The company's resource-based view, intangible asset was the main driver, of organizational performance [14].

Intellectual capital consists, of three components - human capital, structural capital, and relational capital – which is measured using the value added, intellectual capital (VAIC). VAIC is sum of the Human Capital, Efficiency Coefficient (HCE), the Structural Capital, Efficiency Coefficient (SCE), and the Capital Efficiency Coefficient (CEE). The Efficiency Human Capital (HC) in creating value is an indicator of HCE. Computed by dividing the added value (VA) by HC. VA is calculated by reducing the output to the input. HC is a personal account. SCE is an index of structural capital efficiency, measured by dividing structural capital (SC) by VA. SC was defined as the difference between VA and HC. Meanwhile, CEE was an indicator of relational capital efficiency. Capital relational is the book value of total assets. CEE is defined by dividing VA by Capital Efficiency (CE).

The amount VA is calculated used the formula $VA = \text{output} - \text{input}$. The VAIC model was used in this research for two reasons. First, the VAIC model has been used over time in knowledge literature so it has been extensively tested by other researchers and is easy to use [15]. second, VAIC offers simplicity, subjectivity, reliability and comparability in measuring intellectual capital which makes it an ideal model for Measuring intellectual capital performance [15].

[15] conducted a study of intellectual capital and financial performance, an assessment of the Australian financial sector. The sample in this study used 40 Australian financial sector companies listed on ASX.

The results indicated that human efficiency, relational utilization efficiency and structural efficiency are all important, but differ in utilization. We found intellectual capital very important in terms of human efficiency and the value of Australian banking expansion. The efficiency of human capital is higher the relational and structural efficiency of Australian banks.

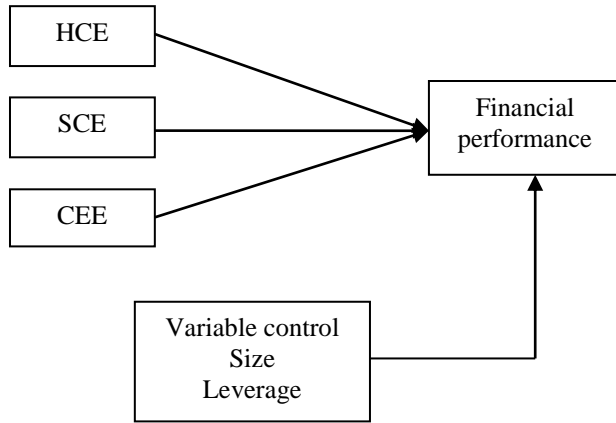


Figure 2. Conceptual framework

[16] conducted a survey entitled the impact of intellectual capital on the performance of Brazilian companies. The sample of this study used 72% of Brazilian companies that received this Quality Award from the Gacho Quality and Productivity Program in 2004 and 70.5% in 2017 that were investigated. The results of this study concluded that intellectual capital has an effect on the performance of companies.

[17] conducted a study entitled Intellectual capital and financial performance The Role of Good Corporate Governance (Study of Islamic Banking in Indonesia). The sample used 13 Islamic banks in Indonesia during four period 2012-2016. The result of the study concluded that there was a new instrument, Good Corporate Governance in a more efficient management process. The variables of Good Corporate Governance (GCG) studied include the responsibility and capacity of Sharia Supervisory Board, the independence, capacity of the external auditors. The participation of investment account holders on the board of director is expected to further enhance the financial performance of the company.

The Resource Based Theory approach stated that the firm will overcome business competition and achieve the best financial performance by owning, controlling and using strategically important assets (tangible and intangible assets). A company that be able to effectively manage it resources can find a competitive edge over its competitors. Highly skilled and competent human resources are a competitive adventure for the company. If the company can properly utilize and manage the potential of its employees, it can increase employee productivity. If employee productivity increases, the company’s revenue and profit will also increase.

2. METHOD

This study is of the kind of explanatory research. Explanatory research is the study that explain position of the variable under study and the relationship between one variable and the other [18].

The dependent variable is a type of variable, describe or influenced by the independent variable [19]. The dependent variable, in this study was an economic performance. The ROA reflect the efficiency of the use of the available, asset in generating profit and calculated as the annual net a profit of each bank before taxes divided by the average of the total asset. ROA is a traditional measure, of financial performance accounting. It is calculated as the ratio of operating income to the carrying amount of the company's total assets. ROA is generally used as a key indicator of a company’s profitability in its annual report [15]. Formulated as follows:

$$ROA = \frac{\text{Net Income}}{\text{Total Assets}} \quad (1)$$

The independent variable was the variable that explains or affects the dependent variable. This study was the intellectual capital to be measured by the Intellectual Value-Added Coefficient (VAIC) model developed by [3].

$$VAIC = HCE + SCE + CEE \quad (2)$$

This study uses secondary data obtained from financial sector companies using a quantitative approach, where the results of the study are based on empirical testing. The objects in this study are companies in the financial sector (bank, financial institution, securities firm, insurance companies, and other financial institution). that were listed on the Indonesian stock exchange from 2014 to 2018. namely selection of samples according to certain criteria. There are 68 companies listed on the IDX period 2014 - 2018 that meet the criteria. The sample size in this study was $68 \times 5 = 340$ (68 companies multiplied by 5 years of observation). The data collection method used is the method of documentation and archive research.

3. RESULTS AND DISCUSSION

This study uses financial sector data in 2014-2018. The data is tested for statistical data as can be seen in the descriptive analysis table 1. Based on table 1, explain the value of financial performance using the Return on Assets (ROA) with the lowest value of -0.123 or -12.3% in Verena Multi Finance (VRNA) company in 2018. Return On Asset (ROA) with the highest value of 0.208 or 20.8% in the Kresna Graha Investama (KREN) company in 2018. Return on assets (ROA) with an average value of 0.022 or 2.2% means that the average financial industry on the IDX has net profit of

2.2% of total asset owned. Return on assets (ROA) with a standard deviation of 0.034 or 3.4%.

Table 1. Descriptive analysis test result

	N	Minimum	Maximum	Mean	Std. deviation
ROA	340	-0.123	0.208	0.022	0.034
HCE	340	-1.734	86.105	2.853	4.991
SCE	340	-17.103	23.734	0.519	1.926
CEE	340	-0.136	4.124	0.294	0.300
SIZE	340	10.845	20.983	16.196	2.235
LEVERAGE	340	0.014	0.948	0.698	0.234
Valid (listwise)	N 340				

After going through the descriptive analysis test, the next step will be continued in the parametric statistical test, which requires the fulfillment of the classical assumption test. After performing the classic hypothesis test, writer do a multiple linear regression test. The Result of the multiple linear regression test asset return (ROA) in table 2.

Table 2. Return on assets score from multiple linear regression test (ROA)

Variable	Model 1			
	B	Std. Error	T	Sig
(Constant)	0.322	0.028	11.603	0.000
HCE	-0.041	0.006	-6.525	0.000
SCE	0.0003	0.002	0.173	0.863
CEE	0.095	0.017	5.479	0.000
SIZE	-0.004	0.002	-2.029	0.043
LEVERAGE	-0.184	0.024	-7.641	0.000

Based on table 2, the equation model 1 is formed.

$$ROA = 0,322 - 0,041HCE + 0,0003SCE + 0,095CEE - 0,004SIZE - 0,184LV$$

Hypothesis testing uses a partial t-test to see the effect of the independent variable on the dependent variable. The value of $t_{count} > t_{table}$ and significant of <0.05 concludes that there is a significance effect. the independent variable on the dependent variable in part. t-table with $df = 340 - 1 = 339$ and significance 0.05 of 1.967.

4.1. The influence of intellectual capital, (human capital efficiency coefficient) on financial performance using return on assets (ROA)

The hypothesis explains that intellectual capital using Human Capital Efficiency (HCE) has a significance effect on financial performance using a

return on asset (ROA). The result of the hypothesis testing by including control variables concluded that the Human Capital Efficiency (HCE) has a negative and significant effect on financial performance using a return on asset (ROA) because significance value is $0,000 < 0.05$.

The result of this study supports the previous finding by [15], [20] who concluded that human capital. The efficiency coefficient (HCE) harms the Return On Asset (ROA). Supporting research findings have strengthened the link between intellectual capital measured using the Human Capital Efficiency (HCE), which harms financial performance through the use of a return on assets (ROA).

Measurement of intellectual capital based on the Human Capital Efficiency coefficient (HCE), refers to the insight and knowledge of the workforce in carrying out their work. Employees who have high skills and abilities will tend to ask for a guarantee of high prosperity as well. This happens because of the limited number of star employees at the company, because not everyone can have high abilities in important fields in the financial sector. So that retaining star employees will result in greater costs, such as salary increases, bonuses and allowances. As a result, the company will increase the workforce load so that the additional burden can reduce company profits.

The results of this study support resource-based theory which explains that companies are able to manage highly knowledge employees will have an impact on the company's financial performance.

4.2. The effect of Intellectual capital (structural capital efficiency coefficient), on financial performance using return on asset (ROA)

The hypothesis explains that intellectual capital uses structural capital efficiency coefficient (SCE) has an effect significant to financial performance using Return on Asset (ROA). Because the significance value was (ROA) because the significance value was $0.863 > 0.05$. The results of this study support the results of previous studies conducted [21], [15] who concluded that the structural capital efficiency coefficient (SCE) does not affect on return on assets (ROA).

The discussion of research in the context of the financial industry on the Indonesia Stock Exchange where the Structural Capital Efficiency Coefficient (SCE) has no impact on Return On Assets (ROA). The measurement of intellectual capital based on the Structural Capital Efficiency Coefficient (SCE) refers to view ability of capital to generate income. If the company manages all of its capital in funding the company's operations, financial performance will be created well. The better the capital structure, the higher the Return On Asset (ROA) because capital is used to improve company operations. Capital in the financial industry is widely used to fund operations in the long

term so that the process of returning capital, such as through lending, will take quite a long time. So that it cannot affect the company's profit which is measured in a short time (one year). The result of this study does not support resource-based theory explained that a well-managed company source of capital would improve financial performance.

4.3. The effect of intellectual capital (capital employed efficiency coefficient), on financial performance, using return on asset (ROA)

The hypothesis explains that intellectual capital uses a capital efficiency ratio (CEE), which has a significant impact on financial performance using return on assets (ROA). Based on the results of hypothesis testing with the inclusion of control variables, it was concluded that the capital efficiency ratio (CEE) had a positive and significant effect on financial performance using return on assets (ROA), since the significance value was $0.000 < 0.05$.

The discussion of this study is in the context of the financial industry on IDX, where capital employee efficiency (CEE) has a significant affect on the Return on Assets (ROA). The result of study uses control variables, firm size and leverage, which have a positive affect on financial performance. The existence of firm size considerations can induce changes in the relationship between the efficiency of capital ratio (CEE) on financial performance through a Return on Assets (ROA).

The result of study is [6], [22], [20], [23], [24] which concluded Capital Employed Efficiency coefficient (CEE) have an influence Return on Assets (ROA).

4. CONCLUSION

Based on the testing of the hypothesis reached by the researchers, the following can be concluded:

1. The Intellectual Capital variable using the Human Capital, efficiency Coefficient (HCE) has a negative and significant effect on financial performance using Return on Assets (ROA).
2. The intellectual capital variable uses the Structural Capital Efficiency Coefficient (SCE) that has a positive and insignificant effect on financial performance using ROA.
3. The intellectual capital variable uses the Capital Used Efficiency Coefficient (CEE) and has a positive and significant effect on financial performance using Return on Assets (ROA).

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