Influence of Intellectual Capital on Company Value with Financial Performance as Intervening Variable

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Abstract
This study aims to analyze the effect of Intellectual Capital on firm value with financial performance as an intervening study variable in manufacturing companies listed on the Indonesia Stock Exchange (BEI) in 2015-2019. In this study, a sample of 375 companies using purposive sampling. In the first equation, there are 357 manufacturing company data companies. In the second equation, there are 352 manufacturing company data companies. The difference in the number of manufacturing company data used as the research sample is due to meeting the assumptions of the feasibility of the regression model in the first and second research models, so that outlier data in the first and second equations need to be eliminated.

This study provides the results that Intellectual Capital has a significant positive effect on financial performance, financial performance has a significant positive effect on firm value, the effect of Intellectual Capital on firm value, Intellectual Capital has a positive and significant effect on firm value through financial performance as an intervening variable.

Keywords: Intellectual Capital, Financial Performance, Company Value

I. Introduction

Globalization that has entered Indonesia has affected various sectors, especially the business sector. The company as a forum in all business activities. The rapid development due to globalization is marked by technological advances, the growth of innovation by developing corporate systems and intense competition. The current movement of the business sector is more directed at determining strategies and changing business management.

As time goes by, companies are forced to be able to keep up with the times. This is intended so that the company is able to compete in the global order, so that the company is able to survive in the rapid competition. That way the value of the company will increase and will have a good effect on financial performance.

The phenomenon that we can see from the condition of the industrial sector in manufacturing companies in 2016 was recorded at Rp. 335.8 trillion. The decline that occurred resulted in the acquisition of the manufacturing industry in 2017 which was recorded at Rp. 274.8 trillion. This figure experienced a decrease of 32.5% in 2017. Then in 2017 the acquisition of the manufacturing industry was recorded at Rp. 226.18 trillion. This figure decreased again by 18.7% in 2018. In 2018 investment occurred in the metal, computer, machinery, electronic, and equipment sectors which managed to attract investors' funds which were successfully withdrawn by 56.2 trillion, chemical by 48, 69 trillion, transportation equipment Rp 17.44 trillion, and textiles and apparel Rp 8.75 trillion (Relly, 2019).

Financial performance is a company's financial condition that uses financial analysis tools in its analysis, so that it knows the good or bad financial condition of the company in a certain period that is able to reflect the company's achievements. This is very important so that resources are used optimally in the face of environmental changes. The conclusion from the above understanding of financial performance is that the company has sought its formal activities to generate profits or profits, so that it is able to attract prospects and growth and rely on available resources in developing the company's potential. Capital employed is able to provide tangible results for the company.

Chen, Cheng and Hwang suggest that the measurement of Intellectual Capital is not directly but through VAICTM. The use of the VAICTM method on Intellectual Capital, illustrates how much the value added of a company from the use of these assets, is very suitable for stakeholders and companies to find out how much tangible assets and intangible assets are. Intellectual Capital performance that is managed well will provide added value to the company, which also affects financial performance and company value.
This study aims to analyze the influence of Intellectual Capital on firm value with financial performance as an intervening research variable in manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2015-2019.

II. Literature Review

Company value is a value which is calculated as a company's calculation to provide increased value in the company and for shareholders. The company has the main goal of increasing the value of the company which means by increasing the prosperity of the company owners or shareholders (Brigham & Houston, 2019). This study uses Price to Book Value in measuring firm value. PBV describes how much the market appreciates the book value of a company's shares (Sunarsih & Mendra, 2012).

Financial information in a certain period can be seen in the financial performance. The quality of the company can be measured by achieving qualified financial performance, able to create added value for the company's sustainability in the future. That way, if financial performance increases, the market's positive response will increase in firm value. According to Helfert in Gaol (2014) financial performance can be defined as a picture of a company as a whole within a certain period of time and produces achievement outputs from operational activities within the company by maximizing the resources owned.

According to Sangkala in (Hartati, 2014) mentions Intellectual Capital as Intellectual material, which consists of information, intellectual property, knowledge and experience that can be used together to create wealth. This theory believes that companies that have good resources are able to compete in the market, create added value, take advantage of opportunities and provide positive value for the company (Belkaoui, 2003).

According to Ghozali and Chariri (2007) in Amal and Syafruddin (2015) in their journal that stakeholder theory states that companies are not entities that only operate for their own interests, but must provide benefits to stakeholders. Thus, the role of stakeholders must be included in the company's activities.

According to Williams (2001) in Lestari and Sapitri (2016), signaling theory explains that organizations will show positive information to potential investors through the company's financial statements. This positive signal is expected to be able to attract positive interest from the market which will provide a competitive advantage for the company and be able to provide high value for the company.

Based on Resource Based Theory, the key to success in a company is to make knowledge an important part of competing. Competitive advantage must be owned by the company in order to make a superior company. That way the company will be more profitable than other companies because of increased productivity. Companies that are successful in activities effectively and efficiently are able to improve their financial performance on capital that is not only in tangible assets, but intangible assets also have a positive influence on financial performance. According to Chen et al (2005) in his journal, it shows that intellectual capital has a positive effect on the company's financial performance.

The value of the company is always associated with the stock price. Companies that have significant financial performance, the value of the company will increase. This level of success will be achieved by managing assets and capital which can be known through financial ratios. The competitive advantage of the company is influenced by the increase in profit. If the increase in the company's ability to increase, then the increase also occurs in stock prices. Increasing profits is one of the important factors for the creation of a company's competitive advantage in a sustainable manner. An increase in stock prices will lead to investor appreciation of the company's performance. Research conducted by Simanungkalit and Prasetiono (2015) proves that financial performance as a proxy for profitability by measuring Return On Assets has a positive effect on firm value.

The value of a company can be reflected in the share price paid by investors for their shares in the market. Research by Chen et al., (2005) states that there is a positive relationship between Intellectual Capital and the market value of the company. Intellectual Capital in the company increases, so the market perception of the value of the company also increases. That way investors tend to pay higher for the shares of companies that have more intellectual resources than companies with low intellectual resources. Intellectual Capital has a positive effect on the company's performance and market value has been proven by the research of Chen et al. (2005). If Intellectual Capital increases, in the sense that it is managed properly, it will increase the market perception of the value of the company.

Companies that are able to manage and use resources in accordance with their capabilities will be able to compete competitively, this assumption is contained in Resource Based Theory. If the use of resources owned by the company is supported by the ability of the company's Intellectual Capital which is also good. Performance for the company will increase when resources are managed effectively and efficiently, so that stakeholders, namely investors, will respond positively. The company's stock price is able to reflect the value of the company. A good company value will be responded well by stakeholders. Intellectual Capital is an important company asset in improving company performance and value as a supporter of company activities. Research by Simanungkalit and Prasetiono (2015) and Yuskar and Novita (2014) proves that Intellectual Capital...
has a positive effect on financial performance and firm value. This study adds an intervening variable, namely financial performance to determine directly or indirectly Intellectual Capital on firm value. This is supported by Sunarsih and Mendra (2012) showing that financial performance is able to mediate the relationship between intellectual capital and firm value.

III. Research Methodology

This research is a quantitative descriptive study to test and prove the influence of Intellectual Capital on Firm Value with Financial Performance as an intervening variable. The sampling technique is based on the company’s criteria in accordance with the provisions on the research variables. The sample in this study was determined using a non-probability sampling method with a purposive sampling technique where the sample selection was not random with the aim of obtaining a sample according to the specified criteria. In this study, samples were taken as many as 375 companies using purposive sampling. In the first equation there are 357 companies with manufacturing company data. In the second equation, there are 352 companies with manufacturing company data. The model used in the study is as follows:

\[ \text{H} = b_1 \text{VAIC} + e_1 \] \hspace{1cm} 1
\[ \text{PBV} = b_2 \text{ROA} + b_3 \text{VAIC} + e_2 \] \hspace{1cm} 2

IV. Research Results And Discussion

This research needs factor analysis, because VAIC is a latent variable that cannot be measured directly. Factor analysis in this study using the SPSS 22 application. Determination of the Intellectual Capital variable can be seen from the communalities value of each component. The result of the sum of each of each component is then multiplied by the value of communalities. After calculating from each variable using the communalities value, then add up all the variables so that it becomes the Intellectual Capital variable (Hutchinson & Gul, 2004).

<table>
<thead>
<tr>
<th>Year</th>
<th>Explanation</th>
<th>Initial</th>
<th>Extraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>VACA</td>
<td>1.000</td>
<td>0.039</td>
</tr>
<tr>
<td></td>
<td>VAHU</td>
<td>1.000</td>
<td>0.934</td>
</tr>
<tr>
<td></td>
<td>STVA</td>
<td>1.000</td>
<td>0.953</td>
</tr>
<tr>
<td>2016</td>
<td>VACA</td>
<td>1.000</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>VAHU</td>
<td>1.000</td>
<td>0.965</td>
</tr>
<tr>
<td></td>
<td>STVA</td>
<td>1.000</td>
<td>0.964</td>
</tr>
<tr>
<td>2017</td>
<td>VACA</td>
<td>1.000</td>
<td>0.016</td>
</tr>
<tr>
<td></td>
<td>VAHU</td>
<td>1.000</td>
<td>0.965</td>
</tr>
<tr>
<td></td>
<td>STVA</td>
<td>1.000</td>
<td>0.964</td>
</tr>
<tr>
<td>2018</td>
<td>VACA</td>
<td>1.000</td>
<td>0.048</td>
</tr>
<tr>
<td></td>
<td>VAHU</td>
<td>1.000</td>
<td>0.951</td>
</tr>
<tr>
<td></td>
<td>STVA</td>
<td>1.000</td>
<td>0.945</td>
</tr>
<tr>
<td>2019</td>
<td>VACA</td>
<td>1.000</td>
<td>0.056</td>
</tr>
</tbody>
</table>
Testing the right method in selecting the panel data regression model is very important, which consists of Fixed Effects and Random Effects. This test uses the Correlated Random Effect method, which aims to determine the use of the model in the study, namely fixed or random. If the prob value < 0.005 then the test uses the fixed method, and vice versa if the prob value > 0.05 then the test uses the random method.

**TABLE 2**

<table>
<thead>
<tr>
<th>Explanation</th>
<th>Statistik</th>
<th>Probabilitas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlated Random Effects - Hausman Test</td>
<td>23,45912</td>
<td>0,0000</td>
</tr>
</tbody>
</table>

Source: Data processed, 2021

Based on the results of table 2 the probability shows a value of 0.0000, meaning that this study was determined to use the fixed effect test as the best model in the study. Furthermore, the second equation model hasuman test is carried out.

**TABLE 3**

<table>
<thead>
<tr>
<th>Explanation</th>
<th>Statistik</th>
<th>Probabilitas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlated Random Effects - Hausman Test</td>
<td>62,709516</td>
<td>0,0000</td>
</tr>
</tbody>
</table>

Source: Data processed, 2021

In the second equation in Table 3 the probability value is 0.000. That way, if the probability < 0.05 then use the Fixed Effect Model. This test shows that the best research method uses the fixed effect method. After selecting the best model, the classical assumption test is carried out including normality test, multicollinearity test and heteroscedasticity test. Based on the results of the calculation of the classical assumption test, the selected model fulfills the requirements of the classical assumption.

**TABLE 4**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t-statistic</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0,040058</td>
<td>8,536594</td>
<td>0,0000</td>
</tr>
<tr>
<td>VAIC</td>
<td>0,015417</td>
<td>7,293993</td>
<td>0,0000</td>
</tr>
</tbody>
</table>

The equation for the regression results in table 4 can be formulated as follows:

\[
\text{ROA} = 0,040058 + 0,015417 \text{ VAIC} + e
\]

The results of the above equation have two meanings, that every increase in ROA value is influenced by 1 increase in VAIC units with a coefficient value of 0.009308 units. If the assumed value of the other independent variables is 0, then the ROA will be worth 0.040058.

**TABLE 5**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t-statistic</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0,219608</td>
<td>1,851888</td>
<td>0,0653</td>
</tr>
<tr>
<td>VAIC</td>
<td>0,452280</td>
<td>3,618563</td>
<td>0,0004</td>
</tr>
<tr>
<td>R-squared</td>
<td>11,79083</td>
<td>3,801409</td>
<td>0,0002</td>
</tr>
</tbody>
</table>

Source: Data processed, 2021

The equation for the regression results in table 5 can be formulated as follows:

\[
\text{PBV} = 0,219608 + 0,452280 \text{ VAIC} + 11,79083 \text{ ROA} + e
\]
The above equation has three meanings, first for every 1 unit increase in VAIC, it will affect the PBV increase of 0.452280 units. Second, every 1 unit increase in ROA will affect an increase in PBV of 11.79083. Third, PBV will be worth 0.219608 if the assumption of the other independent variables is 0.

Based on the regression results in the table above, the following results are obtained:

1. Intellectual Capital based on the table above has a coefficient value of 0.015417, has a positive direction and a t-value of 7.293993, and a significance probability of 0.0000. That the significance value <0.005, it can be concluded that Intellectual Capital has a positive and significant effect on Financial Performance (ROA).
2. Intellectual Capital based on table 20 has a positive coefficient value of 0.452280, has a positive t direction of 3.618563. Then it has a significance value of 0.0004 where the significance probability level is <0.05, it can be concluded that Intellectual Capital has an effect on Firm Value.
3. Financial Performance based on table 20 shows a positive coefficient value of 11.79083 having a positive t direction of 3.801409. Then it has a significance probability value of 0.0002 where the significance probability level is <0.05, it can be concluded that Financial Performance has a significant positive effect on Firm Value.

![FIGURE 2](image)

**FIGURE 2**
Regression Equation Model

Intellectual Capital's direct relationship to firm value has a significance value of 0.0004, which is smaller than 0.05 (0.0004 <0.05), which means that Intellectual Capital directly has a significant effect. While the indirect relationship of Intellectual Capital to firm value has a significance value of 0.0000 less than 0.05 (0.0000 < 0.05) and 0.0002 smaller than 0.05 (0.0000 < 0.005) which means Intellectual Capital indirectly has a significant positive effect. It can be concluded that Intellectual Capital has a significant positive effect on firm value through Financial Performance and Intellectual Capital has a significant positive effect on Firm Value. These results can be seen that in this study there is a direct relationship and an indirect relationship or called half mediation.

Based on the results of the analysis presented in Table 4, the Adjusted R-squared value of 0.800329 or 80.03% is obtained, this indicates that the financial performance can be explained by 80.03% by Intellectual Capital. With a residual value of 19.97% of (100-80.03%) explained by other variables. Based on the results of the analysis presented in Table 5, the Adjusted R-squared value is 0.622480 or 62.24%, this indicates that the Firm Value (PBV) can be explained at 62.24, by Financial Performance (ROA) and Intellectual Capital (VAIC). While the remaining 37.76% (100%-37.76%) is explained by other variables.

Based on the results of Intellectual Capital testing on Financial Performance, it has a significant positive effect, which means that the first hypothesis is accepted. The results of this study support research from Landion and Lastanti (2019), Nurhayati, Arifin and Mulyasari (2019), Agustami and Rahman (2015), Sunarsh and Mendra (2012), Nikmah and Apriyanti (2016), Hadiwijaya and Rohman (2013).

This study shows that the use and utilization of the company's Intellectual Capital is able to improve the company's financial performance. This proves the Resource Based theory, if the company is able to operate effectively and efficiently, the company will succeed in maintaining a competitive strategy by utilizing its resources, with Intellectual Capital consisting of Human Capital, Employed Capital and Structural Capital. Intellectual Capital that is used effectively and efficiently will improve the company's performance to create a competitive advantage.
This result is different from the research of Usman and Mustafa (2019), Putri and Nuzula (2019), and Andriana (2014) which shows that Intellectual Capital has no effect on Financial Performance. This indicates that the quantity of employees does not have a major effect on the company. Only competent employees are able to create wealth and added value, which encourages structural capital and employee capital which are elements of Intellectual Capital.

Based on the results of testing Financial Performance on Firm Value, it has a significant positive effect, which means that the second hypothesis is accepted. The results of this study support research from Simanungkalit and Prasetiono (2015), Septiana (2018), Maryanto (2017), and Fitriyani and Amalia (2014).

Optimizing company value is the company's long-term goal. Significant financial performance of the company will succeed in achieving profits to meet the interests of stakeholders which can be known through the financial statements published by the company. If the company is able to increase its capabilities, the stock price will also increase. An increase in stock prices will lead to investor appreciation of the company's financial performance and have a positive effect on company value.

Signaling theory supports the results of this study which states that signaling to stakeholders and potential investors is carried out by the company, through disclosure of information in the hope that stakeholders and potential investors can find out the information and define it as a positive signal to the company.

Through publications regarding financial performance, it will provide a signal to investors and the market about the prospect and performance of the company in the future. The greater the financial performance in the financial statements, the better the company reflects on it so that it will increase investor or market confidence in the company's prospects in the future which will increase the value of the company as reflected in the increase in the company's stock price.

However, this is different from the results of Putri and Nuzula (2019), and Sofia and Ambe (2012) which showed that financial performance had no significant effect on firm value. This is because the Financial Performance (ROA) proxy is not the only indicator, but there are other proxies as well.

Based on the results of the significance test, it shows that the Intellectual Capital variable has a significant positive effect on firm value, which means that the third hypothesis is accepted. The results of this study support Santiani (2018), Auliyah and Asyik (2016), Barokah, Wilopo and Nuralam (2019), Lestari and Sapitri (2016).

This study shows that maximizing the elements of Intellectual Capital, namely human capital, structural capital and customer capital, will increase firm value. This is in accordance with the Stakeholder theory, which if Intellectual Capital can maximize the utilization of the elements of Intellectual Capital (Human Capital, Structural Capital and Physical Capital) by the company, the interests of stakeholders can be fulfilled and investors will invest in companies that have advantages in intellectual property. Capital. So that the value of the company will increase from the added value of the investment.

This result is different from Septiana (2018), Purnomo and Marcelia (2016), Aida and Rahmawati (2015) which give the result that Intellectual Capital has no effect on Firm Value.

Based on the results of testing Intellectual Capital has a significant positive effect on firm value through financial performance, this fourth hypothesis is accepted, that Financial Performance is able to mediate the relationship of Intellectual Capital to Firm Value. The results of this study support the research of Simanungkalit and Prasetiono (2015), and Yuskar and Dhia Novita (2014).

The researcher's assumption has been successfully proven by the test results in the first and second equations, each of which gives the result that the first equation as an equation that reflects the relationship between Intellectual Capital and Financial Performance gives significant results and the second equation shows the result that Financial Performance significantly affects the value of company.

These results illustrate that Intellectual Capital that is able to be managed and utilized effectively and efficiently from all assets owned by the company will increase the company's financial performance in accordance with the Resource Based Theory. Improved Financial Performance as a contribution from optimizing the utilization and management of Intellectual Capital plays a very important role in building investor or market perceptions of the company's prospects.

This research is also able to prove the stakeholder theory which states that the company is obliged to provide information for stakeholders. By providing information in the form of financial performance for stakeholders, stakeholders will provide an assessment for the company on the fulfillment of the facilities provided to these stakeholders in the form of high value for the company which is reflected in the high price of its shares. However, the results are different from the research of Auliyah and Asyik (2016) which proves that it does not have an indirect effect because it uses different profitability.

V. Conclusion

This study shows that the use and utilization of the company's Intellectual Capital is able to improve the company's financial performance. This proves the Resource Based theory, if the company is able to operate
effectively and efficiently, the company will succeed in maintaining a competitive strategy by utilizing its resources, with Intellectual Capital consisting of Human Capital, Employed Capital and Structural Capital. Intellectual Capital that is used effectively and efficiently will improve the company's performance to create a competitive advantage.

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