The effect of intellectual capital, size, leverage, and liquidity on company value in manufacturing companies listed on Indonesia Stock Exchange

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ABSTRACT
The rapid growth of technology and information can provide opportunities and also threats to the sustainability of a company. Therefore, companies must change their management patterns in order to take advantage of technological advances and strategies to compete in various markets, as well as maintain a competitive advantage by focusing on operational and financial activities. The company's goal is to maximize the wealth of shareholders by maximizing the value of the company. This study aims to provide empirical evidence related to the influence of intellectual capital, size, leverage, and liquidity on company value. The sample in this study was comprised of 84 manufacturing companies listed on the Indonesian stock exchange in 2018-2020. The analytical tool used in this study is a multiple regression model. The results of hypothesis testing with multiple regression analysis using the SPSS 26 application showed that intellectual capital, size, leverage, and company age control variables had a significant effect on company value. Meanwhile, liquidity has no significant effect on the value of the company. This study made several contributions to theory and methodology. This reinforces previous research on the value of the company. This research is expected to be used as input to evaluate companies related to intellectual capital, size, leverage, and liquidity to increase company value. This study only used a sample of manufacturing companies registered on the IDX that made a profit and only three years of research from 2018-2020. Researchers are then expected to expand the sample of all manufacturing companies listed on the IDX, including both companies that get profits and losses, and can expand the research period in order to provide better and more significant research results.

KEYWORDS
Company Value; Intellectual capital; Size; Leverage; Liquidity; Company Age

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Introduction
In the face of modern times and increasing technological innovation, this has led to increasing competition among business people. The rapid growth of technology and information can provide opportunities and also threats to the sustainability of a company. Therefore, companies must change their management patterns in order to take advantage of technological advances and strategies to compete in various markets, as well as maintain a competitive advantage by focusing on operational and financial activities. Shareholders expect better company performance so that it can compete in an increasingly competitive market environment and increase the value of the company by improving shareholder welfare. The welfare of the company’s shareholders is achieved by maximizing the present value to obtain shareholder benefits in the future. The company’s values are a fundamental element in determining the success of a company that has a strong relationship with the company’s stock price. The higher the valuation of an enterprise given by external parties, the greater the level of confidence of potential investors (Anggasta & Suhendah, 2020). Shareholder value will increase if the value of the company increases, which is characterized by a high rate of return on investment to shareholders (Hermuningsih, 2012).

The company’s goal is to maximize the wealth of shareholders by maximizing the value of the company (Tanusdjaja, 2021). The value of a company can not only be described by the stock price of a company. Measuring the high value of a company can be done in various ways, and one of the measuring tools that can be used is price to book value. PBV is a measure that serves to determine whether a company’s stock price is classified as high or low. The high PBV value describes the company’s stock price as high and good for investment. The higher the value of PBVs, the greater the level of prosperity of shareholders, so the company is said to have achieved one of its goals (Suwardika & Mustanda, 2017). In simple terms, a PBV value above one is considered a good value since it signifies a stock price or market value greater than the company’s book value, so investors’ motivation to invest increase
Conversely, if the PBV value is below one, it reflects the value of the company, which is not good enough because the share price is lower than its book value. An example of a company that has a PBV value above one and has an increase in the year of study can be seen in the following table 1:

<table>
<thead>
<tr>
<th>Company</th>
<th>Ratio Price to Book Value (x)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT Industri Jamu Dan Farmasi Sido Muncul Tbk</td>
<td>4.27</td>
</tr>
<tr>
<td>PT Nippon Indosari Corpindo Tbk</td>
<td>2.60</td>
</tr>
<tr>
<td>PT Ultra Jaya Milk Industry Tbk</td>
<td>3.32</td>
</tr>
<tr>
<td>PT Buyung Poetra Sembada Tbk</td>
<td>3.21</td>
</tr>
<tr>
<td>PT Darya-Varia Laboratoria Tbk</td>
<td>1.81</td>
</tr>
<tr>
<td>PT Impack Pratama Industri Tbk</td>
<td>3.52</td>
</tr>
</tbody>
</table>

Based on the table above, it can be seen that several manufacturing companies have experienced an increase in the Price to Book Value ratio. This increase indicates that the company is able to generate good value from the invested capital. The high PBV value is because the stock price is higher than the company’s book value. The high share price reflects the quality of the company’s good performance. A good company value will be increasingly in demand by investors because it is expected to generate high returns in line with the company’s growth in the future.

**Literature review**

From previous studies, various research results were obtained regarding the value of the company. The theory used in this study is stakeholder theory.

**Stakeholder theory**

Stakeholder theory explains that the company does not only focus on its own interests, but must also provide benefits to each stakeholder (Ramadhan, 2016). Stakeholders have the right to be treated fairly by the company, and management must manage the company for profit or profit for all stakeholders (Anjani & Dillak, 2017). Organizational management is expected to be able to carry out activities that are considered important by stakeholders, and management must also report back on these activities to stakeholders (Lestari & Sapitri, 2016). The success of the company is largely determined by stakeholders. The company is obliged to convey accurate and appropriate information to every stakeholder in order to make the best decision. The main purpose of stakeholder theory is to help managers understand the environment of stakeholders and carry out management more effectively among the existence of relationships in their company environment. However, the broader purpose of this theory is to assist managers in increasing the value of the impact of their activities, and minimizing losses for stakeholders (Triwaderi, 2021).

**Company value**

The value of the company is the investor’s perception of the entirety of each equity owned by the company that is associated with the share price. The share price used generally refers to the closing price, and is the price that occurs at the time the stock is traded on the market (Sari & Priyadi, 2016). The company’s high value can increase investor confidence in the company’s performance and prospects in the future. This is because investors believe that the higher the share price of a company, the higher the rate of return that investors will receive. In other words, companies with high stock prices have good value because they are considered capable of prospering their shareholders. Firm value can be interpreted to mean that this value is the value offered to buyers when the company is sold to other parties or third parties. The company has a goal of increasing the value of the company so that investors or buyers believe that the current performance of the company can continue to be seen or survive in the future (Aeni & Asyik, 2019). Price to book value (PBV) is used to assess the price of a stock by comparing the market price of a stock with the book value of the company. High value will make the market believe in the company’s future prospects (Rachmawati & Pinem, 2015). This ratio is used by researchers because the data to calculate the PBV ratio can be easily obtained in the company's financial statements. PBV ratio can be calculated using the following formula:

\[
PBV = \frac{\text{Market price per share}}{\text{Book value per share}}
\]
**Intellectual capital**

Intellectual Capital is information and knowledge that is applied in work to be able to create value in the company. In this study, intellectual capital was measured by Value Added Intellectual Coefficient (VAIC). VAIC is an instrument to measure the performance of a company's intellectual capital. This method is to measure how efficiently in creating value is based on the relationship of three main components, namely capital employed, human capital, and structural capital (Lestari & Sapitri, 2016). Human capital is a very useful source of knowledge, skills, and competencies in an organization or company. Structural capital is the ability of an organization or company to fulfill the company’s routine processes and its structure in a way that supports employees’ efforts to produce optimal intellectual performance and overall performance. A capital employee is a measurement that shows the contribution made by each unit (Sari et al, 2017). According to Anjani & Dillak (2017) VAIC can be calculated using the following formula:

\[
\text{Value Added (VA)} = \text{OUT} - \text{IN} \\
\text{Value Added Capital Employed (VACA)} = \text{Value Added/Capital Employed} \\
\text{Value Added Human Capital (VAHU)} = \text{Value Added/Human Capital} \\
\text{Structural Capital Value Added (STVA)} = \text{Structural Capital/Value Added} \\
\text{Value Added Intellectual Capital (VAIC)} = \text{VACA} + \text{VAHU} + \text{STVA}
\]

**Size**

Size can be interpreted as a scale of classifying the size of a company or organization established by someone or more to achieve a goal. The higher the size will be closely related to the funding decisions set by the company to optimize the company’s value. Generally, large companies tend to be easier to gain the trust of investors to get funding sources so that they can increase the value of the company (Suwardika & Mustanda, 2017). A company size scale is a scale to determine the size of a company. Companies are categorized into two types, namely small-scale companies and large-scale companies (Christiani & Herawatyi, 2019). Size is measured based on the total assets owned by the company obtained from the company’s financial statements. The size measured from total assets will be transformed in the form of logarithms with the aim of equating with other variables because the total value of the company’s assets is relatively large compared to other variable variables in this study. According to Aeni & Asyik (2019) size can be calculated using the following formula:

\[
\text{Size} = \ln x \text{Total Assets}
\]

**Leverage**

Leverage is a comparison of debt with own capital. Which measures the company’s ability to pay for the benefit in the long term. This is necessary in order to be able to determine the level of security for creditors. As an important view in measuring the effectiveness of using company debt, therefore leverage can also measure a company that is experiencing losses so that it will have an impact on the return of its share (Barnades, 2020). Leverage is a ratio that calculates how far the funds provided by creditors are, as well as a ratio that compares total debt to the overall equity of a company, so if investors see a company with high equity but also high leverage risk, they will think twice about investing in the company (Sutama & Lisa, 2018). This ratio is used to measure the composition of the company’s funding, whether it comes from long-term debt or from its own capital (Oktaiviarni, 2019). Leverage in this study was measured using the debt-to-equity ratio (DER). DER can be calculated using the following formula:

\[
\text{Debt to Equity Ratio (DER)} = \frac{\text{long-term debt}}{\text{Total Equity}} \times 100\%
\]

**Liquidity**

Liquidity ratio is a ratio that describes the company’s ability to meet short-term obligations (debt). This means that if the company is collected, the company will be able to meet the debt, especially the debt that is already due. In other words, liquidity serves to show or measure the company’s ability to fulfill its maturing obligations, both obligations to external parties (liquidity of business entities) of the company and within the company (Company liquidity) (Barnades, 2020). A liquid company will be trusted by investors because it is considered a good company (debt). This means that if the company is collected, the company will be able to meet the debt, especially the debt that is already due. In other words, liquidity serves to show or measure the company’s ability to fulfill its maturing obligations, both obligations to external parties (liquidity of business entities) of the company and within the company (Company liquidity) (Barnades, 2020). A liquid company will be trusted by investors because it is considered a good company performance. This is because companies that have a high level of liquidity have internal funds available to use first to finance their investments before using external financing through debt (Putra & Lestari, 2016). Liquidity in this study is measured using the Current Ratio used to determine the company’s ability to pay off short-term obligations by using current assets Thus, it can be said that the usefulness of this liquidity is to determine the company’s ability to meet and finance obligations (debts) at the time of collection (Oktaiviarni, 2019). Current ratio can be calculated using the following formula:

\[
\text{CR} = \frac{\text{Total current assets}}{\text{Total current liabilities}} \times 100\%
\]
**Company Age**

The maturity level of a company can be measured by the age of the company. The age of the company in this study was calculated based on the length of time the company was listed on the Indonesia Stock Exchange (IDX) until the research period. The longer the company is listed on the IDX, the easier it is for investors to trust the company, because the company can maintain the continuity of operational activities or the viability of the company. Companies that have a longer life are estimated to be able to generate optimal profits and less risk than new companies (Anggasta & Suhendah, 2020). Companies that have a longer life have deeper knowledge about the needs of stakeholders for information about the company (Christiani & Herawaty, 2019). Usually, companies that have a longer life have excess information and experience in managing their companies compared to companies that are still several years old. This is because the company already has a lot of working hours (Yumiasih & Isbanah, 2017). In this study, the age of the company will be calculated by the following formula:

$$\text{Company Age} = \text{years of research - listed on the IDX}$$

**Methods**

This study uses secondary data by selecting a sample of manufacturing companies listed on the Indonesia Stock Exchange. The technique of selecting and determining samples uses purposive sampling techniques, which is one of the techniques to determine sampling by determining specific characteristics that are in accordance with the research objectives so that they are expected to answer research problems. The following research data were obtained based on the results of observations conducted in accordance with the sample selection criteria:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing companies listed on the Indonesia Stock Exchange for the 2018-2020 period.</td>
<td>168</td>
</tr>
<tr>
<td>Companies that did not publish the data needed for the variables in this study for the period 2018-2020.</td>
<td>(19)</td>
</tr>
<tr>
<td>Companies that suffered losses during the observation year of the period 2018-2020.</td>
<td>(65)</td>
</tr>
<tr>
<td><strong>Total companies used as sample</strong></td>
<td><strong>84</strong></td>
</tr>
<tr>
<td><strong>Total reaserch sample 2018-2020</strong></td>
<td><strong>252</strong></td>
</tr>
</tbody>
</table>

The research sample consisted of 84 manufacturing companies with a research period of 3 years, so the total data was 252. The methods used were descriptive statistics, classical assumption tests and multiple regression analysis with the following research model:

$$Y = \beta_0 + \beta_1 VAIC + \beta_2 SIZE + \beta_3 DER + \beta_4 CR + \beta_5 AGE + e$$

**Results**

**Descriptive statistics results**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1: Intellectual Capital</td>
<td>1,02</td>
<td>18,28</td>
<td>2,6763</td>
<td>1,47331</td>
</tr>
<tr>
<td>X2: Size</td>
<td>25,95</td>
<td>33,49</td>
<td>28,9476</td>
<td>1,60357</td>
</tr>
<tr>
<td>X3: Leverage</td>
<td>0,00</td>
<td>1,73</td>
<td>0,2748</td>
<td>0,32958</td>
</tr>
<tr>
<td>X4: Liquidity</td>
<td>0,65</td>
<td>303,28</td>
<td>4,8525</td>
<td>23,04481</td>
</tr>
<tr>
<td>C: Company Age</td>
<td>0</td>
<td>39</td>
<td>18,61</td>
<td>11,814</td>
</tr>
<tr>
<td>Y: Company value</td>
<td>0,13</td>
<td>46,60</td>
<td>2,9775</td>
<td>6,04521</td>
</tr>
</tbody>
</table>

**Classical assumption tests results**

Classical assumption tests were performed to ensure that the sample avoided disruptions of normality, multicollinearity, autocorrelation, and heteroscedasticity. So that the tests used in this study are normality tests, multicollinearity tests, autocorrelation tests, and heteroscedasticity tests (Anjani & Dillak, 2017).

**Normality test results**

The normality test is used to find out whether the data owned is normally distributed or not by conducting a kolmogorov smirnov test if the probability value or Asymp. Sig. greater than 0.05 then normally distributed. The test results in table 3 show the significance value of the kolmogorov smirnov test of 0.200 which is greater than 0.05 so it can be concluded that the data from this research variable have been distributed normally.
Partial Test Result (t test)

The t-test aims to determine whether or not there is an influence of each independent variable in the form of intellectual capital, size, leverage, and liquidity on the value of the company as well as the variables of control of the company's age on the value of the company.

<table>
<thead>
<tr>
<th>Unstandardized Coefficients</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>-7.166</td>
</tr>
<tr>
<td>X1: intellectual capital</td>
<td>1.123</td>
</tr>
<tr>
<td>X2: size</td>
<td>4.832</td>
</tr>
<tr>
<td>X3: leverage</td>
<td>-0.995</td>
</tr>
<tr>
<td>X4: liquidity</td>
<td>-1.19</td>
</tr>
<tr>
<td>X5: company age</td>
<td>1.191</td>
</tr>
</tbody>
</table>

From the table, the relationship between the independent variable and the dependent variable can be formulated as follows:

\[ Y = -7.166 + 1.123\text{VAIC} + 4.832\text{SIZE} - 0.095\text{DER} - 0.119\text{CR} + 0.191\text{AGE} \]

Discussion

The results of the statistical test show that intellectual capital is partial to the value of the company with a significant value of 0.000 (less than 0.05). That is, the higher intellectual capital the higher the company's worth. The intellectual capital that the company possesses will produce added value for the company, so information regarding the intellectual capital that the company has will become a consideration for investors. The findings match the findings of this study with the study of Putri & Miftah (2021), whose intellectual capital affects the company's partially influential worth. As well as other research by Ramadhan (2016) and Triwaderi (2021), that suggests that increasing intellectual capital affects the increasing value of the company. It supports the results of hypothetical testing that showed intellectual capital variables affect positive for the company's value, or H1 supported.

The results of a statistical test, it shows that size partially affects the value of the company with a significant value of 0.000 (smaller than 0.05). That is, the larger the size of a company, the higher the value of the company. The company's size is such that it has a large total asset base, which will provide freedom for management to control company assets that can increase the value of the company and can provide benefits for the company. The results of this study are in line with the research of Sari et al (2017), Anjani & Dillak, (2017), Sari & Priyadi (2016), and Rachmawati & Pinem (2015), which show that company size has an effect on increasing company value. The larger the company tends to be the more investors who are interested in the company because large companies tend to have stable financial conditions. It strengthens hypothesis testing results indicating that variable size has a positive impact on company value, or H2 supported.

The results of a statistical test, leverage has a partial effect of a negative impact on a company's value of 0.048 (smaller than 0.05) and a substantial value -0.095. That is, higher leverage can lower the value of the company. High leverage suggests that corporate finance is financed more by debt, causing corporate restructuring as companies are perceived to carry a high risk to investors. This study coincides with the studies of Sari & Priyadi (2016), Triwaderi (2021), and Rachmawati & Pinem (2015), who claim that the higher leverage reflected by long-term debt will lead to a lower value of the company. The high leverage shows a greater investment risk so that investors will think twice about investing. It proves that the results of the testing of variable leverage, or H3 supported.

The results of a statistical test, it is clear that liquidity does not significantly affect a company's value with a significant value of 0.137 (larger than 0.05). In other words, the high liquidity ratio would lower corporate value. High liquidity can reduce a company's profitability because there is too much unemployment that corporate management has not been exploited to run any of the company's operational activities. The results of the study correspond with Tanusdjaja (2021), Sjahruddin & Jannah (2022), and Barnades (2020), which state that the higher the liquidity rate of the company, the company will devalue. The company's high liquidity is because its management is less dependent on the use of smooth assets, where high unemployment assets can lower the company's profit and value. It proves that the results of the testing of the liquidity variable hypothesis, or H4 are not supported.

Conclusion

This study aims to provide empirical evidence related to the influence of intellectual capital, size, leverage, and liquidity on company value in manufacturing companies listed on the Indonesia Stock Exchange in 2018-2020. Testing the first hypothesis, the intellectual capital variable has a significant effect on the value of the company, so this research hypothesis is supported. Testing of the second hypothesis shows that the size variable has a significant effect on the value of the company, so this research hypothesis is supported. Testing of the third hypothesis, the leverage variable has a significant negative effect on the value of the company, so this research hypothesis is supported. Testing from the fourth hypothesis, liquidity variables have no significant effect on the value of the company, so this research hypothesis is not supported. Testing of the control variable, the age of the company as the
controller of the relationship to the value of the company, the age of the company with a sig value of 0.001 (smaller than 0.05) has a significant effect on the value of the company.

This research is expected to be used to increase knowledge and insight related to the influence of intellectual capital, size, leverage, and liquidity on company value. As well as being able to be a reference material for other studies similar to this one. This research is expected to be used as input to evaluate companies related to intellectual capital, size, leverage, and liquidity to increase company value.

The limitation in this study is that the sample of manufacturing companies used only those that made consecutive profits during the 2018-2020 research year, meaning that there were only 84 companies that were sampled. Then this study only measures three years of research, which will be more accurate when using longer years of research.

References


