The Effect Of Intellectual Capital, Company Growth, And Return On Assets On Company Value

[Study on Building Construction Subsector Companies Listed on the Indonesia Stock Exchange for the 2016-2021 Period]

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Abstract – The construction sector in Indonesia plays an important role because it affects most sectors of the country's economy and makes a significant contribution to the development process. The construction sector is closely related to the infrastructure sector, which includes the construction of roads, housing, sewer systems, airports, apartments, and others. The construction sector is an area that requires the need for special skills, especially in terms of complex technology, because of this Indonesia needs to deploy foreign workers. Skilled human resources will help increase a company's value. Human resources or also known as human capital is one of the elements in intellectual capital that can help increase company value. Besides intellectual capital, there are other aspects that are predicted to affect the value of the company, namely financial performance and growth of a company. The purpose of this study was to determine the effect of intellectual capital, company growth and return on assets on firm value in building construction sub-sector companies. The results of the study the effect of intellectual capital, company growth, and return on assets on firm value in building construction subsector companies is intellectual capital is considered negative and insignificant to firm value, company growth has a significant positive effect on firm value, return on assets has a significant positive effect on firm value, and simultaneously intellectual capital, company growth and return on assets have a significant positive relationship.

Keywords – Intellectual Capital, Company Growth, Return on Assets, and Company Value.

I. INTRODUCTION

The construction sector in Indonesia plays an important role because it affects most sectors of the country's economy and contributes significantly to the development process. The construction sector is closely related to the infrastructure sector, which is in the form of road construction, housing, sewer systems, airports, apartments, and so on. In the period from 2015-2019, infrastructure development became one of the priority programs of the Working Cabinet of Mr. President Joko Widodo (www.bpkp.go.id). Quoted from id.wikipedia.org since its implementation in 2016 to 2019, as many as 92 National Strategic Projects have been completed with an investment value of Rp467.4 trillion. On the other hand, PSN (National Strategic Projects) faces obstacles in terms of land acquisition, planning and preparation, funding, licensing, and construction implementation. This obstacle in development occurs because the construction sector is a field that requires the need for specific skills, especially in terms of complex technologies including human resources. To help improve the quality of human resources in Indonesia, PUPR (Ministry of Public Works and Public Housing) at the National Forum for Cooperation and Empowerment of Construction Services, signed an agreement with business entity associations and business entities in the construction services sector.

Skilled human resources will help increase the value of a company. HUMAN RESOURCES or can also be referred to as human capital is one of the elements in intellectual capital. According to Arfan Ikhsan (2008:83) "Intellectual capital is the total
value of a company that describes the intangible assets of a company that are sourced from three pillars, namely human, structural and customer capital”. In the presence of this intellectual capital, the company can create additional profits and the formation of business processes, creating more value for the company than its competitors or other companies.

In addition to intellectual capital, there are other aspects that are predicted to affect the value of a company, namely the growth of a company and financial performance. Safrida (2008:5) says that company growth refers to how a company positions itself in the same macroeconomic system or corporate economic system. The growth of the company can be measured by sales. Sales growth is an increase in the number of sales from year to year or over time. In this study, sales growth will be used to measure company growth.

Financial performance is an overall evaluation of a business in terms of assets, liabilities, capital, revenue, costs and profitability. Financial performance is measured by various formulas and formulas that allow the company to find out the effectiveness of the company. To assess the financial performance of an enterprise can be done by the financial ratio of the enterprise. In accordance with its purpose, the financial ratio is divided into four, namely: profitability, liquidity, solvency and activity. The financial ratio used by the author is a profitability financial ratio measured by return on assets (ROA). Return on assets (ROA) determines the ability of a company to generate net profit after tax from the amount of the company's assets.

Based on research conducted by Dede Sri Rahayu (2021) and Haryani Chandra (2017), it can be concluded that intellectual capital has a positive effect on company value. However, it is different from the research conducted by Krisna and Dini (2021) which concluded that intellectual capital does not affect the value of the company. Furthermore, research on company growth conducted by Nur and Endang (2017) and Atika Suryandani (2018) concluded that the company's growth had a significant positive effect on company value. However, it is different from research conducted by Isabella and Satia (2017) which concluded that company growth has no effect on company value. The financial ratio used by the author is a profitability financial ratio measured by return on assets (ROA). Return on assets (ROA) determines the ability of a company to generate net profit after tax from the amount of the company's assets.

Based on research conducted by Dede Sri Rahayu (2021) and Haryani Chandra (2017), it can be concluded that intellectual capital has a positive effect on company value. However, it is different from the research conducted by Krisna and Dini (2021) which concluded that intellectual capital does not affect the value of the company. Furthermore, research on company growth conducted by Nur and Endang (2017) and Atika Suryandani (2018) concluded that the company's growth had a significant positive effect on company value. However, it is different from research conducted by Isabella and Satia (2017) which concluded that company growth has no effect on company value.

Based on the background that has been explained, this study wrote the title "The Influence of Intellectual Capital, Company Growth, and Return on Assets on Company Value (Study on Building Construction Subsector Companies Listed on the Indonesia Stock Exchange for the 2016-2021 Period)". Based on previous theories and researches that have been submitted, The objectives of this study are as follows:

1. To analyze the effect of intellectual capital on company value.
2. To analyze the effect of company growth on company value.
3. To analyze the effect of the return on assets on company value.
4. For analyzing the influence of intellectual capital, company growth, and return on assets on company value.

II. METHOD

The type used in this study is a type of quantitative research. The subjects used in this study were building construction subsector companies listed on the Indonesia Stock Exchange for the 2016-2021 period. The object of research used in this study is independent variables and dependent variables. Independent variables are intellectual capital (X1), company growth (X2), and return on assets (X3). The dependent variable is in the form of the company value (Y) of the building construction subsector listed on the Indonesia Stock Exchange for the 2016-2021 period.

The sampling technique used in this study was nonprobability sampling with the following criteria:

2. Companies that successively include complete financial statements during the period 2016-2021.

Based on the criteria above, the sample used in this study was 13 out of 23 building construction subsector companies listed on the Indonesia Stock Exchange.
The type of data used in this study is secondary data. Secondary data for this study was obtained from financial statements obtained from the idx.co.id and the company's official website. The data is then processed by the author.

The data collection method used in this study is a documentary with established criteria, namely companies listed on the Indonesia Stock Exchange in the building construction subsector that submit financial statements in 2016-2021.

Data analysis in this study used panel data analysis assisted by the Eviews 12 program. According to Basuki and Prawoto (2017: 275), panel data is a combination of time series data and cross section data. Time series data is data consisting of one or more variables that will be observed in one observation unit within a certain period of time. Meanwhile, cross-section data is observation data from several observation units at one point in time. The times series data in this study is the research time period of 6 years (2016-2021) and the cross section data in this study are 13 building construction subsector companies listed on the Indonesia Stock Exchange.

1. Panel Data Method Estimation
   
   There are 3 alternative approaches that can be used in the panel data method, these approaches are:
   
   a. Common Effect Model (CEM)
      
      This model only combines the two data regardless of the difference between time and individual so it can be said that this model is the same as the OLS (Ordinary Least Square) method because it uses ordinary small squares.
   
   b. Fixed Effect Model (FEM)
      
      This model approach uses a dummy variable known as a fixed effect model In the fixed effect method, estimation can be done with no weighted or Least Square Dummy Variable (LSDV) and with a weighter (cross section weight) or General Least Square (GLS).
   
   c. Random Effect Model (REM)
      
      In the fixed effect model including dummy aims to represent our ignorance of the actual model. However, it carries the consequence of reducing the degree of freedom so that in the end it reduces the efficiency of the parameters.

2. Panel Data Method Selection
   
   Of the three approaches, only 1 approach was chosen to analyze the panel data. Proper model specification tests are required to describe the data from that approach. The required tests are:
   
   a. Chow Test
      
      The chow test is a test to determine what model to choose between a common effect model or a fixed effect model.
   
   b. Hausman Test
      
      The hausman test is a test used to choose the best model between a fixed effect model or a random effect model. This hausman test is based on the idea that Least Squares dummy Variables (LSDV) in the fixed effect method and Generalized Least Square (GLS) in the random effect method are efficient whereas Ordinary Least Square (OLS) in the common effect method is inefficient.

3. Multiple Linear Regression Analysis
   
   Linear regression analysis describes the influence between an independent variable and a dependent variable, and multiple linear regression can decipher the influence or relationship of a bound variable (Y) with two or more free variables (X).

   Formula:

   \[ Y_t = b_0 + b_1X_1t-1 + b_2X_2t-1 + b_3X_3t-1 + e \]

   Information:

   Yt = Company Value of Building Construction Subsector
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\[ b_0 = \text{Constants} \]
\[ X_{1t-1} = \text{Intellectual Capital} \]
\[ X_{2t-1} = \text{ROA} \]
\[ X_{3t-1} = \text{Company Growth} \]
\[ e = \text{Standard Error} \]

4. Test classical assumptions
   a. Normality Test
      A normality test is performed to test whether in a regression model, an independent variable and a dependent variable or both have a normal or abnormal distribution.
   b. Multicollinearity Test
      The multicollinearity test aims to find out whether the regression model found a correlation between independent variables or free variables.
   c. Heteroskedasticity Test
      The heteroskedasticity test is carried out to determine whether in the regression model there is an inequality of variants from the residuality of one observation to another. If variants and residual results remain constant from one observation to another, this is called homoskedasticity and if different then it is called heteroskedasticity.
   d. Autocorrelation Test
      Autocorrelation can appear due to sequential observations throughout the clock relating to one another. This problem arises because residuals are not free from one observation to another. A good regression model is a regression model that is free from autocorrelation.

5. Hypothesis Testing
   a. Partial Regression Testing (t Test)
      The t statistical test basically shows how far the influence of one independent variable individually is in explaining the dependent variable. This test aims to find out the significant relationship of each independent variable to the dependent variable. "The t test is used to partially test each variable."
   b. Simultaneous Regression Testing (F Test)
      This test aims to understand the influence of independent variables simultaneously on dependent variables by looking at the significance of F. F test is used to understand the influence of free variables simultaneously (simultaneously) on bound variables. Significant means that the relationships that occur can apply to the population."
   c. Goodness of Fit Test (R Test2)
      This test aims to determine the proportion or percentage of the total variation in the bound variable described by the free variable. If the analysis used is a simple regression, then the R-Square value is used. " However, if the analysis used is a multiple regression, then what is used is Adjusted R-Square.

The hypotheses in this study are:
1. H1: Intellectual capital has a positive effect on the company's value.
2. H2: Company growth has a positive effect on the company's value.
3. H3: ROA has a positive effect on the company's value.
4. H4: Intellectual capital, company growth, and ROA simultaneously affect the value of the company.
III. RESULTS AND DISCUSSION

- Hypothesis Test

  - Panel Data Method Selection

    Table 1.1 Chow Test

    | Effects Test            | Statistic | d.f. | Prob. |
    |-------------------------|-----------|------|-------|
    | Cross-section F         | 8.055529  | (12,40) | 0.0000 |
    | Cross-section Chi-square| 68.805134 | 12    | 0.0000 |

    The chow test result has a probability value of $F$ of 0.0000 (significance < 0.05), so it can be said that $H_0$ is rejected and $H_1$ is accepted, so the model chosen is FEM.

    Table 1.2 Hausman Test

    | Test Summary   | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob. |
    |----------------|-------------------|--------------|-------|
    | Cross-section random | 2.833319         | 3            | 0.4180 |

    The hausman test results have a significance value of 0.4180 (significance > 0.05), so it can be said that $H_0$ is accepted and $H_1$ is rejected, so the model chosen is REM.

  - Multiple Linear Regression Analysis

    Table 1.3 Random Effect Model

    | Variable | Coefficient | Std. Error | t-Statistic | Prob. |
    |----------|-------------|------------|-------------|-------|
    | C        | 0.010224    | 0.091570   | 0.111652    | 0.9115 |
    | VAIC     | -0.018257   | 0.014413   | -1.266702   | 0.2109 |
    | GROWTH   | 0.193207    | 0.071019   | 2.720495    | 0.0088 |
    | ROA      | 3.381965    | 1.200393   | 2.817382    | 0.0068 |

    Based on the table above, there is a regression equation as follows:

    \[ Y = 0.010224 - 0.018257 \times X1 + 0.193207 \times X2 + 3.381965 \times X3 + e \]

    Information:

    $Y$ = Company Value
    $X1$ = Intellectual Capital (IC)
    $X2$ = Company Growth
The interplay of the regression equation can be expressed as follows:

1. \( \alpha = 0.010224 \), meaning that if the intellectual capital (\( X_1 \)), company growth (\( X_2 \)), and return on assets (\( X_3 \)) is equal to 0, then the company value (\( Y \)) is 0.010224.

2. \( X_1 = -0.018257 \), this negative sign expresses the direction of the negative relationship between the IC and the value of the company then it can be stated that every increase in IC by 1% then the value of the company will tend to fall by -0.018257 or -1.83% assuming that other variables, namely the growth of the company (\( X_2 \)) and the return on assets (\( X_3 \)) is not considered to exist. The existence of this negative relationship states that between the IC and the company's value shows an opposite relationship.

3. \( X_2 = 0.193207 \), meaning that every change in the company's growth increases by 1% then the value of the company will tend to increase by 0.193207 or 19.3% assuming that other variables, namely intellectual capital (\( X_1 \)) and return on assets (\( X_3 \)) are considered non-existent. The existence of this positive relationship, means that between the company's growth and the company's value, it shows a unidirectional relationship.

4. \( X_3 = 3.381965 \), meaning that every increase in ROA by 1% then the value of the company will tend to increase by 3.381965 or 338.2% assuming that other variables, namely intellectual capital (\( X_1 \)) and company growth (\( X_2 \)) are considered non-existent. The existence of this positive relationship, means that between ROA and company values shows a unidirectional relationship.

- Partial t-test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.010224</td>
<td>0.091570</td>
<td>0.111652</td>
<td>0.9115</td>
</tr>
<tr>
<td>VAIC</td>
<td>-0.018257</td>
<td>0.014413</td>
<td>-1.266702</td>
<td>0.2109</td>
</tr>
<tr>
<td>GROWTH</td>
<td>0.193207</td>
<td>0.071019</td>
<td>2.720495</td>
<td>0.0088</td>
</tr>
<tr>
<td>ROA</td>
<td>3.381965</td>
<td>1.200393</td>
<td>2.817382</td>
<td>0.0068</td>
</tr>
</tbody>
</table>

Based on the results of the statistical test t shows the results of 3 independent variables included in the regression model:

a. The VAIC (IC) variable \( X_1 \) partially has no effect on company value, with a prob value = 0.2109 > 0.05.

b. The other two variables growth \( X_2 \) and ROA \( X_3 \) partially affect company value. This can be seen from the prob values of the two variables \( X_2 \) and \( X_3 \) smaller than 0.05, namely \( X_2 \) (0.0068 < 0.05) and \( X_3 \) (0.0088 < 0.05).

- Simultaneous F Test and R Test

<table>
<thead>
<tr>
<th>R-squared</th>
<th>0.292727</th>
<th>Mean dependent var</th>
<th>0.411800</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted R-squared</td>
<td>0.251923</td>
<td>S.D. dependent var</td>
<td>0.327207</td>
</tr>
<tr>
<td>S.E. of regression</td>
<td>0.285224</td>
<td>Sum squared resid</td>
<td>4.230347</td>
</tr>
<tr>
<td>F-statistic</td>
<td>7.173942</td>
<td>Durbin-Watson stat</td>
<td>1.822353</td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>0.000404</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on the results of the simultaneous regression test (F test) above, it can be seen that prob (F-statistic) is 0.000404 which means it is smaller than 0.05 (0.000404 < 0.05) so that it can be stated that the independent variable in this research model simultaneously affects the dependent variable (\( Y \)), namely the company value. And for the results...
of the R² test, it can be seen that the Adjusted R-squared is 0.251923, which means that 25.1% of the company value variable can be explained by the variables of independent intellectual capital (X1), company growth (X2), and return on assets (X3). While the remaining 74.9% was explained by other factors that were not studied in this study.

**Intellectual Capital to Company Values**

From the results of the regression analysis test, a calculated t value of –1.2667 and smaller than t table 1.6747 (–1.2667 < 1.6747) with a prob level of 0.2109 (p > 0.05) then the variable X1 (intellectual capital) has no effect on the company's value, thus H1 is rejected.

Intellectual capital is a form of asset owned by a company. The purpose of intellectual capital is to create value for a company. If a company has good intellectual capital, then it can show that the company has made good use of the intellectual capital.

From the results of the regression analysis carried out, it can be seen that the intellectual capital in the building construction subsector companies listed on the IDX has no effect on company value. This is because investors do not consider the intellectual capital factor in measuring company value. There is a possibility that investors prefer to look at other factors in measuring the value of the company, such as financial ratios or stock prices.

When viewed from the data from the study, it shows that the influence of the intellectual capital variable partially on the company's value is -1.2667. This figure shows that the intellectual capital variable has a negative influence on the value of the company. If the intellectual capital increases by one unit, the company's value will decrease by 1.2667 units assuming other variables have a constant value.

The results of the t test show the significance value of the t test that the intellectual capital variable has no influence on the value of the company. This can be seen from the calculation of t count < t table (1.2667 < 1.6747) or (-1.2667 > -1.6747) and the significance value (0.2109 > 0.05). So, it can be concluded that the relationship between intellectual capital and company value is negative and insignificant.

This is supported by research that has been conducted by Nanik Lestari and Rosi Candra Sapitri (2016) which states that intellectual capital does not have a significant effect on company value. However, in research by Gita Puspita and Tri Wahyudi (2021) stated that intellectual capital affects the value of the company.

**Company Growth to Company Value**

From the results of regression analysis testing, a calculated t value of 2.7205 and greater than t table 1.6747 (2.7205 > 1.6747) with a prob level of 0.0088 (p < 0.05) then variable X2 (Company Growth) affects the value of the company, thus H2 is accepted.

The company's growth is highly anticipated by stakeholders both inside and outside the company, because it can provide a positive signal for the company's growth. Companies with higher profits are significantly more likely to attract the attention of investors and creditors. Company growth is commonly used by many stakeholders, both by business owners, investors, creditors, and other stakeholders, to gauge the company's prospects. With good sales growth, the company can be said to have developed so that the company's growth is highly expected by stakeholders inside and outside the company. The growth of a company is a sign that the company has a profitable aspect, and investors will also expect a return on their investment.

The results of the regression analysis carried out showed that the company's sales growth in the building construction subsector listed on the IDX affected the company's value. This is because sales for the current period are greater than the change in the company's sales in the previous year. From this, it follows that changes in sales growth during the research period can affect the value of the company for investors. Investors tend to look for high-growth companies. Therefore, the higher the growth rate of a company, the higher its value.

When viewed from the data from the study, it shows that the influence of the company's growth variable partially on the company's value is 2.7205. This figure shows that the company's growth variable has a positive influence on the
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Company's value. If the company's growth increases by one unit, the company's value will increase by 2.7205 units, assuming other variables have a constant value.

The results of the t test showing the significance value of the t test that the growth variable of this company can be seen from the calculation of t count > t table (2.7205 > 1.6747) or (-2.7205 > -1.6747) and the significance value (0.0088 < 0.05). These results show that the company's growth variables have an influence on the value of the company. So, the influence it has is positively significant.

This is supported by research that has been conducted by Atika Suryandani (2018) which states that the company's growth variable has a significant positive effect on company value. However, in the research of Isabella Permata Dhani and A.A Gde Satia Utama (2017) stated that the company's growth variable has a positive but not significant effect on the company's value.

Return on Assets to Company Value

From the results of the regression analysis test, a calculated t value of 2.8174 and greater than t table 1.6747 (2.8174 > 1.6747) with a prob level of 0.0068 (p < 0.05), then the variable X3 (Return on Assets) affects the company's value, thus H3 is accepted.

The financial ratio reflects the value of a company. If an investor wants to choose a company to be used as a place to invest in, they can use the financial ratio as an investment appraisal tool to get an overview of the company. The financial ratio can be measured by ROA. A high ROA indicates a good outlook for the company, and investors will be positive about the signal. The increase in the value of the company shows that the company has good performance. It can help increase the stock price. Increasing the stock price in the market will increase the value of the company.

The results of the regression analysis carried out show that the return on assets of the company in the building construction subsector listed on the IDX affects the value of the company. This happens because a good level of profit for a company has an impact on increasing the value of the company. In other words, the higher the ROA, the more productive the asset that generates net profit. A high offer will increase the attractiveness of the company in the eyes of investors. The increasing attractiveness of a company in the eyes of investors can lead to higher rates of return. Therefore, the rate of return on sales (ROA) can affect the value of the company.

When viewed from the data from the study, it shows that the influence of the ROA variable partially on the company's value is 2.8174. This figure shows that the ROA variable has a positive influence on the value of the company. If the ROA increases by one unit, the company value will increase by 2.8174 units assuming other variables have a constant value.

The results of the t test showing the significance value of the t test that this ROA variable can be seen from the calculation of t count > t table (2.8174 > 1.6747) or (-2.8174 > -1.6747) and the significance value (0.0068 < 0.05). These results show that the ROA variable has an influence on the value of the company. So, the influence it has is positively significant.

This is supported by research that has been carried out by Triana Zuhrotun Aulia and Muhamad Riyandi (2017) which states that ROA has a positive and significant effect on company value. However, in research by Nia Puput Febriani (2017) stated that the ROA variable did not have a significant effect on the value of the company.

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From the results of the regression analysis test, a calculated f value of 6.8102 and greater than f table 2.78 (6.8102 > 2.78) with a prob level of 0.000587 (p < 0.05) then the variables of intellectual capital (X1), company growth (X2), and return on assets (X3) have a simultaneous effect on the value of the company, thus H4 is accepted.

The variables studied are intellectual capital, company growth, and return on assets. According to Arfan Ikhsan (2008:83), "Intellectual capital is the total value of a company that describes the intangible assets of a company that are sourced from three pillars, namely human, structural, and customer capital." With this intellectual capital, the assets of a company will increase, which can be used to grow the company. These assets can also be processed to measure the
company's ability to obtain a net profit. So, it can be said that together, the variety of intellectual capital, company growth, and return on assets affect the value of the company.

This is supported by research that has been conducted by Belia Shinta Wulan (2022) which states that intellectual capital and ROA have a simultaneous effect on company value. Nur Maghfirotu Chusnithah and Endang Dwi Retnani (2017) also mentioned that the growth of the company and ROA have a simultaneous effect on the value of the company.

IV. CONCLUSION

Based on the results, analysis, and discussion as outlined above, the author can conclude that: 1) The model produced by placing three free variables, namely intellectual capital, company growth, and ROA simultaneously has a significant influence on the bound variable, namely the value of the company. 2) The growth of the company and ROA individually have a significant influence on the value of the company. Therefore, the value of the company can be affected by both free variables. 3) Intellectual capital has a negative correlation and has no effect on the value of the company, so it can be presumed that the value of the company has no effect with the addition of intellectual capital and there is a possibility that investors prefer to look at other factors in measuring the value of the company such as financial ratios or stock prices.

Recommendations for further research, the author suggests that you should extend the research period because the more samples used, the better the quality of the research and the results. And it is necessary to add other variables such as Return on Equity (ROE), Price to Book Value (PBV), and other variables that can be used in this study.

REFERENCES


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