The effect of intellectual capital, dividend policy, and capital structure on financial performance (Study in food and beverage subsector listed on the Indonesia Stock Exchange 2010-2020 period)

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ABSTRACT
This study aims to determine the effect of intellectual capital with components consisting of VACA, VAHU and STVA, dividend policy and capital structure on financial performance. In the era of industrial globalization, the company's ability to become a benchmark to describe the company's financial condition. The importance of financial performance is to see how the company achieves its goals to gain profits and prosper the company's economy. Based on the results of previous studies, there are inconsistencies in proving variables that can affect financial performance. This study uses secondary data from the food and beverage sub-sector population listed on the IDX for 2010-2020. The method used in this study uses purposive sampling and multiple linear regression models to test the effect of the independent variable on the dependent variable. Based on the research results, the independent variables that significantly positively affect financial performance are STVA (Structural Capital Value Added) and DPR (Dividend Payout Ratio). In contrast, the variable that has a significant but negative or opposite effect is LDER (Long Debt Equity Ratio). Variables VACA (Value Added Capital Employed) and VAHU (Value Added Human Capital) do not affect financial performance. This study suggests using a broader object and not only focusing on the food and beverages subsector.

KEYWORDS
Intellectual Capital; Dividend Policy; Capital Structure; Financial performance.

Introduction
In the era of industrial globalization, the company’s ability to become a benchmark to describe the company’s financial condition. The company will periodically issue financial reports and perform data processing by calculating whether the company has achieved the required performance standards or not. Financial statements are important because they are used to obtain information about the financial position and results of operations that have been achieved by the company so that they become material for consideration in making economic decisions. The company’s financial statements are the most widely used measure of financial performance to determine the size of the company’s financial performance. Financial performance is a description of the company’s financial condition to be analyzed using analytical tools to find out the shortcomings and achievements obtained by the company in a certain period (Esomar & Christianity, 2021). Financial performance is seen in the company’s ability to generate profits using its potential resources. Financial performance is essential to see how each company has a goal to benefit and prosper the company's economy, so to find out the good and bad financial conditions that reflect a company's work performance in a certain period by using financial analysis tools. One of the financial ratios used in measuring financial performance is the profitability ratio. Putra et al. (2021) suggest that the profitability ratio is a ratio that measures the rate of return on investments made. Profitability ratios are used to measure the company's financial performance. Financial performance in this study was measured using Return on Assets (ROA). Return on Assets (ROA) is a ratio to show the financial performance of the company’s ability to generate profits from assets owned by the company. If the company’s ROA value is higher, the higher the profit generated will indicate a good company's financial performance (Mudijjah et al., 2019).

Making investment decisions for a company requires information about the company’s state for investors. Improving financial performance through strategic changes can be measured by the wealth and competitiveness of companies in the past based on ownership of tangible assets. Economic developments at this time are changing basic information and knowledge systems and industries based on physical assets, namely the production of goods and services and the creation of present value into intangible assets. Intellectual capital is material knowledge, information, intellectual property rights, and experience that can be used to create wealth (Ulum et al., 2016). Intellectual capital is always related to Resource Based Theory (RBT). Resource Based Theory (RBT) determines the resources owned by the company and how the company can utilize and manage existing resources to increase
employee productivity, which can impact company performance. Intellectual Capital; Dividend Policy; Capital Structure; Financial performance.

From the creditor's point of view, the better the company's performance, the higher the creditor's confidence to lend the needed funds. Financial performance is essential to study because it can influence the decisions of various parties through the capital structure consisting of debt and capital. Capital structure is a proportion in determining the fulfillment of company expenditure needs that can be obtained using a combination of funds from inside and outside the company. The trade-off theory explains that the capital structure will reach its maximum point if the company can balance the benefits of using debt with bankruptcy costs. However, the pecking order theory explains that companies with a high-profit level will have a lower level of debt. The low level of debt is caused because the company does not need external funds, while the high-profit level will make its internal funds sufficient to meet investment needs. The purpose of investors when investing is to expect dividends to be obtained. The higher the dividend value, the higher the interest of investors in a company. Lestari (2018) says that dividend policy is a policy regarding decisions taken by companies regarding the profits earned, whether to be distributed to shareholders as dividends or held in the form of retained earnings to finance the company's investments in the future.

Several previous research results by Soewarno & Tjahjadi (2020) stated that intellectual capital positively affected financial performance. However, in contrast, Ting et al. (2020) stated that intellectual capital harmed financial performance. Prabowo & Suzan (2021) say dividend policy has a positive effect on financial performance and is different from Lestari's research (2018) which says dividend policy has a negative effect on financial performance. While Andarsari (2021) states that the capital structure variable can positively influence financial performance, A, Ajibola et al. (2014) say that capital structure has a negative effect on financial performance.

Based on the background described and the results of several researchers who have inconsistencies in proving each variable, the researchers are interested in further research on the company's financial performance and whether these variables will strengthen or weaken the company's financial performance. From the explanation of this background, the researcher is interested in researching with the title "Influence Of Intellectual Capital, Dividend Policy And Capital Structure On Financial Performance (in the Food and Beverage Subsector Listed on the Indonesia Stock Exchange 2010-2020).

**Literature review**

**Signal theory**

Signal theory explains that all actions taken contain company information and what is caused by information asymmetry (Brigham & Houston, 2014). Information asymmetry is when one party has excess information while the other does not. Information asymmetry can be reduced by giving signals to outsiders or investors through positive and reliable financial information. If the company gives a good signal, it can show information that is not owned by investors and will reduce uncertainty about the company's prospects. Therefore, the better the signal, the better the company's financial performance.

**Resource based theory (RBT)**

Penrose (1959) in Wenelfert (1984) states that company resources are significant to encourage company growth in balancing the exploitation of existing resources and the creation of new resources to build a sustainable competitive advantage. The resource-based theory states the importance of resources and their implications for the company's development. Management and utilization of company resources such as employees (human capital), physical capital (capital employed), and structural capital will create value creation for the company to affect its financial performance.

**Modigliani-miller tax theory**

Modigliani and Miller (MM theory) introduced the Capital structure theory without taxes. Modigliani and Miller argue that capital structure is irrelevant or will not affect firm value. The assumptions built in the MM theory are that there are no agency costs, no taxes, investors use debt with the same interest rate as the company, investors have the same information as management regarding the company's prospects in the future, there are no bankruptcy costs, Earning Before Interest and Taxes (EBIT) is not affected by the use of debt, investors are price takers. In the event of bankruptcy, assets can be sold at market prices.

The Modigliani-Miller Tax Theory without taxes is considered unrealistic, and in the end, Modigliani-Miller incorporates taxes into the MM theory. Taxes paid to the government are cash outflows. The use of debt can save taxes because interest can be used as a tax deduction. Modigliani and Miller (1963) show that the value of companies with more outstanding debt will be better than companies that do not have debt. Therefore, the company can maximize company value by increasing the company's debt level. Thus, the optimal capital structure theory can show how the use of capital will impact the company's business performance and financial performance.
Trade-off theory

The trade-off theory was founded by Jensen and Meckling (1976). This theory states that an optimal capital structure can be determined by creating a balance between the effects of taxes, agency costs, bankruptcy costs and so on. Trade-off theory explains a relationship between bankruptcy risk and the use of debt caused by the company’s capital structure decisions. This theory balances the benefits and costs arising from the use of debt. As long as the benefit is greater than the sacrifice made, additional debt may still be allowed, whereas if the sacrifice due to the use of debt is more tremendous, additional debt is not allowed. The optimal use of debt is achieved when the tax shields (tax savers) are equal to or proportional to the bankruptcy costs that the company will obtain. Trade-off theory applies that debt consists of two sides: negative and positive. The positive side of debt is that an increase in debt will cause an increase in interest paid by the company. If the company pays higher interest in the capital structure, it will cause a smaller decrease in tax revenue. Lower taxes will lead to a higher firm value. However, higher debt will also increase the company’s bankruptcy risk on the opposing side. This trade-off theory is called the concept of balance.

Financial performance

Yuliani (2021) states that financial performance is used by company to measure a company’s profit and generating the success. Financial performance provides an overview of program implementers and is realized in achieving the organization’s mission and vision. Financial performance is the result of the company’s management effectively performing its functions of managing the company’s assets over some time.

Intellectual capital

Ramirez et al. (2021) states that intellectual capital is an organization in relationships, structures, and people that add value to the organization by generating creativity, innovation, information technology, interpersonal activities, and competitive advantage.

Dividend policy

Anggia (2019) states that dividend policy is a decision in investing whether the profits earned by the company will be distributed to shareholders in the form of dividends, or the profits earned by the company as retained earnings for financing investments in the future.

Capital structure

The capital structure is a combination of debt and equity used to manage the business. The capital structure describes the proportion of the company’s finances between owned capital originating from long-term debt and own capital which is a source of financing for a company (Dinayu, 2020).

Methods

Method of collecting data

The sources of data used in this study are to use secondary data. The population in this study is the Food and Beverage sub-sector manufacturing companies listed on the Indonesia Stock Exchange from 2010-2020, with as many as 36 companies. The sample selection in this study was carried out by purposive sample method, namely selecting samples with specific criteria.

Financial performance

Measurement of financial performance in this study using the ratio of Return on assets (ROA). Return on assets is profitability that measures the company’s ability to generate profits from the assets generated by the company. The higher the Return on Assets ROA value, the more efficient the use of company assets so that they can generate profits for the company; on the other hand, a decrease in ROA (Return on Assets) will affect the company in pursuing profits (Kristianti, 2018).

ROA can be formulated as follows:

\[
\text{ROA} = \frac{\text{earnings after tax}}{\text{total assets}}
\]
**Intellectual capital**

The VAIC method uses a company’s financial statements to calculate the efficiency of three capital types: human capital, structure capital and capital employed. The combination of the three values added is symbolized by the name VAIC™ which Pulic developed (2000) (Ulum, 2013).

The measurement of Intellectual Capital is as follows:

\[ VAIC^\text{™} = VACA + VAHU + STVA. \]

Calculating Value Added Capital Employed (VACA) as follows:  
\[ VACA = \frac{VA}{CE} \]

Note:  
- VACA = Value Added Capital Employed  
- VA = Value Added  
- CE = Capital Employed: Book value of net assets

Calculating Value Added Human Capital (VAHU) as follows:  
\[ VAHU = \frac{VA}{HC} \]

Note:  
- VAHU = Value Added Human Capital  
- VA = Value Added  
- HC = Human Capital: Employee expenses

Calculating Structural Capital Value Added (STVA) as follows:  
\[ STVA = \frac{SC}{VA} \]

Note:  
- STVA = Structural Capital Value Added  
- SC = Structural Capital: VA - HC  
- VA = Value Added

**Dividend policy**

The dividend policy measuring instrument uses the dividend payout ratio (DPR), while the DPR formula is as follows (Resti et al., 2018):

\[ DPR = \frac{\text{dividend per share}}{\text{earnings per share}} \times 100\% \]

**Capital structure**

The LDER ratio describes how big the comparison is between the company’s long-term debt and its capital (Ramaiyanti et al., 2018). According to (Pancawati, 2020), the capital structure formula using LDER has the following equation:

\[ LDER = \frac{\text{long term debt}}{\text{total liabilities}} \]

**Analysis method**

Descriptive statistics provide an overview of research to facilitate observations through calculations of average (mean), maximum, minimum, and standard deviation values. This study uses multiple linear analyses to examine the effect of the independent and dependent variables. According to Sekaran (2018), the function of multiple linear regression analysis is to determine the relationship between the independent and dependent variables. Then the data processing will be done using the SPSS application. Classical assumption tests include normality, multicollinearity, autocorrelation, and heteroscedasticity (Sekaran, 2018).

**Results**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>VACA</td>
<td>123</td>
<td>-0.3229</td>
<td>6.7660</td>
<td>2.079886</td>
<td>1.3184404</td>
</tr>
<tr>
<td>VAHU</td>
<td>123</td>
<td>6.0894</td>
<td>240.4186</td>
<td>48.581277</td>
<td>38.5909602</td>
</tr>
<tr>
<td>STVA</td>
<td>123</td>
<td>0.8358</td>
<td>0.9958</td>
<td>0.965471</td>
<td>0.0283795</td>
</tr>
<tr>
<td>DPR</td>
<td>123</td>
<td>0.0000</td>
<td>1.6129</td>
<td>0.322695</td>
<td>0.3397874</td>
</tr>
<tr>
<td>LDER</td>
<td>123</td>
<td>-0.0259</td>
<td>1.4391</td>
<td>0.306843</td>
<td>0.2800389</td>
</tr>
</tbody>
</table>
Based on the results of statistical analysis from Table 1 with a total of 123 sample data in this study with 5 independent variables, namely VACA (X1), VAHU (X2), STVA (X3), DPR (X4), LDER (X5) and 1 dependent variable, namely ROA (Y).

**Table 2. Regression Coefficients Test**

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>Std. Error</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>-1.058</td>
<td>.268</td>
<td></td>
</tr>
<tr>
<td>VACA</td>
<td>-0.006</td>
<td>0.005</td>
<td>-0.089</td>
</tr>
<tr>
<td>VAHU</td>
<td>0.000</td>
<td>0.000</td>
<td>-0.068</td>
</tr>
<tr>
<td>STVA</td>
<td>1.184</td>
<td>0.282</td>
<td>0.373</td>
</tr>
<tr>
<td>DPR</td>
<td>0.161</td>
<td>0.020</td>
<td>0.608</td>
</tr>
<tr>
<td>LDER</td>
<td>-0.057</td>
<td>0.022</td>
<td>-0.176</td>
</tr>
</tbody>
</table>

The interpretation of the multiple linear regression equation is:

1. The constant of -1.058 indicates that if the variables VACA, VAHU, STVA, DPR, and LDER are assumed to be constant or equal to zero, the amount of financial performance will experience minus/negative 1.058.
2. The VACA coefficient is -0.006, meaning that the parameter is negative, meaning that each addition to the VACA variable by 1 unit, assuming other variables are considered constant, will reduce the added value of the company's financial performance by -0.006.
3. The VAHU coefficient is 0.000, meaning that it is a positive parameter, meaning that each addition to the VAHU variable by 1 unit, assuming other variables are considered constant, will increase the added value of the company's financial performance by 0.000.
4. STVA coefficient of 1.184 means with a positive parameter, meaning that every time there is an addition to STVA of 1 unit, assuming other variables are considered constant, it will increase the added value of the company's financial performance by 1.184.
5. The dividend payout ratio coefficient of 0.161 means that with a positive parameter, an increase of one percent of the DPR will increase 16.1% of financial performance.
6. The long debt to equity ratio coefficient is -0.057, meaning that with a negative parameter, a one percent increase in LDER will reduce financial performance by 5.7%.

**Table 3. T table**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>-1.058</td>
<td>.268</td>
<td>-.089</td>
</tr>
<tr>
<td>VACA</td>
<td>-.006</td>
<td>.005</td>
<td>-.089</td>
<td>1.137</td>
</tr>
<tr>
<td>VAHU</td>
<td>.000</td>
<td>.000</td>
<td>-.068</td>
<td>-7.33</td>
</tr>
<tr>
<td>STVA</td>
<td>1.184</td>
<td>.282</td>
<td>.373</td>
<td>4.202</td>
</tr>
<tr>
<td>DPR</td>
<td>.161</td>
<td>.020</td>
<td>.608</td>
<td>8.255</td>
</tr>
<tr>
<td>LDER</td>
<td>-.057</td>
<td>.022</td>
<td>-.176</td>
<td>-2.521</td>
</tr>
</tbody>
</table>

The partial significant test (T test) can be seen in Table 4.8 as follows:

1. The VACA variable has a significance of 0.258 > 0.05, so H1 is rejected, so it can be concluded that VACA has no significant effect on financial performance.
2. The VAHU variable has a significance level of 0.465 > 0.05, so H2 is rejected, so it can be concluded that VAHU has no significant effect on financial performance.
3. The STVA variable has a significance level of 0.000 < 0.05, so H3 is accepted so that it can be concluded that STVA has a positive effect on financial performance.
4. The DPR variable has a significance level of 0.000 < 0.05, so H4 is accepted so that it can be concluded that the DPR has a positive effect on financial performance.
5. The LDER variable has a significance level of 0.013 > 0.05, which means it is significant, but when viewed based on the results of the T-table test, the results obtained are that LDER has a negative effect so it cannot confirm H5 which hypothesizes that LDER has a positive effect or H5 is rejected.
Discussion

**Effect of VACA on Financial Performance**

Vaca is an intellectual model component of investment funds that will generate more excellent value for the company if it is processed and appropriately utilized. The results show that the use of available capital in food and beverage companies cannot improve financial performance because the results of the capital funds used cannot provide added value for the company. It is based on the resource-based theory that if the company can find strategic resources, then the company can have the ability to exceed its competitors. Companies that can manage resources efficiently and economically can increase sustainable competitive advantage. This is not in line with the results obtained that VACA has no significant effect on the financial performance of the food and beverage sub-sector companies on the IDX for the 2010-2020 period, so hypothesis H1 is rejected. VACA has no effect, meaning that the physical capital that the company well manages has not been able to generate profits that are greater than its capital. The capital used by the company is the value of assets that contribute to the ability to generate income. If the profit generated does not increase, it will not improve the company’s financial performance. The results of this study are in line with research conducted by (Ting et al., 2020) which states that capital employed has no significant effect on financial performance.

**The Effect of VAHU on Financial Performance**

Based on the results of statistical testing, it was obtained that VAHU had no significant effect on the financial performance of the food and beverage sub-sector companies on the IDX for the 2010-2020 period, so H2 was rejected. The performance of human capital (HC) owned by manufacturing companies in the food and beverage sub-sector cannot affect financial performance, meaning that the salaries and benefits provided by the company to employees have not been able to motivate employees to increase the company’s income and profits. Good HR management needs to be improved by providing employee training and development to increase employee knowledge and later improve the company’s financial performance. This research is not in line with the Resource Based Theory, which shows that the company’s ability to manage resources properly can create a competitive advantage, but this study shows that the company’s resources have not been able to create added value for the company. Good HR management in the company cannot increase employee productivity so that later it will also not increase company income. This study’s results align with research conducted by (Soewarno, 2020) which states that human capital has no significant effect on financial performance (ROA).

**The Effect of STVA on Financial Performance**

Structural capital is all knowledge within the company, which includes databases, organizational charts, and strategies that will support the company in improving the company's financial performance. Based on the results of statistical testing, it was obtained that STVA positively affected the financial performance of the food and beverage sub-sector companies on the IDX for the 2010-2020 period, so H3 was accepted. This indicates that the level of efficiency of structural capital can generate corporate profits that will improve employee performance optimally by using systems, databases and management that run effectively and efficiently to provide added value for the company in financial performance (ROA). The rules, culture, procedures and organizational systems that can motivate employees to increase productivity can support employees to try new things to improve their ability to work. This goes with a resource-based theory that states that innovation resources and capital must be valuable, rare, inimitable and irreplaceable. If the company ignores these characteristics, the innovation will not be optimal in generating more profits. This research is in line with research (Soewarno, 2020) which states that structural capital affects financial performance (ROA).

**The Influence of DPR on Financial Performance**

Dividends are profit sharing given to shareholders, which can be in the form of cash dividends or stock dividends. The purpose of investors is to get the maximum return so that investors will be careful in choosing a company because there are risks that will be incurred when investing. Investors expect the company to make as much profit as possible to generate the returns obtained because the return describes how much profit an investor owns. One way to attract investors to invest in the capital market is to see how much return is in the form of dividend distribution. The company will determine whether the profits generated will be distributed as dividends to shareholders or become retained earnings for reinvestment. This is very reasonable if investors expect high dividends from the company. Based on the results of statistical testing, it was obtained that the DPR had a positive effect on the financial performance of the food and beverage sub-sector companies on the IDX for the 2010-2020 period, so the fourth hypothesis was accepted. This study shows that the more excellent the dividend payment, the higher the company’s financial performance. This study’s results align with the dividend signalling theory, which says that dividend payments by company management can be a positive signal for investors. If the company distributes dividends regularly, this will give confidence to the company’s prospects in the future. Food and beverage companies can manage an optimal dividend policy because the higher the financial performance, the higher the dividend...
distribution, which will also increase the prosperity of the shareholders. This is in line with research (Prabowo and Susan, 2021) which states that dividend policy positively affects financial performance.

**The Effect of LDER on Financial Performance**

The capital structure consists of long-term debt and equity. Based on the results of statistical testing, it was obtained that LDER had a significant effect on the opposite direction (negative) on the financial performance of the food and beverage sub-sector companies on the IDX for the 2010-2020 period, so H5 was rejected. A low capital structure, in this case, namely LDER, will increase the level of profitability. On the contrary, a high capital structure will reduce profitability. If the company's profitability decreases, the company's financial performance also decreases. Based on the trade-off theory, companies trade the use of tax benefits from debt financing with the problems caused by the possibility of bankruptcy. An increase in debt that is too much can lead to an increased risk of bankruptcy. The use of debt is allowed if it does not exceed the sacrifice risk limit. The greater the use of debt by the company, the greater the chance of bankruptcy.

Regarding the results of this study, the use of debt is too extensive, so it sacrifices financial performance. The increase in debt must be stopped, or a decrease in the proportion of LDER needs to be done, namely by increasing the company's share capital. This study's results align with research (Ajibola et al., 2018), which states that the capital structure measured by LDER negatively affects financial performance (ROA).

**Conclusion**

This researcher's measure the financial performance is seen from the company's ability to generate profits by using the potential resources of the company. Financial performance is very important to see how each company has a goal to benefit and prosper the company's economy, so to find out the good and bad financial conditions that reflect the work performance of a company in a certain period by using financial analysis tools. One of the financial ratios used in measuring financial performance is using profitability ratio.

Manufacturing companies as capital and knowledge-intensive industries to become the backbone of a country's economy. However, the manufacturing industry has faced immense pressure from both domestic and international markets. Problems (Xu & Li, 2020) in China has insufficient innovative pressure, lower energy efficiency, serious environmental pollution, and lower production costs than other manufacturing countries.

The limitations of this research in only contained to food and beverages subsector, which means the next researchers hopefully can take another subsector so it would be nice to know more what exactly the factors that impact financial performance.

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**References**


