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# Determinants of Profitability and Impact Towards the Firm Value in Food & Beverages Companies

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**Abstract:- The objective of this study to analyze the impact of intellectual capital, institutional ownership, capital structure toward the firm value mediated by the profitability. This study performed at food and beverages companies which registered on the IDX between 2018 to 2021. A total of 17 company samples were obtained through a purposive sampling method. This study used panel data regression analysis using Eviews 12 program. The outcomes of this study found that intellectual capital, capital structure and profitability effect toward the firm value. However, institutional ownership doesn't affect toward the firm value. Furthermore, intellectual capital and institutional ownership affect toward the firm value mediated by profitability. Meanwhile, capital structure doesn't affect toward the firm value mediated by the profitability.**

***Keywords:-*** *Firm Value, Intellectual Capital, Institutional Ownership, Capital Structure, Profitability.*

## I. INTRODUCTION

Many companies in the industry are facing intense competition among consumer goods companies in the current economic climate, especially in the food and beverage subsector. Competition among industry subsectors forces all companies to continuously improve their performance in order to meet their business objectives.

According to Wiyono & Kusuma (2017:81) a company has a primary objective to be achieved which is to maximize the company's assets or value. Maximize the corporate value, it means the company also maximize shareholder wealth. So, maximizing corporate value is very important for a company.

In this study, firm value is measured using financial ratio, namely Price to Book Value (PBV). According to Triyani et al. (2018) PBV is commonly used by securities analysts to predict future stock prices. If the share prices rise, firm values will also rise and vice versa (Salim & Aulia, 2021).

The graph below shows the average PBV of consumer goods industry sectors from 2018 to 2021, experiencing increases and decreases respectively. However, among all industrial subsectors, the food and beverages subsector showed the largest decline in PBV.

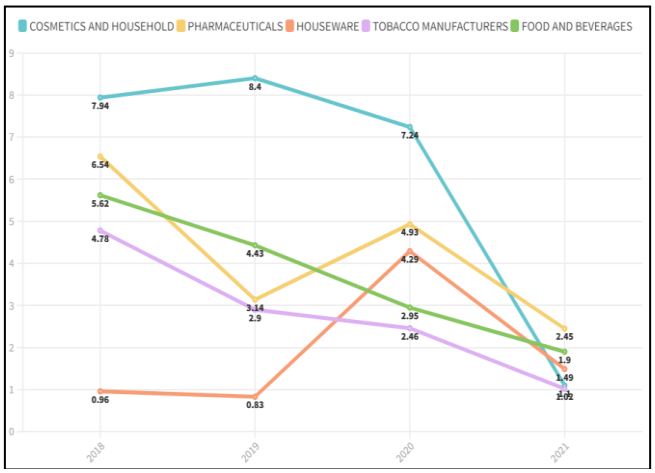


Fig 1. PBV of Consumer Goods Sector Companies for Period 2018-2021

Investors tend to prefer stable PBVs, so declining PBVs represent an unfavorable situation for investors. Also, the decline in PBV reflects the resulting poor performance, which has an impact on a decrease in firm for the food and beverage companies. Changes in PBV values in the food and beverage companies indicate that there are factors that have influenced this condition.

The first factor is intellectual capital that's a combination of intangible assets that enable a company work (Ulum, 2009). Companies own, manage, and utilize key strategic assets to gain competitive advantage and achieve good financial performance. As the company's performance increases, so does the value of the company. Previous studies have shown mixed results regarding the impact of intellectual capital on corporate value (Jay Barney, 1991). According to research performed by Lukman & Tanuwijaya (2021), Salvi et al. (2020) and Yustyarani & Yuliana (2020) shown that intellectual capital has a significant positive effect toward firm value. On the other hand, Lestari & Sapitri (2016) and Subaida et al. (2018) found that intellectual capital doesn't affect the firm value.

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A second factor is institutional ownership. Institutional shareholding percentage is the percentage of shares held by institutional investors. Institutional investors are believed to be better able to monitor the behavior of management. Institutions as shareholders are believed to be better able to detect errors that occur (Alamsyah & Muchlas, 2018). The higher the institution's ownership, the more effective the surveillance. Good internal oversight also affects shareholder wealth (Sutrisno & Sari, 2020). In the research conducted by Zahro (2018) and Soewarno & Ramadhan (2020), institutional ownership has a significant positive effect toward the firm value. Unlike the research performed by Astuti et al. (2018), Listiyowati & Indarti (2018), and Putra & Wirawati (2020) shown that institutional ownership doesn't affect toward the firm value.

A third factor is capital structure. Every business need working capital to support sales. To obtain this working capital, it is typically required to be financed as a combination of equity and debt. The combination of a firm's debt and equity is called its capital structure (Brigham and Ehrhardt, 2020:547). Managers must make capital structure decisions designed to maximize shareholder value. It is very important for companies to enhance their financial stability, as changes in the capital structure are believed to lead to changes in firm value (Fahmi, 2014). According to Ayuningrum (2017), Natalia et al. (2021) and Yurianda & Masdupi (2019) revealed that capital structure has a positive and significant effect toward the firm value. Putri & Rahayuda (2020), Setiadharma & Machali (2017), and Rizki et al. (2018) revealed that capital structure doesn't affect toward the firm value.

Intervening variables used to inform the discrepancy of previous studies and to refine previous studies so that the results are more accurate. The mediating variable used in this study is profitability. This is because the information from this variable is needed by many parties like shareholders, creditors, and other external parties. According to Claudia et al. (2021) found that profitability can mediate the effect of intellectual capital toward firm value. Putri et al. (2019) found that profitability doesn't mediate the effect of intellectual capital toward the firm value. According to Nurkin et al. (2017) revealed that profitability can mediate the effect of institutional ownership toward the firm value. Zahro (2019), on the other hand, found that profitability didn't mediate the impact of institutional ownership toward the firm value. According to Ayuningrum (2017) revealed that profitability can mediate the impact of capital structure toward the firm value. On the other hand, Riny et al. (2019) found that profitability doesn't mediate the impact of capital structure toward the firm value.

There are differences in the results of previous studies. This difference indicates a research gap that leaves room for researchers to study firm value. This study uses the observation period from 2018 to 2021 as a differentiator from previous studies. Furthermore, studies using intellectual capital as an independent variable are limited. The purpose of this study is to analyze and determine the impact of intellectual capital, institutional ownership, and capital structure on firm value through profitability as a mediating variable.

## II. LITERATURE REVIEW

### *A. Signaling Theory*

According to Michael Spence (1973), the theory explains about involvement of 2 parties, insiders, such as management, who act as signal senders, and outsiders, such as investors, who act as signal recipients. Spence also said that management strives to provide relevant information that investors can use through signals. Then, investor as signal receivers will adjust their decisions according to their understanding of the signals.

### *B. Stakeholder Theory*

According to Deegan (2004), the theory explains on how organizational activities affect stakeholders. Indicates that all interested parties have the right to receive information about. The organizations voluntarily choose to disclose information about their environmental, social, and intellectual performance beyond coercive demands to meet the expectations of their stakeholders.

### *C. Agency Theory*

According to Jensen & Meckling (1976), the theory explains about a relationship between on principal (shareholders) and agent (manager). Shareholders trust and give managers responsibility to manage the company to achieve desired goals. However, it's not uncommon for managers to have other goals or interests that conflict with the company's main goals. This condition creates a conflict of interest (Putra and Budiasih, 2017).

### *D. Resources-Based Theory*

According to Ulum (2009), companies can increase their competitive advantage by developing resources to guide them to create value. In the long term, companies can increase their ability to invest in intellectual resources. In this case, human resources as a key factor in increasing the value of the company. According to Belkaoui (2007), a possible strategy for improving company performance is to combine tangible and intangible assets.

### *E. Firm Value*

According to Wiyono and Kusuma (2017:69) states that firm value represents how well management manages its assets. This can be seen from the financial performance that has been obtained or often associated with the stock price in the capital market. The more investors who invest, the stock price will increase, and the value of the company will also increase.

According to Brigham and Houston (2009:111), Price to Book Value ratio is used to measure the firm value. The higher the PBV achieved, the more confidence the market believes the prospects in company. This ratio provides the information a shareholder needs to assess how many times the price level per share is above book value.

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*F. Intellectual Capital*

According to Klein and Prusak in Brooking (1997), intellectual capital is material gathered, collected, and used to create higher levels of wealth. According to Stewart (1997), intellectual capital refers to "packaged and useful knowledge". According to Brooking (1996), intellectual capital is a combination of intangible assets that make a company work (Ulum, 2009).

The method developed by Pulic in 1997, namely the Value-Added Intellectual Coefficient (VAIC), provides information about the efficiency of added value of a company's tangible and intangible assets. This method is relatively simple and very feasible, because it's made from the accounts that's available on the financial statements (like balance sheet, profit and loss).

*G. Institutional Ownership*

According to Alamsyah and Muchlas (2018) state that institutional ownership is the percentage of equity ownership held by institutional investors. Institutions as shareholders are believed to be better able to detect errors when they occur. It's believed that institutional investors more capable of monitoring the behavior of management than the individual investors.

High institutional ownership leads to increased scrutiny by institutional investors to curb management opportunistic behavior. The higher the institution's ownership, the more effective the surveillance. Good internal oversight also affects shareholder wealth (Sutrisno and Sari, 2020).

*H. Capital Structure*

According to Brigham and Erhardt (2020:547) all businesses need working capital to support their sales. To obtain the working capital, it is typically required to be financed as a combination of debt and equity. The combination is called its capital structure. Managers need to make appropriate capital structure decisions designed to maximize shareholder value. It is very important for companies to enhance their financial stability, as changes in the capital structure are believed to lead to changes in firm value (Fahmi, 2014).

This study uses the Debt-to-Equity Ratio (DER) to measure capital structure. This ratio is used to measure the ratio of total debt to total equity (Febriani, 2020).

*I. Profitability*

According to Kasmir (2017:196) profitability is used to assess a company's ability to generate profits. While the metrics discussed so far provide useful indicators of a company's operational efficiency, profitability metrics continue to demonstrate the combined effects of asset management, liquidity, and debt on performance (Brigham and Erhardt, 2020:452)

In this study, profitability is measured by Return on Assets (ROA). Return on Assets shows the result (profit margin) of the total assets used by the company. The smaller this ratio, the worse, and vice versa (Kasmir, 2017:202).

## III. RESEARCH METHOD

Causal research methods used in this study to describes certain causal and influence relationships based on a theoretical framework study. In causal research design there are influencing variables. This research was performed to examine the causality between on intellectual capital, institutional ownership, and capital structure on firm value with profitability as a mediating variable.

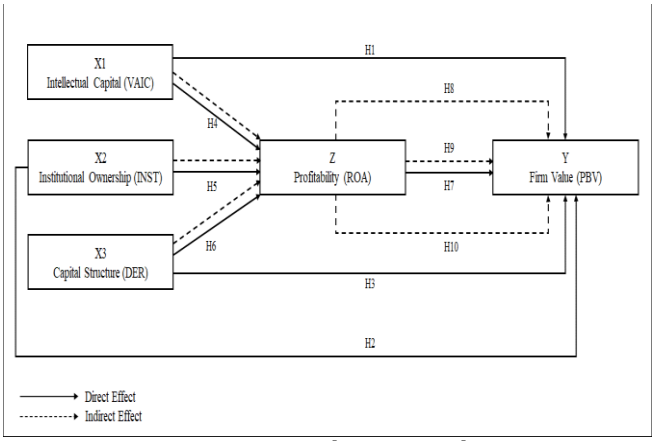


Fig 2. Research Framework

*A. Research Variables*

The variables used in this study are:

1) Dependent variable: *Firm Value (PBV).*
2) Independent variable:

*a. Intellectual capital (VAIC).*
*b. Institutional ownership (INST).*
*c. Capital structure (DER).*

3) Intervening variable: *Profitability (ROA).*

*B. Population*

The population in this study are all food and beverages companies registered on the IDX for period 2018 to 2021 with the total are 22 companies.

*C. Sample*

This study uses a purposive sampling method based on the following criteria:

| Criteria | Number |
|---|---|
| F&B companies registered on the IDX for period 2018-2021 | 22 |
| F&B companies release financial reports for period 2018-2021 | (0) |
| F&B companies that lost in the period 2018-2021 | (5) |
| **Total samples** | **17** |

Table 1. Sample Criteria

## IV. RESULT AND DISCUSSION

### A. *Descriptive Statistical Analysis*

Descriptive statistical analysis will describe the data values for each variable used in this study. The data includes min, max, mean, and std. deviation.

| | X1_VAIC | X2_INST | X3_DER | Z_ROA | Y_PBV |
|---|---|---|---|---|---|
| **Mean** | 3.106824 | 0.667257 | 0.657382 | 0.098887 | 3.301474 |
| **Median** | 2.672450 | 0.766500 | 0.513750 | 0.092350 | 2.154900 |
| **Maximum** | 7.268300 | 0.920100 | 1.766400 | 0.416300 | 25.86390 |
| **Minimum** | 1.500800 | 0.000000 | 0.076800 | 0.000500 | 0.296400 |
| **Std. Dev.** | 1.415524 | 0.245798 | 0.427469 | 0.076588 | 4.548700 |
| **Observations** | 68 | 68 | 68 | 68 | 68 |

Table 2. Descriptive Statistical result

The following is research data that has been analyzed descriptively:

- Intellectual capital (VAIC) variable has a mean value greater than its standard deviation (3.106824 > 1.415524). This indicates that the data is less varied or relatively homogeneous. The maximum and minimum values obtained are 7.268300 and 1.500800 respectively.
- Institutional ownership (INST) variable has a mean value bigger than its standard deviation (0.667257 > 0.245798). This indicates that the data is less varied or relatively homogeneous. The maximum and minimum values obtained are 0.920100 and 0.000000 respectively.
- Capital structure (DER) variable has a mean value bigger than its standard deviation (0.657382 > 0.427469). This indicates that the data is less varied or relatively homogeneous. The maximum and minimum values obtained are 1.766400 and 0.076800 respectively.
- Profitability (ROA) variable has a mean value bigger than its standard deviation (0.098887 > 0.076588). This indicates that the data is less varied or relatively homogeneous. The maximum and minimum values obtained are 0.416300 and 0.005000 respectively.
- Firm value (PBV) variable has a mean value lower than its standard deviation (3.301474 < 4.548700). This indicates that the data is quite varied relatively heterogeneous. The maximum and minimum values obtained are 25.86390 and 0.296400 respectively.

### B. *Panel Data Regression Analysis Result*

The regression equation for the panel data used in this study is:

$PBV = \alpha 1 + b1VAIC + c1INST + d1DER + e1ROA + \varepsilon 1$

$ROA = \alpha 2 + b2VAIC + c2INST + d2DER + \varepsilon 2$

Several steps of tests, including Chow test, Hausman test, and Lagrange Multiplier test, were performed to select an appropriate model to use for panel data regression.

| Effects Test | Statistic | d.f. | Prob. |
|---|---|---|---|
| Cross-section F | 16.352684 | (16,47) | 0.0000 |
| Cross-section Chi-square | 127.978548 | 16 | 0.0000 |

Table 3. Chow Test Result for 1st Regression

| Effects Test | Statistic | d.f. | Prob. |
|---|---|---|---|
| Cross-section F | 5.799039 | (16,48) | 0.0000 |
| Cross-section Chi-square | 73.170054 | 16 | 0.0000 |

Table 4. Chow Test Result for 2nd Regression

The test results in Tables 3 and 4 show that probability values for the two regression models have a cross-section F value of 0.0000 and a cross-section Chi-square value of 0.0000. This indicates that the value is below the 0.05 significance level. From this, we can conclude that the fixed effect model is better to use than the common effect model.

| Test Summary | Chi-Sq.Statistic | Chi-Sq. d.f. | Prob. |
|---|---|---|---|
| Cross-section random | 8.906552 | 4 | 0.0635 |

Table 5. Hausman Test Result for 1st Regression

| Test Summary | Chi-Sq.Statistic | Chi-Sq. d.f. | Prob. |
|---|---|---|---|
| Cross-section random | 4.201600 | 3 | 0.2405 |

Table 6. Hausman Test Result for 2nd Regression

The test results in Tables 5 and 6 show that probability values for the two regression models have cross-section random values of 0.2405 and 0.0635, respectively This indicates that the value is greater than the 0.05 significance level. From this, we can conclude that the random effect model is better to use than the fixed effect model.

| | Cross-section | Time | Both |
|---|---|---|---|
| Breusch-Pagan | 41.87356 | 1.128133 | 43.00170 |
| | (0.0000) | (0.2882) | (0.0000) |

Table 7. Lagrange Multiplier Test Result for 1st Regression

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| | Cross-section | Time | Both |
|---|---|---|---|
| Breusch-Pagan | 24.17607 | 1.416840 | 25.59291 |
| | (0.0000) | (0.2339) | (0.0000) |

Table 8. Lagrange Multiplier Test Result for 2nd Regression

Test results in Tables 7 and 8 show that the cross-section values for the two regression models are 0.0000 and 0.0000, respectively. This indicates that the value is below the 0.05 significance level. From this, we can conclude that the random effect model is better to use than the common effect model.

*C. R-Square Test Result*

For the first panel regression produces an adjusted R-squared value of 0.673507 (67.35%). This means that the effect of the variables in this study is 67.35%, and the remaining 32.65% is affected by other variables outside of this study. The panel regression model has a Prob (F-Statistic) value of 0.0000 < 0.05. This means that VAIC, INST and DER together have a significant effect on ROA.

| Weighted Statistics | | | |
|---|---|---|---|
| Root MSE | 1.132841 | R-squared | 0.652313 |
| Mean dependent var | 0.791177 | Adjusted R-squared | 0.630238 |
| S.D. dependent var | 1.935495 | S.E. of regression | 1.176937 |
| Sum squared resid | 87.26634 | F-statistic | 29.54941 |
| Durbin-Watson stat | 1.403286 | Prob(F-statistic) | 0.000000 |

Table 9. R-Square Test Result for 1st Regression

As for the second panel regression model produces an adjusted R-squared value of 0.630238 (63.02%). This means that the effect of the variables in this study is 63.02%, and the remaining 36.98% is affected by other variables outside of this study. The panel regression model has a Prob (F-Statistic) value of 0.0000 < 0.05. This means that VAIC, INST, DER and ROA together have a significant effect on PBV.

| Weighted Statistics | | | |
|---|---|---|---|
| Root MSE | 0.027279 | R-squared | 0.688126 |
| Mean dependent var | 0.038569 | Adjusted R-squared | 0.673507 |
| S.D. dependent var | 0.049211 | S.E. of regression | 0.028119 |
| Sum squared resid | 0.050603 | F-statistic | 47.07043 |
| Durbin-Watson stat | 1.307713 | Prob(F-statistic) | 0.000000 |

Table 10. R-Square Test Result for 2nd Regression

*D. T-Statistical Test Result*

A t-statistical test can show how the independent variable independently can explains the variation in the dependent variable. If the Prob. value is less than 0.05, it means the independent variable partially affect the dependent variable (Ghozali, 2018:98). Below are the results of the t-test in this study.

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| **Regression 1** | | | | |
| X1_VAIC | -1.240922 | 0.324186 | -3.827805 | 0.0003 |
| X2_INST | -2.328608 | 2.087719 | -1.115384 | 0.2689 |
| X3_DER | 2.746862 | 0.705446 | 3.893793 | 0.0002 |
| Z_ROA | 48.99985 | 5.464078 | 8.967634 | 0.0000 |
| **Regression 2** | | | | |
| X1_VAIC | 0.049253 | 0.004118 | 11.95969 | 0.0000 |
| X2_INST | 0.111448 | 0.034765 | 3.205734 | 0.0021 |
| X3_DER | -0.008525 | 0.014753 | -0.577852 | 0.5654 |

Table 11. T-Statistical Test Result

➢ *Effect of Intellectual Capital (VAIC) on Firm Value (PBV)*

Intellectual capital has a coefficient value of -1.240922 and a probability value of 0.0003, it means that H1 is rejected. From this we can conclude that intellectual capital has a negative and significant effect toward the firm value in food and beverages companies for period 2018-2021.

The results of this study show that firm value decreases as intellectual capital increases. The VAIC calculation consists of three main components. There are Value Added Capital Employed (VACA), Value Added Human Capital (VAHU) and Structural Capital Value Added (STVA).

From three elements that provide high value come from the VAHU component. VAHU shows how much value-added is obtained from the fund spent by the company for employees. Companies that budget high labor costs expect a high level of added value from their employees. However, a high budget that is not compensated for by training reduces employee productivity. Unproductive employees and high workloads devalue a company.

The component that gives the lowest value is the VACA. The components of VACA consist of equity value and net income. In fact, the market and investors prefer one of three elements of intellectual capital, namely VACA, as their consideration in providing value to the company.

Theoretically, intellectual capital affects corporate value. However, the results of the research that has been conducted reveal that the market and investors don't appreciate companies that have high intellectual capital values. Thus, with high intellectual capital companies cannot increase the value of their companies.

The results of this study support research performed by Marwa et al. (2017) and Anggraini et al. (2020) which shows that intellectual capital has a negative and significant effect toward the firm value.

➢ *Effect of Institutional Ownership (INST) on Firm Value (PBV)*

Institutional ownership has a coefficient value of -2.328608 and a probability value of 0.2689, it means that H2 is rejected. From this we can conclude that institutional ownership has no effect toward the firm value in food and beverages companies for period 2018-2021.

The results of this study show that increasing institutional ownership doesn't affect firm value. It doesn't support agency theory. The results of this study show that institutional investors tend to compromise management and often ignore the interests of minority shareholders as institutional ownership increases. The assumption that management tends to take actions and strategies often leading to personal gain leads to alliance strategies between institutional investors and management.

Institutional investors are temporary owners, so they only look at ongoing profits. Changes in current income may affect the decision-making of institutional investors. If this change is perceived to be unfavorable to investors, investors may withdraw their shares. Institutional investors hold large amounts of shares, so share withdrawals affect the total amount of shares. This means that institutional ownership cannot be a mechanism for increasing corporate value.

Stewardship theory is more suitable for explaining this study results. Stewardship theory is based on psychology and sociology developed to motivate managers to act according to the wishes of their superiors. The level of institutional ownership doesn't influence management behavior in increasing shareholder value.

The results of this study support research performed by Astuti et al. (2018) and Nurkhin et al. (2017) which show that institutional ownership has no effect toward the firm value.

- *Effect of Capital Structure (DER) on Firm Value (PBV)*

Capital structure has a coefficient value of 2.746862 and a probability value of 0.0002, it means that H3 is accepted. From this we can conclude that capital structure has a positive and significant effect toward the firm value in food and beverages companies for period 2018-2021.

The results of this study show that whenever the capital structure increases, so does the firm's value. The results of this study support the pecking order theory that companies prefer internal funding, from the company's operating income in the form of retained earnings. When debt capital is required, the company first issues the safest securities. First issue bonds, then option securities, and finally new shares if insufficient.

Managers are valued for providing better initial information. Therefore, the market studies the behavior of managers. The pecking order theory explains that companies that have more profits have less debt. It's not because the company has a low target leverage ratio, but because the company doesn't require external funding.

The results of this study support research performed by Ayuningrum (2017) and Suzulia et al. (2020) which show that capital structure has a positive and significant effect toward the firm value.

- *Effect of Profitability (ROA) on Firm Value (PBV)*

Profitability has a coefficient value of 48.99985 and a probability value of 0.0000, it means that H4 is accepted. From this we can conclude that profitability has a positive and significant effect toward the firm value in food and beverages companies for period 2018-2021.

The results of this study show that whenever profitability increases, so does corporate value. The results of this study are consistent with signaling theory. If profitability improves, firm value will increase significantly. Profitability is a very important metric for business owners. Good profitability growth suggests that the outlook for the company is also good. This is because it offers the potential to increase the company's profits, increases investor confidence, and makes it easier for management to attract capital in the form of equity. If there is an increase in the stock price of a company, it will increase the value of the company.

The results of this study support research performed by Salim & Aulia (2021) and Salim & Susilowati (2019) which show that profitability has a positive and significant effect toward the firm value.

- *Effect of Intellectual Capital (VAIC) on Profitability (ROA)*

Intellectual capital has a coefficient value of 0.049253 and a probability value of 0.0000, it means that H5 is accepted. From this we can conclude that intellectual capital has a positive and significant effect toward the profitability in food and beverages companies for period 2018-2021.

The results of this study show that profitability increases as intellectual capital increases. The results of this study support the resource-based theory that firms must be able to manage both tangible and intangible assets to achieve good profitability. The results of this study show that value creation has been thought of as a concept of profitability in terms of a firm's ability to increase profits in its operations.

The results of this study support research performed by Yustyarani & Yuliana (2020) which shows that intellectual capital has a positive and significant effect toward the profitability.

- *Effect of Institutional Ownership (INST) on Profitability (ROA)*

Institutional ownership has a coefficient value of 0.111448 and a probability value of 0.0021, it means that H6 is accepted. From this we can conclude that institutional ownership has a positive and significant effect toward the profitability in food and beverages companies for period 2018-2021.

The results of this study show that as institutional ownership increases, so does profitability. Agency theory views the behavior of institutional wealth variables as having an impact on profitability. This theory explains the gap between principals and agents because of conflicts of interest. This conflict-of-interest results in agency costs, which must be borne by the company.

Increasing institutional ownership ensures institutional oversight of management activities. Performance can be measured by the amount of profit generated by the business

over a period. Management seeks to generate high profits so that its position is not threatened because of the consequences that management will suffer if it takes any action that may harm its clients. Therefore, the higher the ownership ratio of the organization, the higher the profitability.

The results of this study support research performed by Ali (2019) which shows that institutional ownership has a positive and significant effect toward the profitability.

- *Effect of Capital Structure (DER) on Profitability (ROA)*

Capital structure has a coefficient value of -0.008525 and a probability value of 0.5654, it means that H7 is rejected. From this we can conclude that capital structure has no effect toward the profitability in food and beverages companies for period 2018-2021.

The results of this study show that increasing capital structure doesn't affect profitability. The higher the capital structure a company deploys, the more funds it deploys to support the company's performance. In other words, a company cannot become more profitable simply by changing the debt-to-equity ratio used to finance the company.

According to trade-off theory, the more a company is debt-financed, the higher the risk that it will default on its debts by paying fixed interest rates that are too high, and these defaults will never be repaid.

The results of this study support research performed by Sukmayanti & Triaryati (2019) and Nurlela & Dimyati (2021) which show that capital structure has no effect toward the profitability.

*E. Sobel Test*

Below are the results of the Sobel test in this study.

| | t-Count | t-Table |
|---|---|---|
| **VAIC – ROA -PBV** | 7.155534 | 1.99834 |
| **INST - ROA - PBV** | 3.001724 | 1.99834 |
| **DER – ROA - PBV** | -0.572653 | 1.99834 |

Table 12. Sobel Test Result

- *Effect of Intellectual Capital on Firm Value Mediated by Profitability*

The direct effect of intellectual capital on firm value is -1.240922. Meanwhile, the indirect effect of intellectual capital through profitability on firm value is 2.4134. The results of this study show that the indirect effect is greater than the direct effect, it means that profitability as an intervening variable can mediate the effect of intellectual capital toward the firm value.

Maximizing the use of intellectual capital improves the productivity and quality of a company. This increases the effectiveness of the company's income. Investors choose to allocate their funds to companies that offer guaranteed returns. A steady increase in corporate profits can increase the corporate value reflected in the stock price.

This profitability plays an important role in the development of the company, the better the company performs, the higher the profit it will generate in the future. Based on signal theory, profitability is used as a corporate signal to attract investors to invest which positively affects the firm value.

The results of this study support research performed by Claudia et al. (2021) which shows that profitability is capable to mediate the effect of intellectual capital toward the firm value.

- *Effect of Institutional Ownership on Firm Value Mediated by Profitability*

The direct effect of institutional ownership on firm value is -2.328608. Meanwhile, the indirect effect of institutional ownership through profitability on firm value is 5.4609. The results of this study show that the indirect effect is greater than the direct effect, it means that profitability as an intervening variable can mediate the effect of institutional ownership toward the firm value.

The role of institutional ownership in minimizing institutional conflict. The existence of this agency competition can result in agency fees for the company. One of his ways to reduce agency costs is to increase agency ownership. The size of institutional ownership determines the company's continuity, which influences the company's performance in achieving its goals by maximizing the firm value. This can be done through the control they have.

The value of a company can be considered good if it also has good performance. The financial performance of a company can be measured by profitability indicators that show the efficiency of the business activities carried out by the company.

Based on signal theory, high financial performance is associated with good company prospects, allowing investors to increase the number of shares requested. As the number of requests for shares increases, so does the value of the company. Strong financial performance signals from managers to shareholders encourage investors to invest more in the company, increasing demand for the company's stock and increasing the firm value.

The results of this study support research performed by Nurkhin et al. (2017) which shows that profitability is capable to mediate the effect of institutional ownership toward the firm value.

- *Effect of Capital Structure on Firm Value Mediated by Profitability*

The direct effect of the capital structure variable on firm value is 2.746962. Meanwhile, the indirect effect of capital structure through profitability on firm value is -0.4177. The results of this study show that the indirect effect is smaller than the direct effect, it means that profitability as an intervening variable cannot mediate the effect of capital structure toward the firm value.

Profitability affects capital structure as sufficient capital generates high returns. On the other hand, the less capital a company has, the harder it is to make a profit. Profitability also affects the value of the business. Signal theory suggests that high profitability is associated with good business prospects, prompting investors to increase demand for the stock. An increase in demand for the stock increases the value of the company. Profitability is one of the factors affecting the firm value.

The results of this study support research performed by Erawati & Dewi (2019) and Amelia & Anhar (2019) which show that profitability is unable to mediate the effect of capital structure toward the firm value.

## V. CONCLUSION AND SUGGESTION

From the study performed regarding the effect of intellectual capital, institutional ownership, capital structure toward the firm mediated by profitability, in the food and beverages companies registered on the IDX in 2018 to 2021, the following conclusions are obtained: (1) intellectual capital has a negative and significant effect toward the firm value; (2) institutional ownership has no effect toward the firm value; (3) capital structure has a positive and significant effect toward the firm value; (4) profitability has a positive and significant effect toward the firm value; (5) intellectual capital has a positive and significant effect toward the profitability; (6) institutional ownership has a positive and significant toward the firm value; (7) capital structure has no effect toward the profitability; (8) profitability is capable to mediate the effect of intellectual capital toward the firm value; (9) profitability is capable to mediate the effect of institutional ownership toward the firm value; (10) profitability is unable to mediate the effect of capital structure toward the firm value.

Investors considering investing in food and beverage companies should pay attention to the management of intellectual capital within the company. An example of poor intellectual capital management is allocating excessive budgets to employees and not being compensated for by employee training. This leads to unproductive employees, higher labor costs, and lower company value. Furthermore, investors are not necessarily interested in investing in companies with high institutional ownership, as institutional ownership without a prudent stance can be detrimental to investors. Investors should pay attention to the composition of the company's capital structure. Companies need to be able to find the right funding mix to achieve the optimal capital structure that directly impacts enterprise value. Investors should pay attention to the profitability on company. Profitable companies can offer large returns to their investors.

On the other hand, the company's management should strengthen the supervision of intellectual capital, including the development of science and education, improve the professional knowledge and skills of employees, and bring high profit or profit to the company. And to gain investor interest and confidence in the capital markets, management of companies with high institutional ownership will need to make more prudent decisions.

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