Plantation Industry Firm Value: The Factors of Profitability, Leverage, and Company Size

Rinita Mutiarasani Kurnianingtyas, Anik Yuliati*

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ABSTRACT: Company value is a parameter for investors’ assessment of a company's success, which is closely related to share prices. This research aims to test and prove the influence of Profitability, Leverage, and Company Size on Firm Value in plantation companies listed on the Indonesia Stock Exchange for the 2015-2019 period. This research uses a quantitative approach. The population of this research is plantation companies listed on the Indonesia Stock Exchange for the 2015-2019 period, totaling 21 companies. The sample used in this research was 12 plantation companies with a period of 5 years, so the total data (n) was 60. This research data is secondary data from company financial reports from the company website and www.idx.co.id. The method used in this research is Purposive Sampling. The data collection method uses the documentation method. The data analysis used in this research is the multiple linear regression analysis tool and hypothesis testing, namely the F test, t-test, and coefficient of determination; classical assumption tests include the normality test, autocorrelation test, multicollinearity test, and heteroscedasticity test. Based on the analysis that has been carried out, it can be concluded that Profitability (ROE) contributes to company value. On the other hand, Leverage (DAR) and Company Size do not contribute to company value.

Keywords: Company Size, Firm Value, Leverage, Profitability.

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INTRODUCTION

Company continuity is an element that must be maintained by the company, especially those related to the prosperity of shareowners reflected through company value (Santoso & Muda, 2020). The company value of a company going public is indicated by the many variables that exist in the company, such as management skills in managing the company, assets owned by the company, and others. Meanwhile, for private companies, it is determined by the assessment agency. In a company, there are generally two important goals. First, the long-term goal is to maximize company value. Second, the short-term goal is to get optimal profits. Having long-term goals means that companies must always consider the impact on their share prices when making decisions.

The company's share price rises, meaning its performance is good, especially in generating company profits. The condition of a company experiencing an increase in profits impacts the investment of funds made by investors because the distribution of dividends obtained by investors is getting bigger. However, if share prices fall, the company's performance is not good or declining, so the dividend distribution for investors becomes smaller, affecting investors' considerations in reinvesting their capital.

The Central Statistics Agency (BPS) announced that in 2018, the five largest contributing sectors to the Gross Domestic Product (GDP) grew positively, but the agricultural sector weakened (Mustami & Winarto, 2018). On the Indonesian Stock Exchange (BEI), the agricultural sector is divided into four subsectors, namely plantations, fisheries, crops, and livestock. Figure 1 is data on the number of agricultural sector companies.

Based on Figure 1, the plantation subsector is more dominant than other subsectors. In the Indonesian economy, plantations play a very important role as a supporter of the national economy through their contribution to the gross domestic product, export revenues, tax revenues, and providing employment opportunities. The plantation industry contributed to a national GDP of IDR 429 trillion in 2016 (Nurmayanti, 2017). The Central Statistics Agency (BPS) noted that the plantation subsector's contribution to the national economy in 2018 increased by 22.48 percent compared to 2014. Plantation GDP in 2014-2018 was IDR 2,192.9 trillion (Febrinastri, 2019).

Having not yet recovered from the market downturn during 2018-2019, the company's expectations and reduced value emerged at the beginning of 2020. However, the COVID-19 pandemic changed the situation, and 2020 became a new market downturn (GAPKI, 2020). Indonesia is one of the countries that is feeling the impact of this virus. One of the impacts of the Covid-19 pandemic is the decline in demand for Crude Palm Oil (CPO). Globally, Indonesia's palm oil export activities have fallen by 30 percent due to the implementation of a lockdown on several Indonesian CPO markets (CNBC-Indonesia, 2020). Apart from that, problems and challenges also arise from the decline in crude palm oil prices. Of course, this has implications for the economic growth rate, which slowed to 2.97 percent in the first quarter of 2020. Pressure on CPO prices due to the pandemic caused a quite deep decline in net profit, even posting losses. PT Eagle High Plantation Tbk (BWPT) recorded a net loss of IDR 143.12 billion, bigger than the previous year’s, minus IDR 254.09 billion. Likewise, PT Sampoerna Agro...
Tbk (SGRO) recorded a decrease in net profit of 88.19% to IDR 423 million from the same period in the previous year of IDR 3.58 billion (Sidik, 2020). Companies that cannot improve their performance in conditions like this will gradually experience financial difficulties for the company in the eyes of investors.

For investors and business people, information is an important part of a company's survival because it provides information, descriptions, and notes on its past, present, or future conditions and the securities market (Sabatini & Sudana, 2019). Investors need timely, relevant, complete, and accurate information to analyze before making decisions. Improved financial performance will increase demand for shares and share prices, followed by high company value (Widiastari & Yasa, 2018).

One of the indicators used to measure company value is Price to book value (PBV), which compares the share price with the book value per share. The level of welfare of shareholders can be seen from the high and low prices to the company's book value (Pratama & Wikuana, 2016). Based on the PBV ratio, a high company value can be seen in an overvalued PBV value, namely, a greater market value than the company's book value. On the other hand, if PBV is undervalued, the company value is not well-reflected. Company value can be increased by paying attention to factors that will influence it, such as internal or external factors of the company. Several factors can influence the value of a company, and based on several previous studies, company value can be influenced by profitability, leverage, liquidity, and company size. Table 1 shows summary data on the average development of profitability, leverage, company size, and company value from 2015 to 2019 in plantation companies listed on the IDX.

Table 1. Average Profitability, Leverage, Company Size, and Company Value 2015-2019

<table>
<thead>
<tr>
<th>Year</th>
<th>Profitability (ROE)</th>
<th>Leverage (DAR)</th>
<th>Size (Ln Total Asset)</th>
<th>Firm Value (PBV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>4.91</td>
<td>54.77</td>
<td>23.00</td>
<td>1.59</td>
</tr>
<tr>
<td>2016</td>
<td>-4.38</td>
<td>52.72</td>
<td>23.02</td>
<td>1.41</td>
</tr>
<tr>
<td>2017</td>
<td>5.34</td>
<td>51.90</td>
<td>23.04</td>
<td>1.24</td>
</tr>
<tr>
<td>2018</td>
<td>-3.26</td>
<td>52.97</td>
<td>23.07</td>
<td>1.07</td>
</tr>
<tr>
<td>2019</td>
<td>-12.10</td>
<td>53.65</td>
<td>23.64</td>
<td>1.04</td>
</tr>
</tbody>
</table>

Source: Bursa Efek Indonesia, IDX.co.id, Processed by the author (2020)

Based on the data in Table 1, company value decreased from 2015 to 2019. Several factors, including profitability, leverage, and company size, can cause this decrease. This decline will impact investors' decisions not to provide capital to the company. Investors look at developments in the company value graph to determine the company's performance.

One of the factors considered to influence company value is profitability. Profitability describes the company's ability to earn profits through all available sources and performance capabilities closely related to sales, total assets, and own capital. According to Kasmir (2013, p. 196), profitability is a ratio used to measure a company's ability to earn profits. From the definitions above, profitability is the level of a company's ability to obtain profits by utilizing existing resources.

Referring to Table 1, it can be seen that during 2015-2019, profitability experienced significant increases and decreases. In the table above, it can be seen that there is a mismatch between profitability and company value. In 2017, profitability experienced an increase, followed by a decrease in company value. This is contrary to the theory that profitability and company value have a positive relationship; when profitability increases, it is followed by an increase in company value. This theory is in line with research by Zurriah & Sembiring (2020), which shows the results that profitability has a positive and significant effect on the value of the company. This positive direction means that the greater the profitability, the greater the company value. Dewantari et al. (2019) also supported the research results. They stated that profitability has a significant positive effect on company value, meaning that profitability increases with good profitability management. Good, it will also be followed by an increase in company value. This differs from the research results of Rahayu & Sari (2018), which show that profitability does not influence company value.

Another factor that is considered to influence company value is leverage. According to Fahmi (2011, p. 62), leverage is a financial ratio used to measure the size of a company financed by debt. Companies with high leverage levels are vulnerable to the threat of bankruptcy and financial difficulties due to the high use of debt. Hence, they are unable to discharge their debt burden. Losses incurred are not only borne by the company but also by shareholders and investors. This can be interpreted as meaning that the higher the level of leverage, the lower the company value (Sari & Priyadi, 2016). The
company must be able to balance debt with sources of funds from anywhere that can be used to pay off debt. Debt can have a positive or negative influence on company value. At a certain time, increasing debt will cause the company's value to decrease because the benefits obtained from using debt are smaller than the costs incurred.

Referring to Table 1, it can be seen that during 2015-2019, leverage experienced fluctuating increases and decreases. In 2018, leverage experienced an increase followed by a decrease in company value, while in 2016 and 2017, leverage experienced a decrease but was followed by a decrease in company value. The results described above contradict the theory from Brigham & Houston (2011, p. 7) that companies have an optimal capital structure and are said to have a good mix of debt and equity, which impacts optimal share prices. If a company wishes to increase its value, it will optimally estimate its capital structure (leverage). This explanation contradicts research by Dewantari et al. (2019), which states that leverage, as proxied by DER, has a negative and insignificant effect on company value. These results are inversely proportional to the research results by Widiastari & Yasa (2018), which states that leverage as proxied by DER does not affect company value. However, this is different from the research of Suwardika & Mustanda (2017) and Pratama & Wiksuana (2016), whose research results state that leverage has a positive effect on company value.

Company size is considered to have a major influence on company value. The bigger the company, the easier it will be to obtain funding sources. Company size reflects total net sales or assets the company owns, which are used for operational activities (Haryadi, 2016). The company's size also determines the level of investor confidence. Large companies will be increasingly recognized by the wider community, thereby increasing the company's value.

Referring to Table 1, it can be seen that the company's size has increased from year to year. The table above shows a mismatch between company size and company value. Every year, the company's size increases, followed by a decrease in company value. This is not in accordance with the theory that company size and company value are positively related, where when company size increases, it will be followed by an increase in company value. The explanation above is in line with research by Dewantari et al. (2019) which shows that company size has a positive and significant effect on company value. The results of this research are supported by research by Zurriah & Sembiring (2020), which shows the results that company size has a positive and significant effect on the value of the company. In contrast the research results of Rahayu & Sari (2018) show that company size has a negative effect on company value.

Based on the research results explained in the previous paragraph, there is still a research gap, especially in terms of company value in the plantation industry. Research on company value in the plantation industry is important, considering that this industry is related to green environmental issues. Information about the factors that influence the value of plantation industry companies will be very useful in attracting investors' interest in this industry. The implication is that the plantation industry will continue to develop to support the economy in Indonesia.

This research aims to test and prove the influence of profitability, leverage, and company size on company value in plantation companies listed on the Indonesia Stock Exchange for the 2015-2019 period. Therefore, it is hoped that the results of this research can contribute to adding and broadening insight and can be a means of developing knowledge regarding the factors that influence company value in plantation companies listed on the Indonesia Stock Exchange. For management, it can help management carry out its work optimally by identifying factors that influence company value, especially factors that originate from internal companies. It is hoped that further research can be used to apply the knowledge gained during lectures to actual problems. Apart from that, it can be a comparison material and reference source for researchers as well as information for prospective researchers regarding company value.

**LITERATURE REVIEW**

**Previous Research**

Previous research is a science that produces conclusions in the form of reliable knowledge. It involves thinking according to certain steps that are logical and supported by empirical facts. Table 2 shows previous research that can be used to compare the factors that influence company value. There are similarities with the previous research on the independent and dependent variables. However, the differences include the subject of the company, years of observation, and industry.
**Table 2. Summary of Previous Research**

<table>
<thead>
<tr>
<th>Title and Author</th>
<th>Research Variable</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Influence of Company Size and Leverage and Profitability on Company Value in Food and Beverage Companies on the IDX. Ni Luh Surpa Dewantari, Wayan Cipta, dan Gede Putu Agus Jana Susila (Dewantari et al., 2019)</td>
<td>Independent Variable: • Size (X1) • Leverage (DER) (X2) • Profitability (ROE) (X3) Dependent Variable: Firm Value (Y)</td>
<td>Company size and profitability have a positive effect on company value. Leverage has a negative effect on company value.</td>
</tr>
<tr>
<td>The Influence of Leverage, Company Size, Growth, and Profitability on Company Value in Property Companies. Nyoman Agus Suwardika and I Ketut Mustanda (Suwardika &amp; Mustanda, 2017)</td>
<td>Independent Variable: • Leverage (DER) (X1) • Size (X2) • Growth (X3) • Profitability (ROA) (X4) Dependent Variable: Firm Value (Y)</td>
<td>Leverage and profitability have a positive effect on property company value. Company size has no effect on property company value, and company growth has a negative effect.</td>
</tr>
<tr>
<td>Factors Affecting Company Value. Maryati Rahayu dan Bida Sari (Rahayu &amp; Sari, 2018)</td>
<td>Independent Variable: • Leverage (DAR) (X1) • Size (X2) • Profitability (ROE) (X3) • Earnings quality (X4) Dependent Variable: Firm Value (Y1)</td>
<td>Leverage and size have a negative effect on company value, profitability has no effect, and earnings quality has a positive effect.</td>
</tr>
<tr>
<td>The Influence of Profitability, Free Cash Flow, and Company Size on Company Value. Putu Ayu Widiastari and Gerianta Wirawan Yasa (Widiastari &amp; Yasa, 2018)</td>
<td>Independent Variable: • Profitability (ROA) (X1) • Free Cashflow (X2) • Size (X3) Dependent Variable: Firm Value (Y)</td>
<td>Size and profitability have a positive effect on company value. Free cash flow does not affect company value</td>
</tr>
</tbody>
</table>

Source: Previous research

**Agency Theory**

Agency theory explains the working relationship between company owners and management. Brigham and Houston (2010) define Agency Theory as a relationship that occurs where one or several individuals (principals) hire other individuals (agents) to perform several services and delegate their authority to make decisions to the agent. This theory arises when shareowners hire other parties to manage their company. The function of this theory is to analyze and find solutions related to problems in agency relationships (Bathala et al., 1994).

Jensen and Meckling (1976) stated that in agency relationships, conflicts of interest occur due to differences in the goals of each party. As company managers, managers are interested in maximizing their welfare by providing large compensation for their company performance. Meanwhile, shareholders are interested in getting a faster and bigger return on their investment. Therefore, managers must try to increase profitability so that the interests of both shareholders and managers can be met.

Agency problems can also be caused if the manager's share of shares in the company is low. Because the manager's lack of shares in shares means managers can take actions that suit their personal interests, not optimize the company. This is the cause of agency costs. Jensen and Meckling (1976) state that agency costs are expenses used to finance supervision carried out on agents. In agency theory, each party is assumed to always act in its interests, giving rise to a conflict of interest. These differences in interests can give rise to problems known as information asymmetry. Information asymmetry is when management has more complete information about the company than shareholders (Hapsari, 2017).

**Signal Theory**

According to Brigham and Houston (2010), signaling theory states that a company's action of giving a signal to potential investors regarding its management is a signal. Signal theory explains the company's encouragement to make announcements to outside parties. This encouragement is caused by
information asymmetry. Signal theory can be interpreted as a theory that can influence company value because it considers the information conveyed regarding the company's condition through financial reports. The financial statements must present information useful for creditors when making investments or other decisions. According to Jogiyanto (2010), the publication of information can be a signal to investors. If the information contains a positive value, then the market will respond well to the information, so there will be changes in share prices and trading volume, which can affect the company's value.

Signaling theory states that profits give a positive signal to the company's financial performance and better prospects in the future, thereby increasing stock demand transactions, which will impact company value (Widiastari & Yasa, 2018). External parties interpret an increase in debt as the company's ability to pay its obligations in the future because the business risk is low, investors will respond positively, and the company value will increase (Brigham & Gapensi, 1999). Signal theory relates to company size, where management must provide the same information regarding company size as measured by total assets or sales owned by the company to shareholders. That way, investors know the company's prospects in the future, and shareholders can find out how big the company is in which they invest their funds.

**The Influence of Profitability on Company Value**

Profitability describes management's performance in managing a company and measures how much a company can generate profits (Ramdhonah et al., 2019). In this research, profitability is measured using return on equity (ROE), a ratio that shows the return obtained by management on capital provided by shareholders. According to signal theory, information is the rate of return on profits for using assets or capital. If the profitability ratio is high, it can be a positive signal for investors. A high profitability ratio shows that the company's financial performance is good and will attract investors' interest in investing in shares. The increasing demand for shares by investors will cause share prices to rise in the capital market. High profitability shows that the company's prospects are getting better. This is a positive signal from the company, as it can increase investor confidence and company value.

Profitability, as measured by Return on Assets (ROA) in research conducted by Ningrum & Hermuningsih (2019), has a positive and significant influence on company value because companies that succeed in making a profit will increase the value of the company, as can be seen from the high price of the company's shares. The increase in profitability every year shows a good response from investors, so they are interested. Likewise, Hapsari's (2017) research results show that profitability significantly influences company value because high profitability shows good performance. The prospects are promising, so the positive signal is responded to well by the market, and the company value increases.

**The Influence of Leverage on Company Value**

Leverage describes the company's use of debt to finance all operational activities. If too much debt is used, it is not good for the company. It is feared that the profits obtained will decrease. The higher the level of leverage, the greater the investment risk that will be accepted, and vice versa; the lower the leverage value shows that the risk accepted for the investment is smaller. The use of leverage is quite profitable for companies due to the effect of the corporate tax shield, which allows the proportion of debt to be optimal and increases company performance (Sofiamira & Asandimitra, 2017). However, suppose the use of debt exceeds the optimal point, and the company cannot pay its debts. In that case, it will cause greater bankruptcy costs, reducing the company's value.

In agency theory, problems related to differences in interests between management and shareholders related to leverage exist. Management wants to obtain a lot of funds to carry out its operational activities, one of which is through debt. At the same time, shareholders do not like the results of management's decisions. For shareholders, high debt can decrease profits, resulting in a decrease in company value. Previous research results that align with this theory are research conducted by Dewantari et al. (2019) and Jariah (2016), which show that leverage negatively influences company value. The increasing use of debt to carry out the company's operational activities causes the company's income to decrease, so the company value also decreases.

**The Influence of Company Size on Company Value**

Company size is a scale that classifies an entity described by the market value of shares, assets, total income, and so on (Dewi & Sudiartha, 2017). Large companies find it easier to attract investors to invest their funds in these companies because they have high asset values. According to Sembiring &
Pakpahan (2010), compared to small companies, large companies tend to find it easier to raise funds in a short time because access to the capital market is not difficult (Oktaviarni, 2019). Large companies have a lower level of risk than small companies because large companies have good control over market conditions, so they can face economic competition. With this, the company's performance can be said to be good, so the company's size as a reference for investors to provide capital injections will increase the company's value.

According to agency theory, large companies have greater agency costs than small companies (Jensen & Meckling, 1976). Large companies will disclose more information than small companies in order to reduce agency costs. The general public or the market highly scrutinizes large companies. Usually, large companies have large assets and value. As a result, it will reduce uncertainty regarding the company's prospects. Large companies will find it easier to get investors, so their value increases through share prices. Research conducted by Pratama & Wiksuna (2016) and Zurriah & Sembiring (2020) states that company size has a positive influence on company value. The company's large size reflects good growth, thereby increasing its value, which is indicated by the company's higher total assets compared to its debts.

**Research Hypothesis**
A hypothesis is a short statement concluded from a theoretical framework or research objectives or a temporary answer to the research problem formulation (Sugiarto, 2017, p. 118). Based on problem identification and the research framework in Figure 1, the hypothesis of this research is as follows:

- **H1**: Profitability positively affects company value.
- **H2**: Leverage negatively affects company value.
- **H3**: Company size positively affects company value.

![Figure 1. Research Framework](image)

**RESEARCH METHOD**

**Types and Objects of Research**
This research uses a quantitative approach. Quantitative research is data measured on a numerical scale, which can be analyzed using statistical analysis. According to Sugiyono (2016, p. 41), the research object is a scientific target to obtain data with a specific aim regarding something objective, valid, and reliable. The object of research in this study is the influence of profitability, leverage, and company size on company value in plantation companies listed on the Indonesian Stock Exchange for the 2015-2019 period.

**Operational Definition and Variable Measurement**
This research model uses two variables. The independent variables in this research consist of profitability, leverage, and company size. The dependent variable, which will be influenced by the independent variable, is company value.

**Profitability (X1)**
Profitability describes an entity's ability to make a profit, which is related to total assets, sales, own capital, and so on. In this research, the indicator used to measure profitability is Return on Equity (ROE). The data scale used is a ratio scale, and the unit of measurement used is a percentage.
Plantation Industry Firm Return on Equity Ratio (ROE) = \frac{\text{Net Income}}{\text{Equity}} \times 100\% \quad \ldots (1)

Return on Equity Ratio (ROE) = \frac{\text{Net Income}}{\text{Equity}} \times 100\% \quad \ldots (1)

Leverage (X2)
Leverage measures how well a company fulfills all its financial obligations. This can be interpreted as how much debt the company will bear compared to the total assets owned (Kasmir, 2016, p. 151). The indicator that measures leverage in this research is the Debt to Assets Ratio (DAR). This ratio compares total debt with total company assets.

\[ \text{Total Debt to Total Assets} (\text{DAR}) = \frac{\text{Total Debt}}{\text{Total Assets}} \times 100\% \quad \ldots (2) \]

Size (X3)
Company size is a benchmark that shows a company's size. In this research, the size of the company is determined based on total assets. Company size is measured using the Natural Logarithm of Total Assets (Ln Total Assets) to simplify company assets without changing the proportion of the actual number of assets.

\[ \text{Natural Logarithm of Total Assets} \]

Firm Value (Y)
This research measures company value using Price Book Value (PBV). This ratio compares the market price of shares with the book value of shares. It shows the extent to which the company can create value relative to the amount of funds invested.

\[ \text{Price to Book Value (PBV)} = \frac{\text{Market Value per Share}}{\text{Book Value per Share}} \times 100\% \quad \ldots (3) \]

Population and Sample
In this study, the population was all plantation companies listed on the Indonesia Stock Exchange (BEI) from 2015 to 2019. Table 3 shows the population as 21 plantation subsector companies. The sampling technique used in this research was purposive sampling. According to Sugiyono (2017, p. 124), purposive sampling is a technique for determining samples with certain considerations. The criteria for determining the sample used were plantation companies listed on the Indonesia Stock Exchange in 2015-2019, which published their financial reports completely and consecutively during that year. Plantation companies that have positive equity values during the research period and Financial Reports use the rupiah currency. Based on the research population above, the number of plantation companies can be used as samples because they meet the criteria determined by the researchers as 12 companies (Table 3).

Table 3. List of Plantation Companies Sample

<table>
<thead>
<tr>
<th>No</th>
<th>Code</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>AALI</td>
<td>PT. Astra Agro Lestari Tbk.</td>
</tr>
<tr>
<td>2.</td>
<td>BWPT</td>
<td>PT. Eagle High Plantation Tbk.</td>
</tr>
<tr>
<td>3.</td>
<td>DSNG</td>
<td>PT. Dharma Satya Nusantara Tbk.</td>
</tr>
<tr>
<td>4.</td>
<td>GZCO</td>
<td>PT. Gozco Plantation Tbk.</td>
</tr>
<tr>
<td>5.</td>
<td>JAWA</td>
<td>PT. Jaya Agra Wattie Tbk.</td>
</tr>
<tr>
<td>6.</td>
<td>LSIP</td>
<td>PT. PP London Sumatera Indonesia Tbk.</td>
</tr>
<tr>
<td>7.</td>
<td>PALM</td>
<td>PT. Provident Agro Tbk.</td>
</tr>
<tr>
<td>8.</td>
<td>SGRO</td>
<td>PT. Sampoerna Pratama Tbk.</td>
</tr>
<tr>
<td>9.</td>
<td>SIMP</td>
<td>PT. Salim Ivomas Pratama Tbk.</td>
</tr>
<tr>
<td>10.</td>
<td>SMAR</td>
<td>PT. Sinar Mas Agro Resources and Technology Tbk.</td>
</tr>
<tr>
<td>11.</td>
<td>SSMS</td>
<td>PT. Sawit Sumbermas Sarana Tbk.</td>
</tr>
<tr>
<td>12.</td>
<td>TBLA</td>
<td>PT. Tunas Baru Lampung Tbk.</td>
</tr>
</tbody>
</table>

Source: Edusaham (2020), Perusahaan Sektor Pertanian yang Terdaftar di BEI 2019. Data processed by researchers (2020)
Analysis and Hypothesis Testing Techniques

Classic assumption test

The classical assumption test was carried out to fulfill the requirements for the multiple linear regression analysis used in this research. The regression equation must be Best Linear Uncontrolled Estimation (BLUE), meaning that decision-making through the F-test and t-test must not be biased, so testing needs to be carried out to determine whether the resulting regression model meets the requirements of classical assumptions. The classical assumption tests that will be used in this research are the normality test, multicollinearity test, autocorrelation test, and heteroscedasticity test. Multicollinearity testing can be done by looking at the Variance Inflating Factor and tolerance values. The tolerance value limit is 0.10, or the VIF value is 10. If the tolerance value is <0.10 and the VIF value is >10, then it is indicated that there is multicollinearity (Ghozali, 2016, p. 103). The autocorrelation test in this study used the Durbin-Watson test. heteroscedasticity test using the Spearman Rank test. If the significance level is more than 5%, then there is no heteroscedasticity, but if the significance level is <5%, then there are symptoms of heteroscedasticity.

Normality test

The normality test aims to test whether the independent variable's distribution to the dependent variable's value or both has a normal distribution. A good linear regression model is indicated by error values that are normally distributed or close to normal so that it is feasible to carry out statistical tests. The normality test in the study was carried out using the Kolmogrov-Smirnov test of normality. According to (Ghozali, 2016, p. 103), decision-making can be based on probability (asymptotic significance); namely, if the probability is > 0.05, then the distribution of the regression model is normal.

Analysis Techniques

This research uses data analysis techniques, namely multiple linear analysis. Multiple linear analysis aims to predict the influence of more than one independent variable on one dependent variable. Multiple linear analysis, according to Sugiyono (2017, p. 269), can be formulated as follows:

\[ Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e \]

Legend:
- \( Y \): The predicted dependent variable, namely Company Value
- \( \alpha \): Constant, \( Y \) value when \( X = 0 \) (share price)
- \( \beta \): Direction number or regression coefficient, which shows the rate of increase or decrease in the dependent variable based on the independent variable. If \( \beta (+) \) then it increases, if \( \beta (-) \) then there is a decrease.
- \( X \): Independent variable that has a certain value.
- \( e \): Error

Regression Model Fit Test (F Test)

The F-test is carried out to test the significance of whether or not the regression model used is suitable to see the influence of the independent variable on the dependent variable. In this research, the F test is used to test whether or not the regression model is appropriate to predict the effect of profitability (X1), leverage (X2), and company size (X3) on company value (Y). The significance level (\( \alpha \)) used is 5%.

Determination Coefficient Test (R2 Test)

The R² test determines how much variation a model applies in the dependent variable. The R2 value is between zero and one (0 < R2 < 1). A small value (R2) indicates that the ability of the independent variable is limited in explaining the dependent variable, and an R2 value that is close to one indicates that the independent variable explains almost all the information used to predict variations in the dependent variable (Ghozali, 2016, p. 95).

Hypothesis Test (t-Test)

The t-test tests the significance of the relationship between variables X and Y and whether variables X1 and X2 influence the variables individually or partially (Ghozali, 2016, p. 97). This test uses a
RESULTS AND DISCUSSION

Description of Research Variables

The variables in this study are described with the minimum value, maximum value, average (mean), and standard deviation of each variable to describe the data used (Table 4). Researchers use three independent variables, namely profitability, which is proxied by ROE; leverage, which DAR measures; and company size, which is measured by logarithms (Ln Total Assets), as well as one dependent variable, namely company value, which is proxied by PBV. Data on plantation companies listed on the Indonesian Stock Exchange during the 2015-2019 period showed that they met the criteria determined in this research. The variable description also presents the average of each variable from year to year, so that its development can be known.

Table 4. Descriptive Statistics Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROE</td>
<td>55</td>
<td>.00</td>
<td>19.39</td>
<td>5.0842</td>
<td>5.50335</td>
</tr>
<tr>
<td>DAR</td>
<td>55</td>
<td>11.28</td>
<td>80.42</td>
<td>52.0842</td>
<td>18.19504</td>
</tr>
<tr>
<td>SIZE</td>
<td>55</td>
<td>21.39</td>
<td>24.28</td>
<td>23.0491</td>
<td>.82948</td>
</tr>
<tr>
<td>PBV</td>
<td>55</td>
<td>.21</td>
<td>3.42</td>
<td>1.1389</td>
<td>.65360</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>55</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: processed data

Based on Figure 3, it can be seen that profitability (ROE) in plantation companies experienced significant increases and decreases during 2015-2019. In 2015 ROE had an average of 4.91, in 2016 it fell to -4.38, in 2017 it rose to 5.34, and in 2018 it fell to -3.26, then in 2019 it fell to -12.10. Leverage (DAR) in plantation companies experienced fluctuating increases and decreases during 2015-2019. In 2015 the average DAR was 54.77, in 2016 it fell to 52.72, in 2017 it fell to 51.90, and in 2018 it rose to 52.97, then in 2019 it rose to 53.65. Company size (Ln Total Assets) in plantation companies increases every year. In 2015 the average Ln Total Asset was 23.00, in 2016 it rose to 23.02, in 2017 it rose to 23.04, and in 2018 it rose to 23.07, then in 2019 it rose to 23.64. The company value proxied by PBV
in plantation companies has decreased every year from 2015-2019. In 2015 the average PBV was 1.59, in 2016 it fell to 1.41, in 2017 it fell to 1.24, and in 2018 it fell to 1.07, then in 2019 it fell to 1.04.

The results of the classical assumption test prove that there is no autocorrelation, multicollinearity and heteroscedasticity. The results of the normality test show that all research variable data is normally distributed. Therefore, it continues with analysis techniques and hypothesis testing.

**Multiple Regression Analysis**

Multiple linear regression analysis (Table 5) using the SPSS version 21 for Windows program was carried out in several stages to see the magnitude of the influence between the variables profitability (X1), leverage (X2), and company size (X3) on the variable company value (Y).

Table 5. Multiple Regression Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression Coefficient</th>
<th>t-count</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>1.291</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROE</td>
<td>0.058</td>
<td>3.858</td>
<td>.000</td>
</tr>
<tr>
<td>DAR</td>
<td>0.001</td>
<td>0.163</td>
<td>.871</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.021</td>
<td>-0.211</td>
<td>.834</td>
</tr>
</tbody>
</table>

Source: processed data

Based on the calculation results in table 5, the regression equation obtained is as follows:

\[ Y = 1.291 + 0.058 \text{ROE} + 0.001 \text{DAR} - 0.021 \text{SIZE} \]

The multiple linear regression equation can be described as follows:

- The constant value (\(\alpha\)) in this regression model is 1.291, indicating that the variables ROE (X1), DAR (X2), and SIZE (X3) are zero or constant. So the Price to Book Value decreased by 1.291.
- The regression coefficient value of ROE (X1) is 0.058 and has a positive sign indicating a directional change between ROE (X1) and PBV (Y). Shows that if other independent variables are constant, then an increase of 1 unit in profitability will be followed by an increase in company value of 0.058.
- The regression coefficient value of DAR (X2) is 0.001 and has a positive sign indicating a directional change between DAR (X2) and PBV (Y). shows that if other independent variables are constant, then an increase of 1 unit in leverage will be followed by a decrease in company value of 0.001.
- The regression coefficient value of SIZE (X3) is 0.021 and has a negative sign indicating the opposite change between SIZE (X3) and PBV (Y). Shows that if other independent variables are constant, then an increase of 1 unit in company size will be followed by an increase in company value of 0.021.

**F-test**

Based on Table 6, the test results with the F test show a value of 5.155 with a significance level of less than 0.05 (sig = 0.003), which means it is significant. Thus, the regression model can predict company value based on profitability, leverage, and company size.

Table 6. F-Test Results

<table>
<thead>
<tr>
<th>F count</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residual</td>
<td>5.155</td>
</tr>
</tbody>
</table>

Source: processed data

**Determination Coefficient Test (R\(^2\) Test)**

The R\(^2\) value is used to determine the percentage influence of the independent variable on the dependent variable as a whole. The R\(^2\) value ranges from 0 to 1. The higher the R\(^2\) value, the better the regression model explains the influence of the independent variable on the dependent variable.

Table 7. R Square Test Results

<table>
<thead>
<tr>
<th>Model</th>
<th>R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.233</td>
</tr>
</tbody>
</table>

Source: processed data
The determinant coefficient value \((R^2)\) in Table 7 shows the large contribution of the variables profitability \((X1)\), leverage \((X2)\), and company size \((X3)\), which influence the variable company value \((Y)\). So, the R Square value of 0.233 means that profitability \((X1)\), leverage \((X2)\), and company size \((X3)\) influence the company value variable \((Y)\).

### Table 8. Hypothesis Test – t-test

<table>
<thead>
<tr>
<th>Variabel</th>
<th>t count</th>
<th>Sig.</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROE</td>
<td>3.858</td>
<td>.000</td>
<td>H1 accepted</td>
</tr>
<tr>
<td>DAR</td>
<td>0.163</td>
<td>.871</td>
<td>H2 rejected</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.211</td>
<td>.834</td>
<td>H3 rejected</td>
</tr>
</tbody>
</table>

Source: processed data

### Hypothesis Test (t-Test)

Table 8 shows the results of hypothesis testing with the t-test. The results prove that Profitability \((X1)\) has a significant level of less than 5% \((\text{sig} = 0.000)\), meaning that profitability as proxied by Return on Equity (ROE) partially has a positive effect on company value. Leverage \((X2)\) has a significant level of more than 5% \((\text{sig} = 0.871)\), meaning that leverage as proxied by the debt-to-assets ratio (DAR) partially does not affect Firm Value. Company Size \((X3)\) has a significant level of more than 5% \((\text{sig} = 0.834)\), meaning that company size partially does not affect Firm Value.

### Discussion

#### The Effect of Profitability on Firm Value

The first hypothesis in this research shows that profitability, as proxied by Return on Equity (ROE), affects company value. Table 8 shows that the sig value of the profitability variable is 0.000 < 0.05, so the first hypothesis of this research is accepted. Thus, it can be concluded that the profitability variable positively and significantly affects company value. The relationship between profitability and company value based on the regression coefficient shows a positive direction. This is due to increased net profit results, which increases profitability as proxied by ROE (Alifiani & Suryaningrum, 2020). An increase followed this increase in share prices. If the share price rises, the company’s financial performance is good, so investors or potential investors are interested in providing capital (Jihadi et al., 2021).

The results of this research support the agency theory, which states that high profitability indicates that the company's future prospects are improving (Alifiani & Suryaningrum, 2020), so investors respond to the positive signals given by the company (Musa et al., 2022). Of course, this will also increase the company's value. Likewise, the results of this research are consistent with research conducted by Ningrum & Hermuningsih (2019) and Astuti & Yadnya (2019), which shows that profitability has a positive and significant effect on company value because companies that can generate profits every year will attract the interest of many investors.

#### The Effect of Leverage on Firm Value

The second hypothesis in this research shows that leverage, as proxied by the Debt to Assets Ratio (DAR), affects company value. Table 8 shows that the sig value of the leverage variable is 0.871 > 0.05, so the second hypothesis of this study is rejected.

The results of this research are consistent with research conducted by Sukarya & Baskara (2019), which shows that leverage does not influence company value, meaning that in funding its assets the company prefers to use its own capital rather than debt. Using debt on a large scale will only reduce the benefits received because it is not commensurate with the costs incurred, where a low proportion of debt will increase the company's value, and increasing debt can reduce it. Likewise, the research results of Zurriah & Sembiring (2020) and Kolis et al. (2018) state that leverage does not affect company value. On the contrary, Abbas et al. (2023) proved that leverage influences firm value. The study's findings indicate that investors should not overlook other aspects, particularly those related to the Company's accountability. In order to reduce reliance on external sources of funding, investors must employ astute methods of assessing and quantifying instruments that can accurately depict the current and future conditions and performance of organizations (Abbas et al., 2023).

According to agency theory, companies with high debt levels will reduce profits, decrease investors’ interest in investing funds, and decrease share prices and company value (Musa et al., 2022). However, the results of this research show that the leverage variable does not significantly affect...
company value. This means that companies tend to use their own funds because funds originating from their own capital are deemed sufficient to fund their assets, making companies reduce the use of debt.

**The Influence of Size on Firm Value**

The third hypothesis in this research states that company size, as proxied by Ln Total Assets, does not affect company value. Table 8 shows that the sig value of the company size variable is 0.834 > 0.05, so the third hypothesis is rejected. The results of this research are in line with research by Sopiah & Suryono (2017), Endri & Fathony (2020), and Suwardika & Mustanda (2017). Sopiah & Suryono (2017) state that size does not affect company value. The company’s size is assessed using its total assets for its operational activities. The bigger the company, the bigger the funds needed for its operational activities. One of the sources of funds obtained by the company comes from loan funds or debt originating from external parties such as creditors. So, it can be interpreted that the bigger your debt, the bigger the company. Company size does not affect company value because the size of the assets used in measuring the company does not give investors confidence in its ability to manage its assets (Haryadi, 2016). In contrast, Mubeen et al. (2022) found that firm size moderates the relationship between product market competition and firm performance. This implies that the bigger the firm size, the more capable it is of increasing performance, and finally, it will influence the firm’s value.

According to signal theory (Friske et al., 2023), company size can indicate the company’s achievements. In contrast, large companies are considered to have good performance and can run well, so the company attracts the interest of many investors more easily. Because investors have more confidence in companies that perform well when investing their funds. Of course, this can increase share prices and increase company value. However, the results of this study show that company size does not affect company value. Because the size of the company as proxied by total assets does not have implications for investor interest because investors are more interested in variables that are directly related to a company’s profits.

**CONCLUSION**

Based on the analysis carried out, profitability has a positive effect on company value. On the other hand, leverage and company size do not affect company value. This proves investors are still more interested in company performance when making investment decisions. Factors such as leverage and company size are unimportant when investing in plantation companies.

This research has limitations that can weaken the research results. The limitation of this research is that the annual financial report data required for this company (especially in 2015) is not all on the official website of the Indonesia Stock Exchange, so researchers have to look for data on each company’s official website. Apart from that, it is only limited to Plantation companies registered on the IDX. Apart from the variables used in this research being less varied, this research also did not carry out a robust test using control variables. Therefore, further research can expand to industries other than the plantation industry and use control variables to prove the validity of the research results.

**Abbreviations**

Central Statistics Agency (BPS), Gross Domestic Product (GDP), Crude Palm Oil (CPO), Indonesia Stock Exchange (BEI), Price Book Value (PBV), Natural Logarithm of Total Assets (Ln Total Assets), Debt to Assets Ratio (DAR), Return on Equity (ROE), Return on Assets (ROA), Best Linear Uncontrolled Estimation (BLUE).

**Authors Contribution**

RMK made the initial draft and collected data, analyzed the data, and drafted the article. RMK and AY completed the article, and AY made final revisions.

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Conflict of Interest
The authors declare no conflict of interest.

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Data and Material Availability
Data can be accessed from the IDX and companies' websites.

REFERENCES


Plantation Industry Firm Value: The Factors of Profitability, Leverage, and Company Size
Rinita Mutiarasani Kurnianingtyas, Anik Yuliati


