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The effects of environmental performance, financial leverage, and institutional ownership on firm value: a study on manufacturing firms in Indonesia

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Abstract

This study aims to examine the relationships between environmental performance, financial leverage, as well as institutional ownership and firm value. In this study, firm value is measured with Tobin's Q ratio. The sample used in this study was 20 manufacturing firms listed at the Indonesia Stock Exchange with the observation period between 2016-2019; so, the total observations made were 80. Multiple regression analysis using SPSS application was carried out to scrutinize the data. The results of this study indicate that all independent variables tested, namely environmental performance, financial leverage, and institutional ownership, have positive influences on firm value. These results provide a good signal for the investors to continuously invest in manufacturing firms. In addition, good environmental performance has an impact on firms' positive image.

Introduction

Firm is an organization that has its own goals based on the field or sector of the firm. One of the most important goals is to get profit based on the capital that has been used in the firm in order to maintain or develop the business that has been established. Firms optimally attempt to at least attract the attention of the investors to work together in achieving the common goals (Nurminda et al., 2017).

Firm value is a value needed by investors as a consideration for investment decision. This value has a good impact on shareholders. The better the value of a firm is, the more attracted the shareholders will be (Sartono, 2017). Firm value that increases through stock market value will have a good impact even though there are financial changes made by the firms. One of the factors that can affect firm value is environmental performance (Pasaribu et al., 2016).

The image of a firm can increase its firm value if the firm focuses on environmental issues (Nahda & Harjito, 2011; Wang & Sarkis, 2017). A firm that pays more attention on environmental management is able to improve the firm's image in the eyes of the shareholders, thus increasing the firm value in line with good environmental management activities (Mardiana & Wuryani, 2019). Good environmental management will also bring a good impact to a firm, but some firms still ignore their environmental conditions because they think that the environmental management costs will add the firms' expenditures. In addition, it is also not uncommon to cause environmental damage or other social impacts in the process of obtaining profits (Hamdani et al., 2020).

The next factor that can increase or affect firm value is financial leverage. According to the agency theory of Jensen and Meckling (1976), more use of debts by a firm can reduce the conflict between the managers and shareholders. According to the theory, an addition of debt will have a good prospect in the future that will give a positive signal to the investors with the assumption that future cash flows will be maintained (Akisik & Gal, 2017; Detthamrong et al., 2017; Marpaung et al., 2022; Wang & Sarkis, 2017).

Institutional ownership is another factor that can increase firm value. Institutional ownership is a condition where a firm works together with other parties including government institution, private institution, and foreign institution (Yendrawati & Witono, 2011).

With institutional ownership, the level of supervision from various parties on the condition of a firm increases. The existence of a cooperation system with other parties will ensure the better condition of the firm or maintain the firm's condition in a safe position according to mutual agreement as in the capital market. The increasing level of institutional ownership will result in greater supervision by the institutional investors, so it can be a challenge. The existence of supervision from those who are responsible for managing the firm can maintain the condition of the firm and prevent irresponsible management which later will also affect the firm value. This study attempts to investigate the effects of environmental performance, financial leverage, and institutional ownership on firm value.

Literature Review

Agency Theory

Agency costs are a good reason for firms to increase the amount of debt in their capital structure because debt allows managers to strengthen the commitments to improve financial performance (Jensen, 1986). Agency theory suggests that a conflict of interests between shareholders and managers occurs because there is no optimal utility agreement between them. Jensen and Meckling (1976) define agency relationship as a contract in which the principals (shareholders) hire an agent to perform certain actions for their benefits which have the potential to create conflict of interests between the principals and the agent.

Firm Value

Firm value is a reflection in the market value of a firm's shares if the firm goes public. If it has not gone public, the value of the firm is the impact value if the firm is sold. Firm value is a value that can improve a firm's image if its stock prices increase which also has an impact on shareholders; the higher the firm value, the more attracted the investors to invest (Sartono, 2017). According to Suraida (2005), higher firm value shows better establishment and image, so the potential investors will have more trust and interest in the firm.

Environmental Performance and Firm Value

Firm environmental performance is an ability of a firm to create such conditions where the firm brings a good impact to the public or creates green firm condition (good, safe, and secure). Environmental performance is assessed using PROPER rating assessment by the Ministry of Environment (KLH). The purpose of the assessment is to create safe firm conditions which do no harm to other parties. One of the good environmental performance criteria is that the firm complies with the regulations or policies set by the Ministry of Environment (KLH) or does not interfere the activities of other parties in order to create good environmental performance. Firm environmental performance also refers to both good and bad environmental conditions of a firm (Nekhili et al., 2017). Nahda and Harjito (2011), based on their first hypothesis test result, show that the application level of environmental performance will affect the increase or decrease in the firm value. Therefore, this study proposes the following hypothesis.

H1: Environmental performance has a positive effect on firm value.

Financial Leverage and Firm Value

Financial leverage is a fund that is used based on a fixed expense, and this can maximize earning per share (EPS). Based on the Packing Order Theory, the addition of debt will be a good prospect in the future because it will give a positive signal to the investors that the future cash flows will be maintained. Hence, it can be said that leverage has an effect on firm value (Akisik & Gal, 2017; Bjuggren et al., 2018; Detthamrong et al., 2017; Wang & Sarkis, 2017). Therefore, this study proposes the following hypothesis.
H2: Financial leverage has a positive effect on firm value.

Institutional Ownership and Firm Value

Institutional ownership is the ownership of a firm's shares by institutions, such as insurance firm, bank, investment firm, and other industrial firm. Institutional ownership has an important role in monitoring the management because institutional ownership will encourage more optimal supervision. Such monitoring will certainly ensure the prosperity of the shareholders. The role of institutional ownership as a supervisory agent is emphasized through large investment in the capital market (Yendrawati & Witono, 2011). There is various empirical evidence in the relationship between concentrated ownership and firm performance. Several studies have provided the evidence that there is a significantly positive relationship between large investor ownership of shares and firm performance, such as those conducted by Haniffa and Hudaib (2006) and Joh (2003) which use Malaysian and Korean firms as the samples. High concentration of family ownership in public firms is common in Indonesia, as in other East Asian markets (Claessens et al., 2000; Marpaung, et al., 2022). Managers who are also the shareholders will try to increase the value of the firm because with the increase, the value of their wealth as the shareholders will also increase. Therefore, the hypothesis proposed in this study is as follows.
H3: Institutional ownership has a positive effect on firm value.

Research Method

The population of this study is manufacturing firms in industrial sector of consumer goods listed at the IDX from 2016 to 2019. The samples were selected using simple random sampling. The number of research samples collected for four years from 2016-2019 was 80 firms. The data collected were financial report data and annual reports from the Indonesia Stock Exchange.

Definitions of Variables

Firm value (dependent variable)

Firm value can improve a firm's image if its stock prices increase.

$$Tobin's\ Q = \frac{(\mathrm{EMV} + \mathrm{D})}{\mathrm{Asset}}$$

where:
Q : Firm value
EMV : Equity market value
D : Book value of total debts

Environmental performance (Independent variable)

Environmental performance is an assessment used to measure a firm's environmental conditions which is carried out by the Ministry of Environment based on the PROPER scale subject to the certain provisions. The measurement of the environmental performance variables in this study used the PROPER performance rating (score 1-5) (Anindito & Ardiyanto, 2012).

Financial leverage (independent variable)

Leverage is an average policy taken by the management in order to obtain a source of finance for the firm to fund the operational activities. In this study, financial leverage was measured by comparing the ratio of debt to equity (Detthamrong et al., 2017; Ramli et al., 2018).

Institutional ownership (independent variable)

The percentage of institutional ownership of shares is obtained from the sum of the percentage of shares owned by other firms, both within and outside the country. Institutional ownership is measured by the percentage of share ownership by institutions out of the total outstanding share capital (King & Santor, 2008; McConnell & Servaes, 1995; Sukrini, 2012).

Results and Discussion

Descriptive Analysis

In this study, the descriptive analysis included the variables encompassing environmental performance (X1), financial leverage (X2), institutional ownership (X3), and firm value (Y). Table 1 shows the descriptive statistical value of each research variable.

Table 1. Descriptive Statistics

No		N	Minimum	Maximum	Mean	Std. Deviation
1	Firm value	80	0.4017	23.3807	3.7159	4.4759
2	Environmental performance	80	2.0000	4.0000	2.9500	0.5010
3	Financial leverage	80	0.0759	4.7875	0.8911	0.8160
4	Institutional ownership	80	0.3830	0.9871	0.7628	0.1490

Source: Processed data (2021)

As seen in Table 1, the first variable is firm value with the minimum value 0.4017 and the maximum value 23.3870. The second variable is environmental performance with the lowest value 2 and the highest value 4.

Classical Assumption Test Results

The result of the normality test concluded that the data were normally distributed because the value of Asymp. Sig (2-tailed) was 0.883, greater than 0.05. Then, the multicollinearity test indicated that the tolerance value of the independent variables was above 0.10, while the value of the variance inflation factor (VIF) was less than 10. Additionally, heteroscedasticity test showed that the points spread randomly above and below 0 (zero) on the Y axis and did not form a certain clear pattern.

Regression Test Result

The result of regression test in this study can be seen in Table 2.

Table 2. Regression Test Results

No	Name of Variable	B	Error Standard	Sig.
1	Constant	-8.486	4.279	0.051
2	Environmental performance	2.424	0.967	0.014
3	Financial leverage	1.634	0.593	0.007
4	Institutional ownership	4.711	0.660	0.021

Source: Processed data (2021)

Based on the result of the regression test, multiple linear regression equation was obtained as follows.

$$\mathbf{Y = -8{,}486 + 2{,}424\ X_1 + 1{,}634\ X_2 + 4{,}711\ X_3}$$

The Effect of Environmental Performance on Firm Value

The result of the statistical test shows that environmental performance has a positive effect on firm value with $T_{statistic}$ 2.507 which is greater than T_{table} 1.992. Thus, H1 is accepted.

Environmental performance in manufacturing firms affects the firm value. The better the environmental performance of a firm, the more disclosed the firm related to its social activities and governance that have been carried out. This means that good environmental performance will have impact on the increase in the firm value. The result of this study shows that the firms which pay more attention to environmental management are able to improve their image in the eyes of their shareholders, so the firms' value will increase in line with their good environmental management activities (Marpaung, et al., 2022; Nahda & Harjito, 2011). The increasing firm value can be interpreted that the market has given a positive response to a firm's efforts in terms of environmental management activities. Investors will assume that the firm has the ability to manage the impact of environmental damage due to its operational activities (Buchanan et al., 2018; Wang & Sarkis, 2017). A firm that has good environmental performance will have a positive image in the eyes of the community that will indirectly affect the level of public trust in the products produced by the firm, resulting in the increasing sales and firm profit.

The Effect of Financial Leverage on Firm Value

The test result shows that financial leverage has a positive effect on firm value by the comparison of the value of $T_{statistic}$ which is more than that of T_{table}, 2.754 compared to 1.992 respectively. Hence, H2 is accepted. The result supports the study conducted by Detthamrong et al. (2017) as well as Wang and Sarkis (2017). Individually, financial leverage affects the value of manufacturing firms listed at the Indonesia Stock Exchange. Financial leverage aims to increase the returns for the shareholders, but it also has the potential to increase the risks faced by the investors if the fixed costs which must be paid by the firm for its debts are greater than the profit it earns. This study supports the agency theory described by Jensen and Meckling (1976) which argues that there should be a clear separation between ownership function and management function. The management should not have control in determining debts because it is controlled by the major owner.

The Effect of Institutional Ownership on Firm Value

The result showed in Table 2 signifies that institutional ownership has a positive effect on firm value with the value of $T_{statistic}$ 2.402 which is larger than the value of T_{table} 1.992. Evidently, H3 is accepted. This study proves that the ownership of the manufacturing firms listed at the Indonesia Stock Exchange by the internal and external parties also needs to be considered by the investors and firm management because share ownership can affect the amount of agency costs that arise. This study supports the agency theory of Jensen and Meckling (1976) stating that greater equity ownership improves firm performance because it aligns the managers' monetary incentives with the incentives of the other shareholders, thereby reducing the standard principal-agent problems.

Conclusion

The results of this study indicate that all the proposed hypotheses are accepted. The variables of environmental performance, financial leverage, and institutional ownership are found to have positive relationships with market performance or firm value. The findings show that good environmental performance gives a good image of a firm so that it can attract more investors to invest. Meanwhile, financial leverage and institutional ownership contribute to strengthening the agency theory which states that the presences of forests and concentrated ownership lead the agent to earn more profits.

Although the results of this study contribute to the agency theory, this study has limited samples of only 20 firms, and the indicators of the variables are still very simple. Thus, the results of this study do not give a significant contribution.

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