The Influence of Capital Structure and Management Quality on Firm Value With Capital Expenditure as Moderating Variable in the Primary Consumer Goods Sector on the Indonesia Stock Exchange

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Abstract

The purpose of this study is to determine the effect of capital structure and management quality on firm value and the effect of capital expenditure as a moderating variable on the effect of capital structure and management quality on firm value. The population in this study is the Primary Consumer Goods Sector Companies on the Indonesia Stock Exchange (IDX) from 2016 to 2020, of which there are 92 companies. The sampling technique is purposive sampling, so the research sample is 59 companies. The analysis stages of this study include descriptive statistical analysis, classical assumption testing, multiple linear analysis, correlation coefficient analysis and determination, hypothesis testing, and moderating regression analysis. The results of the study show that capital structure and management quality have a positive effect on firm value, and capital expenditure has a moderating effect that weakens the effect of capital structure on firm value, while capital expenditure has a moderating effect that strengthens the influence of management quality on firm value.

Keywords: Capital Structure, Management Quality, Capital Expenditure, Company Value.

1. Introduction

The growing Indonesian economy encourages entrepreneurs to develop their business in Indonesia (Pertiwi & Pratama, 2012). In running its business, every company must consider the value for money factor. Companies that perform well usually apply the 3E concept, namely economy, efficiency, and effectiveness. Economical is a company's way to use its resources as efficiently as possible. In general, efficiency is associated with productivity, which is the company's way of minimizing inputs and maximizing output. Meanwhile, effectiveness is closely related to the expected output with the output achieved. These three elements are the basis used by companies in managing their business or known as value for money (Mardiasmo, 2009). Value for money that is fulfilled indicates that the company is performing well, which can increase the value of the company (Duarte, Lloyd, Kotas, Andronis, & White, 2019; HELBY PETERSEN, 2019; Kissi, Adjei-Kumi, Twum-Ampofo, & Debrah, 2020).

Firm value is the investor's view of the company's success, generally associated with its share price (Adiputra & Hermawan, 2020; Hirdinis, 2019; Husain & Sunardi, 2020; Qiu, Jiang, Liu, Chen, & Yuan, 2021; Rehman, 2016). (Kusumajaya, 2011) reveals that the value of the company is important for the company because this value reflects the success of the company, which can affect the public's view of the company. The high value of the company reflects the welfare of shareholders. Tobin's Q is a measuring tool to measure the value of the company (Alghifari, Triharjo, & Juhaeni, 2013; Butt, Baig, & Seyyed, 2021; Chung & Pruitt, 1994; Dzahabiyah, Jhoansyah, & Danial, 2020; Ishaq, Islam, & Ghouse, 2021; Maswadeh, 2021). Therefore, the author chooses Tobin's Q to be a tool for measuring firm value, which is the ratio of market capitalization and total debt to the company's total assets.

The capital structure shows the comparison between the company's capital and the debt needed to finance the company's operational activities. The use of the right capital structure means that the company allocates its funds for appropriate and useful company activities so that it is believed to increase the value of the company. The capital structure in this study is calculated by the Debt to Assets Ratio (DAR) by comparing all debt to all company assets.

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Good management quality can show high company value. The quality of management in this study is the success of the company's management in maintaining and increasing company profits through the use of its assets. The high rate of return from asset management reflects that the company's management has high quality, so it will be in demand by investors and this condition will increase the value of the company. Measurement of the quality of the company's management in generating a return on all assets belonging to the company by using Return on Assets (ROA).

Capital expenditure is an investment policy aimed at business development and expansion. This study uses the calculation of the capital investment ratio as a measure of the company's capital expenditure by comparing the company's capital expenditure for one period (capital expenditure) with all company assets. (Myers, 1977) and (Hasnawati, 2005) suggested that firm value is the main purpose of the company's capital expenditure in the future. According to (Miller & Modigliani, 1961) and (Fama & French, 2001) firm value is highly dependent on investment decisions.

The company's capital expenditure is to create future benefits; Capital expenditure is used to purchase fixed assets to add fixed value to assets with a useful life of several years. (Mwangi, 2014) reveals that capital expenditure has a significant positive effect on financial performance.

This study aims to determine the effect of capital structure and management quality on firm value and to assess the moderating effect of capital expenditure variables on the effect of these two variables on Primary Consumer Goods Sector Companies on the IDX.

2. Literature Review

The consumer goods sector is one of the sectors on the stock exchange with issuers including food and beverage companies, pharmaceuticals, supermarkets, cigarette manufacturers, household goods, agricultural products, and personal care goods. The primary consumer goods industry is an industry that produces goods and services that are needed and consumed by humans. Thus, this sector has good potential and prospects (Subramanyam, 2017).

One way to achieve the company's goal to optimize the welfare of shareholders is to increase the value of the company. Company valuation is important for management and investors to evaluate the fairness of the company's stock price. According to (Djaja, 2020), the purpose of evaluating the fairness of stock prices is to find out whether the stock market price reflects the true value of the company or has over value or undervalue. Therefore, the value of a good company is a reflection of the public's perception of the company is also good. Tobin's Q is a measuring tool to measure the value of the company.

Measurement of firm value with Tobin's Q described in (Chung & Pruitt, 1994) uses the following formula:

\[
\text{Tobin's Q} = \frac{\text{Market Value Equity} + \text{Total Liabilities}}{\text{Total Assets}}
\]

Tobin's Q is the ratio between market capitalization and total debt to the company's overall wealth. Market capitalization is the closing market price of the common stock multiplied by the number of shares of the company in circulation. (Sukamulja, 2005) explains that the high Tobin's Q ratio shows that the company's business prospects can grow in the future, so investors need to sacrifice to get the company. Thus, Tobin's Q can reflect the level of prospects for the value of the company in the future.

Capital structure is the proportion of funding between debt and company capital. (Agus Harjito, 2008) state that the optimal capital structure is defined as a capital structure that makes efficient use of capital costs so as to maximize firm value. Therefore, the use of the right capital structure means that the company allocates its funds for appropriate and useful company activities so that it is believed to increase the value of the company. The company's management can monitor the capital structure by using financial ratio analysis, namely DAR.

According to (Fahmi, 2012), the DAR value is calculated by the formula:

\[
\text{DAR} = \frac{\text{Total Debt}}{\text{Total Assets}}
\]

According to (Agus Harjito, 2008), DAR indicates the level of company assets that are financed with all debt. Where assets as company assets (assets) and debt are obligations as sources of funding from outside parties. (Sudana, 2011) says that the optimal capital structure will be achieved if the company uses debt maximally to produce maximum firm
value. It was concluded that DAR had a positive effect on firm value. The same thing is conveyed in the results of a study from (Obradovich & Gill, 2013) on American manufacturing and service industry companies and (Rehman, 2016) research on non-financial companies also suggests that DAR has a positive effect on firm value. Based on the results of other researchers' studies, the first hypothesis in this study is H1 that capital structure has a positive effect on firm value.

Maximizing the value of the company can also be assessed based on the quality of company management. (Sugeng, 2017) states that the creation of company value is done by looking at the quality aspects of company management in increasing revenue. According to (Marantika, 2012), quality management is the company's success in managing its resources as effectively and efficiently as possible which reflects the company's level of health. The quality of company management in this study is measured by the profitability ratio, namely ROA. According to (Fahmi, 2012), the ROA value is calculated using the formula:

\[
\text{ROA} = \frac{\text{Earning After Tax (Net Profit)}}{\text{Total Assets}}
\]  

(Sudana, 2011) argues that ROA shows the company's ability to utilize its assets to generate profits. According to (Sugeng, 2017), companies that can generate profits can increase the value of their companies. Thus, ROA has a positive effect on firm value. As revealed by (Obradovich & Gill, 2013) on American manufacturing and service industry companies and research by (Alghifari et al., 2013) reported that ROA has a positive effect on firm value. Based on the results of other researchers' studies, the second hypothesis in this study is H2 that management quality has a positive effect on firm value.

In the company's financial statements, there is also an investment cash flow report to see the activities of using the company's sources of funds in financing capital expenditures in the form of company investment activities which include fixed assets and other equipment that have a long cycle. One of the investment policies used for business development or expansion is capital expenditure or often referred to as capital expenditure.

According to (Jiang, Chen, & Huang, 2006), capital expenditure is a capital expenditure activity in the form of an important investment in the company, such as the replacement or expenditure of fixed assets. Fixed assets in the company in question are new machines, new buildings or facility updates that can be utilized for the next few years. The purpose of capital expenditure is to keep the company's production process running smoothly. A smooth production process indicates a more effective use of the company's assets. In measuring the ability of capital expenditure to moderate the effect of capital structure and management quality variables on firm value, this study uses the measurement of capital investment ratio (Mardiasmo, 2009; Ross, Westerfield, & Jordan, 2016). According to (Jiang et al., 2006), the value of the capital investment ratio is calculated using the following formula:

\[
\text{Capital Investment Ratio} = \frac{\text{Capital Expenditure Annual}}{\text{Total Assets}}
\]

Companies around the world require capital expenditure investments in order to achieve company goals so as to add value to the company. In this case, it is expected that capital expenditures can be followed by future returns so as to optimize the value of the company (Manurung, FoEh, Ni Nyoman, & Saragih, 2021; Pertiwi & Pratama, 2012). The results of a study by (Jiang et al., 2006) stated that the capital expenditure made by the company during the previous 5 years had a positive effect on the company in the future after capital expenditure was made. Based on the results of other researchers' studies, the third and fourth hypotheses in this study are: H3 and H4. H3 is that capital expenditure can have a moderating effect on the effect of capital structure on firm value. In this case, it is expected that capital expenditures can be followed by future returns so as to optimize the value of the company. H4 is Capital expenditure can have a moderating effect on the effect of management quality on firm value.

3. Methods

This study uses a quantitative approach. The data collection technique is by taking documentary study data, as well as secondary data sourced from audited consolidated financial statements on the IDX official website. The object of the research is the primary consumer goods sector companies on the IDX, totaling 92 companies. The sampling was done by purposive sampling, with the criteria of Primary Consumer Goods Sector Companies registered for IPO before 2016 and audited financial reports published on the IDX official website for 5 years periodically from 2016 to 2020 and obtained a research sample of 59 companies. The analysis stages include descriptive statistical analysis, classical assumption testing, multiple linear analysis, correlation coefficient analysis and determination, hypothesis testing, and moderating regression analysis (Ghozali, 2013, 2016; Liana, 2009; Miles, Huberman, & Saldana, 2020; Priyatno, 2013; Sujarweni & Endrayanto, 2012).
4. Result and Discussions

4.1. Descriptive Statistical Analysis

The results of descriptive statistical tests on the research sample are shown in table 1.

<table>
<thead>
<tr>
<th>Table 1. Descriptive Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
</tr>
<tr>
<td>CS</td>
</tr>
<tr>
<td>KM</td>
</tr>
<tr>
<td>Tobins’ Q</td>
</tr>
<tr>
<td>Capex</td>
</tr>
</tbody>
</table>

In Table 1 it is found that the minimum capital structure value is 0.0285, the maximum return on assets is 60.72 percent, the average value of Tobin’s Q from 2016 - 2020 is 1.978592 and the standard deviation value is 2.7447725. The value of the standard deviation is greater than the average, indicating that the value of the deviation that occurs is not good, namely the existence of data values that are too extreme.

4.2. Analysis of the Effect of Capital Structure and Management Quality on Company Value

4.2.1 Classic assumption test

The test results from several classical assumption tests show that the residual values are normally distributed, and there are no problems of multicollinearity, heteroscedasticity, and autocorrelation.

4.2.2 Multiple Linear Regression Analysis

Multiple Linear Regression Analysis, Here are the results of multiple linear regression testing in table 2.

<table>
<thead>
<tr>
<th>Table 2. Multiple Linear Regression Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
</tr>
<tr>
<td>LN_CS</td>
</tr>
<tr>
<td>LN_KM</td>
</tr>
</tbody>
</table>

Based on the results in Table 2, the equations of the regression model are:

\[ Y = 0.050 + 0.328 X_1 + 0.412 X_2 + e \] (5)

4.2.3 Analysis of Correlation Coefficient and Coefficient of Determination

The results of the multiple correlation coefficient tests and the coefficient of determination are presented in Table 3. Based on the results in Table 3, the correlation coefficient value (R) is 0.678. This indicates that the capital structure and management quality of ROA are positively and strongly correlated with the firm value variable (Tobin's Q). Table 3 also shows the Adjusted R² value of 0.455 (45.5%) and the excess of 0.545 (54.5%) is influenced by other factors.
Table 3. Analysis of correlation coefficient and determination coefficient (Model Summary)\(^b\)

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.678(^a)</td>
<td>.460</td>
<td>.455</td>
<td>.59245</td>
</tr>
</tbody>
</table>

Predictors: (Constant), LN_ROA, LN_DAR

Dependent Variable: LN_TobinsQ

4.2.4 F Test.

The results of the F test are shown in Table 4.

Table 4. F Test Results (ANOVA)\(^a\)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>65.485</td>
<td>2</td>
<td>32.743</td>
<td>93.285</td>
<td>.000(^b)</td>
</tr>
<tr>
<td>Residual</td>
<td>76.868</td>
<td>219</td>
<td>.351</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>142.353</td>
<td>221</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Predictors: (Constant), LN_ROA, LN_DAR

Based on the results in the table, it is known that the calculated F value = 93.285 > 19.491 F table (Sig. 0.05). Table 4 also shows the significance value of 0.000 < 0.05. It can be stated that this research model is feasible.

4.2.5 T test.

Table 2 shows the results of the t-test, namely:

a. Effect of capital structure.

In Table 2 it is known that the capital structure variable has a t value of 5.398 > t table 1.9707 (Sig. 0.05). Table 2 also shows the significant value of the capital structure variable, which is 0.328, it shows a positive effect on firm value, which means that for every one unit increase in the firm's capital structure, the firm value will increase by 0.328 units, and vice versa. It can be concluded that the capital structure has a positive effect on the value of the company which is the sample of this study.

b. Effect of Quality management.

In Table 2, it is known that the management quality variable (return on assets) has a t value of 12.857 > t table 1.9707 (Sig. 0.05). Table 2 also shows the significant value of management quality (return on assets) 0.000 < 0.05. Based on the results of the regression coefficient value of the capital structure variable, which is 0.412, it shows a positive influence on firm value, which means that for every one unit increase in the quality of the company's management, the firm value will increase by 0.412, and vice versa. It can be stated that the quality of management has a positive effect on the value of the company that is the sample of this study.

4.3. Analysis of the Effect of Capital Structure and Management Quality on Firm Value by using Capital Expenditure as Moderating Variable

4.3.1 Classical Assumption Test

The results of the classical assumption test show that the residual value is normally distributed, there is no problem with multicollinearity, heteroscedasticity, or autocorrelation.

4.3.2 Moderation Regression Analysis

The results of the moderation regression test are shown in Table 5.
Table 5. Morderation Regression Analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>(Constant)</td>
<td>.685</td>
<td>.377</td>
<td></td>
<td>1.816</td>
<td>.071</td>
</tr>
<tr>
<td>LN_CS</td>
<td>.429</td>
<td>.742</td>
<td>.035</td>
<td>.578</td>
<td>.564</td>
</tr>
<tr>
<td>LN_KM</td>
<td>.101</td>
<td>.017</td>
<td>.339</td>
<td>5.816</td>
<td>.000</td>
</tr>
<tr>
<td>LN_Capex</td>
<td>-.200</td>
<td>.046</td>
<td>-.502</td>
<td>-4.346</td>
<td>.000</td>
</tr>
<tr>
<td>LN_CS_Capex</td>
<td>.172</td>
<td>.095</td>
<td>.216</td>
<td>1.803</td>
<td>.073</td>
</tr>
<tr>
<td>LN_KM_Capex</td>
<td>.022</td>
<td>.003</td>
<td>.624</td>
<td>8.725</td>
<td>.000</td>
</tr>
</tbody>
</table>

Based on the results in Table 5, the moderating regression model equations are

\[ Y = 0.685 + 0.429 X_1 + 0.101 X_2 - 0.200 Z + 0.172 X_1Z + 0.022 X_2Z + e \]  

(6)

4.3.3 F Test

The results of the moderated regression model F test are shown in table 6.

Table 6. F Test Moderation Regression Model (ANOVA\(^a\))

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1308.848</td>
<td>5</td>
<td>261.77066 952</td>
<td>.000(^b)</td>
<td></td>
</tr>
<tr>
<td>Residual</td>
<td>844.515</td>
<td>216</td>
<td>3.910</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2153.363</td>
<td>221</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dependent Variable: TobinsQ

Predictors: (Constant), LN_ROA_CIR, LN_DAR, LN_ROA, CIR, LN_DAR_CIR

Based on Table 6, it was found that the calculated F value was 66.952 > 4.3836 F table (Sig. 0.05). From Table 6 it is also known that the significant value is 0.000 < 0.05. So, this research model is feasible.

4.3.4 T test

Based on Table 5, it can be seen that the results of the t-test on the interaction variables between the independent variables moderated by the variable on the dependent variable are explained as follows:

a. The results of the interaction t-test of capital structure (DAR) with capital expenditure variables are 1.803 < 1.9707 t table (Sig. 0.05). In Table 5, it is also known that the significance value of the interaction of capital structure with the capital expenditure variable is 0.073 > 0.05. It can be concluded that the capital structure interaction variable with the capital expenditure variable has a negative effect on the value of the company that is the research sample.

b. The results of the t-test of the interaction quality management variable (return on assets) with the capital expenditure variable were 8.725 > 1.9707 t table (Sig. 0.05). In Table 4.5 it is also known that the significance value of the interaction of management quality (ROA) with the capital expenditure variable is 0.000 < 0.05. It is stated that the interaction variable of management quality (return on assets) with the capital expenditure variable has a positive effect on the value of the company that is the research sample.

4.3.5 Comparison of the Effect of Capital Structure and Management Quality on Firm Value before and after using Capital Expenditure as Moderating Variable.

The following are the results of the comparison of the adjusted R square (R\(^2\)) values before and after using the moderating variable in this study:
Table 7. Comparison of Adjusted R Square Values Before and After Using Moderating Variables

<table>
<thead>
<tr>
<th>Note</th>
<th>$R^2$</th>
<th>Adjusted $R^2$ ($R^2$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before using moderating variables</td>
<td>0.460</td>
<td>0.455</td>
</tr>
<tr>
<td>After using the moderating variable</td>
<td>0.608</td>
<td>0.599</td>
</tr>
</tbody>
</table>

Based on Table 7, it is known that before the interaction test with the moderating variable has an $R$ square value of 0.460 and adjusted ($R^2$) to 0.455 (45.5%) and after the interaction test with the moderating variable the value of $R$ square becomes 0.608 and adjusted ($R^2$) becomes 0.599 (59.9%). The results of the value of $R$ square and adjusted $R$ square ($R^2$) which have increased after using the moderating variable indicate that the overall moderating variable of capital expenditure can have a moderating effect on the effect of capital structure and management quality on firm value.

5. Conclusions

Based on the results of the analysis of the effect of capital structure and management quality on firm value with capital expenditure being the moderation, it can be concluded that the variable capital structure and management quality have a positive effect on firm value. The high value of the capital structure and the quality of the company's management shows that the company's value is also high.

The effect of capital structure and management quality on firm value, and capital expenditure can have a moderating effect. This is evidenced by the increase in the value of Adjusted $R$ Square ($R^2$) before and after moderation. The result of the effect of capital structure on firm value, where capital expenditure as a moderating variable has a weakening moderating effect, meaning that the higher the value of the capital structure followed by capital expenditure, the value of the company will decrease. Meanwhile, the results of the influence of management quality using capital expenditure as a moderating variable provide a moderating effect that strengthens, meaning that the higher the value of management quality followed by capital expenditure, the value of the company will also increase.

The researcher realizes that there are several weaknesses in this study so that these weaknesses can be taken into consideration by further researchers so that the results of their research produce good conclusions. This study only uses 2 independent variables, namely capital structure and management quality in influencing firm value. In addition to the two independent variables, there are still many variables that need to be proven to influence firm value.

This study has limitations so that future researchers must consider using a large sample, a longer research period, for example, more than 5 years, and adding new variables that are considered to affect firm value. Likewise, the scope of this research can also be expanded and is not only limited to primary consumer sector companies on the IDX but also needs to cover other sectors, for example by using a sample of the Compass Index 100, LQ-45, or sectors on the IDX with a larger number of samples.

References


