Determinant Factors that Affect Manufacturing Sectors Profitability: An Evidence from Consumer Goods Industry, Indonesia

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Abstract

Consumer Goods Industry (CGI) is one form of the manufacturing sector and promising choice in contributing to Indonesia's economic growth. Therefore, CGI always requires maintaining and increase the company's profit to encourage the country's economy. To achieve its objective, CGI needs to attract more and more investment and expand its business into national and even to international levels. Usually, the companies seeking additional funds; thus, they need issuing and selling the securities product such as bonds or shares to the public. In line with the previous elaboration, the present study examines determinant factors that affect manufacturing sectors profitability (Consumer Goods Industry) in Indonesia Stock Exchange. This study is designed using a quantitative approach through panel data series. The data collected from the online financial statement of 34 manufacturing listed companies for 2014 to 2018 using purposive sampling method and analysed using static panel data regression by assisting the econometric software, namely EVIEWS. This study found that operating leverage has a significant positive effect on manufacturing sectors profitability. Meanwhile, the company size has a significant negative effect on manufacturing sectors profitability. Besides that, debt to equity ratio, current ratio and company growth does not affect manufacturing companies' CGI profitability in the Indonesian Stock Exchange. This study's findings indicate that manufacturing companies in the Consumer Goods Industry sector need to increase their operating leverage because optimal operating leverage can increase profitability. Also, it is necessary to study the company size's efficiency level due to inefficient company size reduces the level of profitability of CGI companies.
Keywords:
Operating leverage, debt to equity ratio, current ratio, company size and growth, profitability, manufacturing sectors (Consumer Goods Industry).

1. Introduction
Companies in the consumer goods industry sector are companies that process raw materials into finished goods for the community. In the capital market, the consumption sector company is one of the sectors that plays an important role in improving the performance of the capital market index. Data on the Indonesia Stock Exchange has been added yearly as a form of privatization to the capital market. In 2019, there were 54 companies in the consumer goods industry sector out of a total of 668 companies included in the Indonesia Stock Exchange. This shows that the business continuity of the consumer goods industry sector is potentially in good prospects. How a company entity survive is determined by several factors. One factor is company's ability to generate profits, which are proxied, among others; return on assets, return on assets, net profit and operating profit over a certain period of time (Ernawati and Widyawati, 2015). One of the proxies that researchers use related to profitability is return on assets (ROA). Fahmi (2016) defined ROA as a ratio that analyzes the company's ability to generate returns on invested funds. Companies with a stable rate of return on assets or better represent the condition and position of the company into the future. This is due to the fact that investors tend to be careful in choosing companies as places to invest (Musnadi et al. 2019). Profitability is used as an important indicator by stakeholders in a company without ignoring regulations determined by the government (Syamni et al. 2018). The company's profitability is not always normal and shows fluctuation sometimes. This also applies to companies in the consumer goods industry sector operating in Indonesia. Thus, the purpose of this study is to examine several factors affecting profitability in the consumer goods industry sector companies in Indonesia.

2. Literature Review
This section describes the literature review related to several previous studies on factors affecting profitability in the consumer goods industry sector companies. In this study, the factors analyzed are capital structure, liquidity (current ratio), operating leverage, company growth and company size.

2.1 The effect of capital structure on profitability
Capital structure is a balance between capital and company debt. Siegel and Shim (2016) stated that capital structure is a balance of all forms of shares and long-term debt in the company. The use of the capital structure, either capital or debt, has an impact on the company's profitability level eventhough the impact received by the company is inconsistent. A study in Indonesia by Susilo et al. (2020) found that capital structure does not affect profitability. Another study in Indonesia by Wijaya et al. (2020) revealed that capital structure has a significant negative effect on profitability. Margaretha and Khairenisa (2016) stated that the capital structure variable does no have a significant effect on company profitability. Meanwhile, in Pakistan, Devi and Devi (2014) found that there is a relationship between capital structure and company profitability. In addition, Shubita and Alsawalhah (2012) in Jordan stated that capital structure has a negative effect on company profitability.

2.2 The effect of the current ratio on profitability
One of the liquidity ratios is the current ratio. Current ratio is the ratio to analyze the company's ability to meet short-term obligations before reaching due date (Fahmi, 2016). The company's ability to pay off short-term obligations allows the company to affect profitability. Research in Turky by Isik and Tasgin (2017) and Işık (2017) found that company liquidity determines company profitability. While research in Malaysia, Alarussi et al. (2018) stated that there is no relationship between company liquidity and profitability. However, other research in Malaysia by Ghasemi and Razak (2017) revealed that company liquidity has a positive effect on companies. Research by Nguyen and Nguyen (2020) found that liquidity has a positive effect on the profitability of different industrial companies in Vietnam. Saripalle (2018) also found the same result that liquidity affects the profitability of logistics companies in India, while research in Indonesia Margaretha and Khairenisa (2016) found that the current ratio does not affect the company's profitability.

2.3 Effect of operating leverage on profitability
Operating leverage is the use of fixed costs that a company must incur in its operations. Operating leverage which is proxied by the degree of operating leverage (DOL) in the company must be well managed due to the way it works which makes additional profits but can also deepen losses (Utari, 2014). In addition, Garcia - Feijóo and Jorgensen (2010) explained that degree operating leverage can increase firm value. Degree of operating leverage (DOL) is measured as by the percentage of change in profit before interest and tax divided by the change. Several recent studies found that the degree of operating leverage of the company is still inconsistent. Research by Asche et al. (2018) in Norway found that operating leverage has a significant positive effect on profitability. Gatsi et al. (2013) using data from insurance companies in Ghana found that operating leverage is positively related to profitability. Kumar (2014) found that operating leverage has a positive effect on profitability in India. Prior research by Pontoh and Ilfat (2013) using Indonesian data found that degree operating leverage has a negative effect on company profitability.

2.4 The influence of company growth on profitability
The company's growth represents the ability to maintain the company's position and condition amid various economic conditions (Kasmir, 2015). The company's ability to maintain the company's condition allows an increase in the company's profitability. Khan et al. (2018), who focuses on the telecommunications sector in India, revealed that company growth has a positive effect on profitability. Ghasemi and Razak (2017) in Malaysia stated that company growth has a negative effect on company profitability. Meanwhile, research in Sweden by Azdanfar (2013) discovered that company growth has a positive effect on profitability. Even research in America and the European Union shows that company growth affects the profitability of food industry companies (Gschwandtner and Hirsch, 2018). In similar vein, research in Indonesia by Susilo et al. (2020) also found that company growth has a positive effect on the profitability of manufacturing companies in Indonesia.

2.5 The effect of company size on profitability
The size of the company is represented as the success of the company which is represented by the total assets, total sales, total profit, tax expense, and market value. Several studies indicate that company size have a positive effect on company profitability (Alarussi et al. 2018; Khan et al. 2018; Isik et al. 2017; Ghasemi and Razak, 2017; Azdanfar, 2013)

3. Methods
3.1 Data
This study uses secondary data from the financial statements of manufacturing companies in the consumer goods industry sub sector. The data was obtained by accessing the ojk.go.id website and the respective websites of 34 of the 54 industrial consumer goods sector companies during the 2014-2018 period, totaling 170 observations. Delisted data as well as complete and audited financial reports during the study sampling period were not available for as many as 20 companies.

3.2 Models
Based on the data used, namely panel data, this research method is a static panel data regression model approach.

\[ ROA_{it} = \alpha_{it} + \beta_1 DER_{it} + \beta_2 CR_{it} + \beta_3 DOL_{it} + \beta_4 Growth_{it} + \beta_5 Size_{it} + e_{it} \] ; Dimana:

ROA = Return on asset sebagai proksi dari profitabilitas
\( \alpha \) = Konstan konstanta
\( \beta_1, \beta_2, \beta_3, \beta_4, \beta_5 \) = Koefisien regresi koefisien regresi
DER = Debt equity ratio
CR = current ratio
DOL = Degree of operating leverage
Growth = company growth
SIZE = Company size
e_{it} = Error term on company i period t

4. Results and Discussion
4.1 Results
The initial discussion of the research results describes a description of the research variables which include the mean, median, standard deviation, maximum value and minimum value. Next, the best model of testing results and selected models in this study will be discussed, then end with a discussion of the research results. Descriptive analysis describes the mean, median, maximum, minimum standard deviation and the number of observations. The description of each research variable used in this study can be seen in Table 1 below.

<table>
<thead>
<tr>
<th>Variabel</th>
<th>Mean</th>
<th>Median</th>
<th>S.D</th>
<th>Max</th>
<th>Min</th>
<th>Obs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>11.10</td>
<td>7.61</td>
<td>13.73</td>
<td>92.11</td>
<td>-17.61</td>
<td></td>
</tr>
<tr>
<td>DER</td>
<td>62.48</td>
<td>28.24</td>
<td>99.59</td>
<td>944.73</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>CR</td>
<td>149.41</td>
<td>102.17</td>
<td>177.70</td>
<td>863.78</td>
<td>0.58</td>
<td>170</td>
</tr>
<tr>
<td>DOL</td>
<td>-45.34</td>
<td>0.84</td>
<td>502.39</td>
<td>439.47</td>
<td>-6411.82</td>
<td></td>
</tr>
<tr>
<td>GROWTH</td>
<td>1.12</td>
<td>0.07</td>
<td>1.12</td>
<td>14.23</td>
<td>-0.74</td>
<td></td>
</tr>
</tbody>
</table>

Based on Table 1 above, it can be explained that the variables ROA, DER, CR, DOL, AND SIZE have a standard deviation value that is greater than the average value. This shows that all data fluctuates greatly, except for growth. ROA has a maximum value of 92.11% with a minimum value of -17.61%. Furthermore, DER has a maximum value of 944.73 with a minimum value of 0.00, meaning that there is a possibility that manufacturing companies in the consumer goods industry sector do not carry out activities in a certain period of time. Then the CR variable has a maximum value of 863.78% with a main value of 0.58%. DOL has a maximum value of 439.47% with a minimum value of -6411.82%. and GROWTH has a maximum value of 14.23% with a minimum value of -0.74%. and the last variable SIZE has a maximum value of 30.53% with a minimum value of 13.13%

The results of research regression where the dependent variable is profitability which is proxied by return on assets. Meanwhile, the independent variable is the capital structure (DER), the liquidity ratio is proxied by the current ratio (CR), degree of operating leverage (DOL), company growth (GROWTH) and company size (SIZE). The study was tested with a panel regression model with the common effect model, fixed effect model and random effect model approach. After doing the Chow and Hausman model tests, it was found that the best model in this study was the fixed effect model (Table 2). The Chow test results showed that the value of the Chi 2 Cross-section is 33 and significant at the 1 percent level. This can be interpreted that the fixed effect model was selected and continued to the Hausman test. The results of the Hausman test found that the cross-section value was random 5 and significant at 5%. It can be concluded that the best model in this study is the fixed effect model (Widarjono, 2013).

<table>
<thead>
<tr>
<th>Variabel</th>
<th>Common Effect Model</th>
<th>Fixed Effect Model</th>
<th>Random Effect Model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coeff. t-statistic</td>
<td>Coeff. t-statistic</td>
<td>Coeff. t-statistic</td>
</tr>
<tr>
<td>C</td>
<td>30.3204 7.055***</td>
<td>36.2485 0.4698 30.9121 4.8309***</td>
<td></td>
</tr>
<tr>
<td>DER</td>
<td>0.0131 1.3076</td>
<td>0.0059 0.4576 0.0096 1.3868</td>
<td></td>
</tr>
<tr>
<td>CR</td>
<td>0.0012 0.2220</td>
<td>-0.0016 -0.1004 0.0007 0.1144</td>
<td></td>
</tr>
<tr>
<td>DOL</td>
<td>0.0017 0.8420</td>
<td>0.0032 1.8019* 0.0027 1.9711*</td>
<td></td>
</tr>
<tr>
<td>GROWTH</td>
<td>-0.3556 -0.4008</td>
<td>-1.3524 -1.6866* -1.0417 -0.4238</td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.8663 -4.9836***</td>
<td>-1.0739 -0.3212 -0.8713 -3.0452***</td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>0.1486 0.5473</td>
<td>0.0883 3.1765</td>
<td></td>
</tr>
<tr>
<td>F-Statistic</td>
<td>5.7260***</td>
<td>4.1680***</td>
<td>3.1765</td>
</tr>
<tr>
<td>Chow Test</td>
<td>Cross section Chi Square : 33***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hausman Test</td>
<td>Cross section Random : 5**</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Based on Table 2 above, it can be explained that two of the five independent variables affect company profitability (ROA), namely: operating leverage (DOL), and firm size (SIZE). While the other three variables; capital structure (DER), current ratio (CR), and company growth (GROWTH) do not significantly affect ROA. The static panel data regression equation in this study is as follows:

$$\text{ROA} = 30.9121 + 0.0096\text{DER} + 0.0007\text{CR} + 0.0027\text{DOL}^* - 1.0417\text{GROWTH}^* -0.8713\text{SIZE}$$

Table 2 above indicates that The constant value (C) is 30.9121, meaning that if the variables of capital structure, current ratio, operating leverage, company growth and company size are constant, then profitability remains constant 30.9121 points. The DER coefficient value has a positive relationship with ROA of 0.0096, this means that if DER increases by 1 point, ROA will increase by 0.0096 points. The coefficient value of the CR variable has a positive relationship with ROA of 0.0007, this means that if the CR increases by 1 point, the ROA will increase by 0.0007 points. The coefficient value of the DOL variable has a positive relationship with ROA of 0.0027, this means that if DOL increases by 1 point, the ROA will increase by 0.0027 points. The coefficient value of the GROWTH variable has a negative relationship with ROA of - 1.0417, this means that if GROWTH increases by 1 point, ROA will decrease by 1.0417 points. The SIZE variable coefficient value has a negative relationship with ROA of -0.8713, this means that if the size increases by 1 point, the ROA will decrease by -0.8713 points. The results of the F test found that the F-count is 3.1765 with an F-table value of 2.27 which means that the F-count> F-table means that all independent variables as a whole affect the profitability variable. The R-Square value is 0.5473 or 54.73%. This shows that ROA can only be explained by the variables DER, CR, DOL, Growth, and Size of 54.73%. While the rest is explained by other factors which were not analyzed in this study.

4.2 Discussion

4.2.1 The effect of DER on return on assets
The results of the study found that the capital structure variable (DER) has no effect on the profitability of manufacturing companies in the consumer goods industry sector. This finding is consistent with the results of the study by Susilo et al. (2020) who found that the capital structure did not affect profitability. Margaretha and Khairunisa (2016) who analyzed small and medium enterprises in Indonesia. This indicates that the high debt composition has not been able to boost the profitability of manufacturing companies operating in Indonesia.

4.2.2 The effect of CR on return on assets
The results of the study found that the current ratio had no significant effect on profitability in manufacturing companies in the consumer goods industry sector on the Indonesia Stock Exchange. This finding is in line with Margaretha and Khairunisa (2016) who focus their research on small and medium business. Research by Alarussi et al. (2018) revealed that the current ratio or (CR) did not significantly affect the profitability of companies on the Bursa Malaysia. This finding indicates that generally companies in the consumer goods industry sector are able to pay off their short-term obligations when the payments are due. Nevertheless, the level of current ratios has not been able to leverage the company's profitability.

4.2.3 The effect of DOL on return on assets
The results of this study found that degree operating leverage (DOL) has a significant positive effect on profitability (ROA) in manufacturing companies in the consumer goods industry sector on the Indonesia Stock Exchange. This finding is in line with several previous research by Asche et al. (2018) who focused on the salmon industry in Norway; Gatsi et al. (2013) who focused on insurance companies in Ghana and Kumar (2014) who focused on Bata companies in India stated that degree operating leverage had a positive effect on companies. This happens because the greater the production cost, which is fixed, the greater the effect of leverage in boosting company profits.

4.2.4 The influence of growth on return on assets
The results of this study found that the company growth variable has a significant negative effect on Profitability (ROA) in manufacturing companies in the consumer goods industry sector on the Indonesia Stock Exchange. This finding is in line with Ghasemi and Razak (2017) in Malaysia who stated that company growth has a negative effect on company profitability. This finding indicates that the Indonesian consumer goods industry sector companies are still in the process of company growth. However, the company's growth has not been able to be accompanied by an increase in company profits.

4.2.5 The effect of SIZE on return on assets
The results of the study found that company size has no significant effect on profitability in manufacturing companies in the consumer goods industry sector on the Indonesia Stock Exchange. This finding is not in line with several previous studies (Alarussi et al. 2018; Khan et al. 2018; Isik et al. 2017; Ghasemi and Razak, 2017; Azdanfar, 2013). This finding indicates that manufacturing companies tend to use external capital loans in their operations. The use of larger capital is still done to be able to compete or survive in the industry. However, the external capital loan only adds to the burden of the company's debt, thereby reducing its profitability.

5. Conclusion
There are five independent variables discussed in this study, namely capital structure, current ratio, operating leverage, company growth, and company size with profitability as the dependent variable. After the regression analysis was carried out, it was found that two variables among the five independent variables could significantly influence the profitability of the consumer goods industry company, namely the degree of operating leverage variable and the company growth variable. However, the three other variables, namely capital structure, current ratio, and company growth do not significantly affect the company.

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