Effect of Firm Size on Sales Growth with Capital Structure as An Intervening Variable

Shafarina Dewi Kusuma¹, Nurika Restuningdiah², Puji Handayati³
Jurusan Akuntansi, Fakultas Ekonomi, Universitas Negeri Malang¹,²,³
Jl. Semarang 5, Malang 65141, Indonesia
Correspondence Email: nurika.restuningdiah.fe@um.ac.id

ABSTRACT

The increasing need for consumer goods can cause the sectors of consumer goods are trying to increase their production activity which is supported by the firm's performance. It gives a signal of the high level of cash flow in the future and as a positive signal to creditors as an indication of the firm's sales growth. The purpose of this research is to test the validity of trade-off theory and resource-based view theory. In addition, this study aims to determine the direct effect and indirect effect between firm size on sales growth through capital structure. The sample used in this study are the sixteen companies for three years and those were tested by using path analysis and uses a quantitative research approach. The results of this study prove that firm size has a significant positive effect on sales growth through capital structure, which is proven based on the comparison of the indirect effect with the direct effect. This study aims to determine the direct effect and indirect effect between firm size on sales growth through capital structure. The sample used in this study is sixteen consumer goods sector companies that are listed on the Indonesia Stock Exchange throughout 2016-2018. Sixteen companies were tested using path analysis. The result of this study shows that firm size has a significant positive effect on sales growth through capital structure, which is proven based on the comparison of the indirect effect with the direct effect.

Keywords: Capital Structure, Firm Size, Sales Growth

JEL Classification Codes: L25, G32, F10

INTRODUCTION

The large population in Indonesia causes an increase in public interest in the consumer goods sector, so this sector tries to always innovate so that the products produced can be consumed by the community continuously. The increasing demand causes the consumer goods sector to try to increase its business activities which are supported by the company's performance. After a challenging year, in 2016 consumer goods companies around the world increased due to political upheaval in several countries.

During 2016-2018 the consumer goods sector had the highest sales growth rate compared to other sectors. Consumer goods companies in the first semester experienced an increase in sales compared to the previous period (Simanora, 2017). Comparison of each level of sales growth for each sector listed on the Indonesia Stock Exchange during 2016-2018 can be seen in the figure 1:
Figure 1 shows that the consumer goods sector is the highest sales growth, followed by the automotive sector and finance. The financial aspect ratio in financial management is useful for measuring the performance of a company, one of which is the ratio of sales growth. Sales growth is a ratio to measure the size of a company's ability to maintain existence that reflects the level of productivity (Kodrat & Herdinata, 2009). Sales growth illustrates the increase in sales from year to year. Sales growth occurs when the company experiences an increase in the number of sales compared to the previous period (Meriani & Krisnadewi, 2012).

In consumer goods companies such as PT Unilever Indonesia Tbk. (UNVR) in the last five years had net sales of UNVR continued to increase to reach Rp 41.2 trillion in 2017 (Simanora, 2018). In addition, PT Indofood Sukses Makmur Tbk revealed that the financial statements of the INDF shares in 2015-2017 each experienced a successive increase in sales of Rp 64.06 trillion, Rp 66.65 trillion, and Rp 70.18 trillion or respectively grew 0.73%, 4.04%, and 5.2%. Meanwhile, in the September 2018 report, INDF’s net sales rose 3.04% from the position of Rp 71.80 trillion in the same period the previous year (Simanora, 2018).

Sales growth is the difference between total sales in the specified period and the previous period (Harahap, 2008). Sriwardany in Wijaya & Utama (2014) argues that the increase in sales signals a high level of cash flow in the future. This can give a positive signal to creditors on indications of the company's development. Brigham & Houston (2001) state that one of the factors that can influence sales growth is capital structure, which means a capital structure that comes from high debt requires companies to be able to offset sales of products owned by the company so that profits from high sales can be used by companies to pay their obligations. Koto and Wansa (2019) stated that sales growth has a non-significant positive effect on the firm value.

In addition to the capital structure, firm size can also be a factor that influences the company's sales growth. The higher the size of a company shows that the company has a greater total asset that can be utilized to increase sales from year to year because large companies try to always innovate in increasing sales (Irfan & Ali, 2017). Sales growth experienced by the company can be seen by calculating the difference in sales of the current year with the previous year (Kasmir, 2012). Lumapow (2018) argued that company size has a negative but insignificant effect on debt policy.

The size of the company becomes a very important factor in helping the company's sales growth because the higher the company, the better the manager's performance in seeing the market as a company reference to increase sales. In addition, large companies have more ability to manage their assets to achieve optimal performance to increase company sales growth. The previous studies only tested factors that influence sales growth with different research results (inconsistency) but this research develops the models by adding capital structure as an intervening variable function as an intermediary between firm size.
and sales growth. The capital structure aims to boost the company's performance. If you
only rely on capital or equity, of course, the company will have difficulty in expanding a
business that requires additional capital.

Based on the description, this research aims to find out the direct and indirect influence
between firm size on sales growth through capital structure. So, the title of the research
"Effect of Firm Size on Sales Growth with Capital Structure as Intervening Variables"

**Theoretical Basis**

The trade-off theory is a development of the Modigliani-Miller theory (Brealey & Myers,
1991). The optimum capital structure is the capital structure that has the most impact on
maximizing the company's sales growth. So that the capital structure or debt ratio that is
lower or higher than the optimum capital structure will produce a company value that is
not optimal (Sugeng, 2017). Based on trade-off theory, financial managers play a role in
determining the amount of debt used by companies to increase sales growth more
efficiently. The decision can only be made possible through trade-off theory because the
theory expects that if a company takes a lot of debt, the profits obtained by the company
will increase due to tax protection (Irfan & Ali, 2017).

Resource-based view theory (RBV theory) first put forward by Penrose, (2009) states that
RBV theory is a collection of company resources that are useful as a controller behind the
performance and competitiveness of companies in increasing company productivity and
also as a company's ability to achieve excellence competitive company. Company
resources can be utilized to the maximum if company managers have extensive insight
for the company to grow the company to provide a competitive advantage (Peteraf, 1993).
Resource-based view theory assumes that companies can achieve a competitive
advantage that can increase company sales and obtain high profits by controlling strategic
assets, both tangible and intangible assets (Penrose, 2009)

**Effect of Firm Size on Capital Structure**

The size of the company describes the size or size of the total assets owned by the
company (Sartono, 2015). The size of the company shows the high or low operating
activities of a company. The greater the size of a company, the more companies use
external funds because large companies have high funding needs (Susanti & Agustin,
2015). The higher the size of a company affects the amount of debt that comes from the
company's external funds.

Based on the trade-off theory proposed by Myers (1984) the theory is a capital structure
theory that considers and reconciles the advantages and disadvantages. Funding from
debt can bring both profits and losses. So, companies must have optimum capital structure
targets to balance bankruptcy risk with the benefits derived from tax protection. Based on
the above research results, the following hypotheses can be drawn:
H1: Firm size has a positive effect on capital structure.

**Effect of Firm Size on Sales Growth**

The size of the company describes the size of a company that can be seen through the
total assets of a company. The higher the size of the company is believed to increase
sales from year to year because large companies try to always innovate in increasing
sales (Irfan & Ali, 2017). According to resource-based view theory, the more resources a
company has, the greater the opportunity for companies to increase company sales
because the resources they have can be utilized to the maximum extent possible for

Company resources can be utilized to the maximum if company managers have extensive
insight for the company to grow the company to provide a competitive advantage (Peteraf,
1993). Resource-based view theory assumes that companies can achieve a competitive
advantage that can increase company sales and obtain high profits by controlling strategic assets both tangible and intangible assets (Penrose, 2009). So, the resource-based view theory shows a positive direct relationship between firm size and sales growth, because the greater the size of a company, it shows that the company can control and manage the assets of the company in increasing company sales. Based on the research results above, it can be drawn the following hypothesis:

H2: Firm size has a positive effect on sales growth.

Effect of Capital Structure on Sales Growth

One factor that can influence sales growth is capital structure (Brigham & Houston, 2001). Capital structure is a comparison between foreign capital (long term) with own capital in a company (Riyanto, 2015). Companies that are experiencing quite rapid development usually these companies plan to expand, increase capacity, or new businesses which of course require more funds than companies that have not developed (Sugeng, 2017). The company needs more funds from outside the company (external funds), namely debt.

Companies with higher debt levels tend to have high sales as well as companies that use funding from low debt. This statement is following the trade-off theory which states that companies can choose which systems can be used by companies that can provide benefits to companies either through debt or equity. Based on the trade-off theory, funding originating from debt gives the advantage in the form of tax and provides losses for the cost of debt (Sugeng, 2017). Based on the research results above, it can be drawn the following hypothesis:

H3: Capital structure has a positive effect on sales growth.

Effect of Firm Size on Sales Growth Through Capital Structure

The higher the size of the company, the greater the opportunity for companies to increase sales. Another factor that can affect sales growth is capital structure, which is one way for companies to obtain external funding. High company sales growth requires an increase in production volume so the company needs more funds. The higher the size of a company, the easier it is for companies to borrow funds for the needs of the company as capital in increasing sales growth to the maximum.

But not all companies can easily get loan funds from creditors. The results of Chen and Strange's research in Ichwan & Widyawati (2015) show that the larger the size of a company, the greater the operating activities of the company. So that large companies are generally easier to obtain debt compared to small companies because it relates to the level of trust of credit providers in the company. This is by the trade-off theory which explains that the capital structure can be used as a prediction of whether a company can experience profits or losses for the company (Sugeng, 2017). The size of a company can affects the management of the company's capital structure because large companies tend to diversify well so that the possibility of failure for the company is low. Based on the research results above, it can be drawn the following hypothesis:

H4: Firm size has a positive effect on sales growth through capital structure

RESEARCH METHOD

This research uses a quantitative research approach. Quantitative data used in the study includes components contained in the financial statements of consumer goods sector companies listed on the Indonesia Stock Exchange in 2016-2018.

The population of this research is all companies of the consumer goods sector which are listed on the Indonesia Stock Exchange in 2016-2018. The number of consumer goods sector companies that were actively listed on the Indonesia Stock Exchange from 2016 to 2018 was 51 companies. The sampling method is the Purposive sampling method.
2. Consumer goods sector companies publish the company's financial statements that have been audited for three consecutive years, namely in 2016-2018.

The sample used in this study was 16 manufacturing companies listed on the Indonesia Stock Exchange with a study period of 3 years (2016-2018).

Data Collection Technique
The data in this study were obtained by researchers using documentation techniques. The documentation technique used by researchers is to use documents in the form of financial statements of consumer goods sector companies in 2016-2018 published through the official website of the Indonesia stock exchange.

Data Analysis Technique
The data analysis technique used in this study is path analysis. Before using path analysis, it is required to do correlation and regression analysis first. Next in the calculations used software in the form of SPSS 25 (Riduwan & Kuncoro, 2015).

RESULTS AND DISCUSSION
Description of variables aims to provide a description or description of each variable based on data that is processed descriptively. Descriptive testing gives the characteristics of each variable regarding the mean (mean), minimum value, maximum value, and standard deviation.

Table 1. Descriptive Statistics

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm size</td>
<td>48</td>
<td>24.350</td>
<td>32.704</td>
<td>28.22719</td>
<td>2.014371</td>
</tr>
<tr>
<td>Capital Structure</td>
<td>48</td>
<td>.186</td>
<td>1.867</td>
<td>.92240</td>
<td>.405681</td>
</tr>
<tr>
<td>Sales Growth</td>
<td>48</td>
<td>.092</td>
<td>25.925</td>
<td>11.58536</td>
<td>5.671844</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Firm Size
Based on Table 1 the minimum value of the firm size is 24,350 and the maximum value is 32,704. These results indicate that the size of the companies sampled in this study ranged from 24,350 to 32,704 with an average value of 28,22719 on the standard deviation of 2,014371. The highest firm size occurred at PT Indofood Sukses Makmur Tbk (INDF) of 32,704 while the lowest firm size occurred at PT Kedaung Indah Can Tbk (KICI) of 24,305.

Capital Structure
Based on Table 1 the minimum value of the capital structure is 0.186 and the maximum value is 1.867. These results indicate that the magnitude of the capital structure that is sampled in this study ranged from 0.186 to 1.867 with an average value of 0.92240 at a standard deviation of 0.405681. The highest capital structure of the company occurred at PT Tri Banyan Tirta Tbk (ALTO) of 1.867 while the lowest capital structure occurred at PT Delta Djakarta Tbk (DLTA) of 0.186.

Sales Growth
Based on Table 1 the minimum value of sales growth is 0.092 and the maximum value is 25.925. These results indicate that the magnitude of sales growth sampled in this study ranged from 0.092 to 25.925 with an average value of 11.58536 at a standard deviation
of 5.671844. The highest sales growth occurred at PT Pyridam Farma Tbk (PYFA) of 25,925 while the lowest sales growth occurred at PT Kalbe Farma Tbk (KLBF) of 0.092.

**Normality test**
The value of Asymp Sig. (2-tailed) in the equation, 0.071 greater than 0.05 so the regression model is normal. Asymp Value of Sig. (2-tailed) equation II is 0.200 greater than 0.05 so the regression model is normal.

**Autocorrelation Test**
The Durbin-Watson value in the equation is 0.906 while in equation II it is 1.479. Both regression models are good because there are no symptoms of autocorrelation in the regression model.

**Multicollinearity Test**
Tolerance and VIF values in the equation is 1.000 while in equation II tolerance values are 0.814 and VIF is 1.222. So that the two regression models there are no symptoms of multicollinearity between the independent variables used.

**Heteroscedasticity Test**
The points in equations I and II spread randomly and spread both above and below the number 0 and the Y-axis. So, it can be concluded that there was no heteroscedasticity in the regression model created.

**Hypothesis Testing**
The next step in determining the path analysis results is to create a structural equation, namely:

**Structural regression equation 1:**
\[ Y = Y = \rho_1 X + e_1 \]
\[ Y = 0.431 X + 0.902e \]

The regression equation explains that the regression coefficient (\(\beta_1\)) indicates the value of the firm size variable (X) of 0.431 meaning that each increase of one unit will cause an increase in the capital structure (Y) of 0.431. The residual coefficient of 0.902 means that 90.2% is influenced by other variables outside the pathway model being studied.

**Structural regression equation II:**
\[ Z = \rho_2 X + \rho_3 Y + e_2 \]
\[ Z = 0.322 X + 0.388 Y + 0.799 e \]

The regression equation explains the regression coefficient (\(\beta_1\)) shows the value of the firm size variable (X) of 0.322 means that each increase of one unit will cause an increase in sales growth (Z) of 0.322. The regression coefficient (\(\beta_2\)) shows the value of the capital structure variable (Y) of 0.388 meaning that each increase of one unit will cause an increase in sales growth (Z) of 0.388. The residual coefficient of 0.799 means that 79.9% is influenced by other variables outside the pathway model being studied.

Figure 2 is the path analysis model of the Direct effect an Indirect Effect.
Figure 2. Path Analysis Model

Direct Effect
1. Effect of Firm Size on Capital Structure
Based on the results of testing the effect of firm size on capital structure in table 4.8, shows that the size of consumer goods companies in Indonesia has a regression coefficient value of 0.431 and a significance value of 0.002 smaller than the level of significance (α = 0.05) so that H01 is rejected. This means that the size of the company affects the capital structure.

2. Effect of Firm Size on Sales Growth
Based on the results of testing the effect of firm size on sales growth in table 4.10, shows that the size of consumer goods companies in Indonesia has a regression coefficient of 0.322 and a significance value of 0.019 less than the significance level (α = 0.05) so H02 is rejected. This means that the size of the company affects sales growth

3. Effect of Capital Structure on Sales Growth
Based on the results of testing the effect of capital structure on sales growth in table 4.10, shows that the DER of consumer goods companies in Indonesia has a regression coefficient value of 0.388 and a significance value of 0.005 smaller than the level of significance (α = 0.05) so H03 is rejected. This means that the capital structure influences sales growth.

Indirect Effects
Effect of Firm Size on Sales Growth Through Capital Structure
Based on table 4.8 the direct effect of firm size variable (X) on capital structure (Y) of 0.431 and the direct effect of capital structure variable (Y) on sales growth (Z) in table 4.10 of 0.388. So, the probability value of the indirect effect of firm size on sales growth through capital structure is 0.167 with the following calculation:

\[ 0.431 \times 0.388 = 0.167 \]

In table 4.10 the magnitude of the direct effect of firm size variable (X) on sales growth (Z) is 0.322, while the magnitude of the total effect which is the result of calculations derived from the number of direct influences with the indirect effect that is firm size directly on sales growth through capital structure is 0.489 with the following calculation:

\[ 0.322 + 0.167 = 0.489 \]

Furthermore, to determine the effect of mediation, testing is done using the Sobel test. Here are the standard errors of the indirect effect coefficient (Sp2p3):

\[ Sp2p3 = \sqrt{p3^2Sp2^2 + p2^2Sp3^2 + Sp2^2Sp3^2} \]

\[ Sp2p3 = \sqrt{0.002659 + 0.003232 + 0.000307} \]

\[ Sp2p3 = \sqrt{0.006198} = 0.079 \]
Based on the results of Sp2p3, the t value of the mediating influence statistic can be calculated using the formula:

$$t = \frac{p2p3}{Sp2p3} = \frac{0.167}{0.079} = 2.114$$

Because the t value of 2.144 is greater than the t table with a significance level of 0.05 which is 1.96, it can be concluded that the mediation coefficient is 0.167, which means that there is a mediating effect. This means that the size of the company affects sales growth through capital structure.

**Coefficient of Determination**
The results show that the R2 value is 0.362. This shows that the relationship of the independent variable of firm size and capital structure to explain the magnitude of variation in the dependent variable, namely sales growth is 36.2%.

**Coefficient of Total Determination (Rm2)**
The total diversity of data can be explained by the coefficient of total determination or Rm2. The following results are calculated from the coefficient of total determination:

$$Rm^2 = 1 - (0.902)^2(0.799)^2 = 0.481$$

Based on the total diversity of data explained through Rm2 the results obtained were 48.1% or in other words, the information contained in the 48.1% data can be explained by the variables discussed in this study. While 51.9% is explained by other variables and errors. The results of this study successfully proved that the capital structure can also mediate the size of the company against sales growth so that the capital structure can be used as an intervening variable in this study.

**Discussion**

**Effect of Firm Size on Capital Structure**
The results of statistical analysis prove that the firm size variable has a positive and significant effect on a capital structure derived from the debt of consumer goods companies in Indonesia in 2016-2018. The company will utilize the company's assets to get loan funds from lenders (creditors). That is because creditors believe that the company has a sufficient level of liquidity. So that this research is by the trade-off theory which states that the company has an optimal capital structure target to balance the risk of bankruptcy with the tax advantages of using debt as the company's capital structure (Sugeng, 2017).

This result shows that large companies tend to diversify well so that the possibility of failure for companies is low. Likewise, large companies have a greater chance of getting loans compared to smaller companies because there is a small possibility of bankruptcy. It is proven that companies that have maximum value for firm size occur at PT Indofood Sukses Makmur Tbk (INDF). PT Indofood Sukses Makmur Tbk is the largest producer of various types of food and beverages in Indonesia. In 2016-2018 the size of the company experienced an increase followed by a capital structure derived from debt.

**Effect of Firm Size on Sales Growth**
The results of statistical analysis prove that the firm size variable has a positive and significant effect on the growth of consumer goods company sales in Indonesia in 2016-2018. This shows that consumer goods companies in Indonesia that have high firm sizes will increase the company's sales growth. Therefore, judging from the total assets of consumer goods companies are considered to have good sales growth prospects.
So the results of this study are consistent with resource-based view theory which states that companies can achieve a competitive advantage that can increase company sales and obtain high profits by controlling strategic assets both tangible and intangible assets (Eisenhardt & Martin, 2000). It is proven that companies that have maximum value for firm size occur at PT Indofood Sukses Makmur Tbk (INDF). In 2016-2018 the size of the company experienced an increase followed by an increase in the company's sales growth.

Effect of Capital Structure on Sales Growth
The results of statistical analysis prove that the capital structure variable measured by the ratio of debt-to-equity ratio has a positive and significant effect on sales growth of consumer goods companies in Indonesia in 2016-2018. If the company has an optimal capital structure derived from debt, the company can use it to increase the company's sales growth and vice versa the lower the capital structure used under the optimal capital structure in the consumer goods sector, the lower the company's sales growth.

The results of this study are under the trade-off theory which states that companies can choose which systems can be used by companies that can provide benefits to companies either through debt or equity. Based on trade-off theory, funding originating from debt can provide tax advantages and losses for the costs incurred from debt (Sugeng, 2017). Proven in companies that have high capital structure, namely PT Tri Banyan Tirta Tbk (ALTO). PT Tri Banyan Tirta Tbk is a producer of bottled drinking water as a local product with international standard quality. In 2016-2018 the capital structure experienced an increase followed by an increase in the company's sales growth.

Effect of Firm Size on Sales Growth through Capital Structure
The results of this study indicate that firm size has a positive and significant effect on sales growth through capital structure. Based on the comparison of the indirect effect of firm size on sales growth through the capital structure with the direct effect of firm size on sales growth, the results are 0.489> 0.322. This means that the indirect effect has a greater result than the direct effect.

This research is under the trade-off theory which explains that capital structure can be used as a prediction of whether a company can experience profits or losses for the company (Sugeng, 2017). The size of a company can affect the management of the company's capital structure because large companies tend to diversify well so that the possibility of failure for the company is low. Thus, the capital structure derived from the debt can be used to meet the company’s funding needs that can increase the company’s sales growth.

This is proven by companies that have high total assets followed by a high capital structure to increase high sales growth, those companies are PT Tri Banyan Tirta Tbk (ALTO) and PT Indofood Sukses Makmur Tbk (INDF). The company can manage and utilize the total assets and capital structure of the company properly and optimally. Both companies are committed to realizing the utilization of total assets to obtain loan funds in the form of debt in increasing the company's sales growth.

CONCLUSIONS

Based on the research findings found by researchers, the conclusion is firm size measured by Size has a positive and significant effect on capital structure proxied by Debt-to-Equity
Ratio (DER) on consumer goods companies listed on the Indonesia Stock Exchange from 2016 through 2018. This research is under trade-off theory.

Firm size measured by size has a positive and significant effect on sales growth which is proxied by Sales Growth in consumer goods companies listed on the Indonesia Stock Exchange from 2016 to 2018. This research is under resource-based view theory.

The capital structure measured by the Debt-to-Equity Ratio (DER) has a positive and significant effect on sales growth which is proxied by Sales Growth in consumer goods companies listed on the Indonesia Stock Exchange from 2016 through 2018. This research is under trade-off theory.

The size of the company measured by Size has a positive and significant effect on sales growth which is proxied by Sales Growth through a capital structure that is proxied by Debt-to-Equity Ratio (DER) in consumer goods companies listed on the Indonesia Stock Exchange from 2016 to 2018. So that this research under the trade-off theory predicts each company to achieve company profits to avoid possible losses.

Research Limitations
This study uses a sample criterion that is the audited financial statements. However, in this study, not all companies reported audited financial statements for three years in a row, namely only 16 companies from 51 companies of consumer goods companies in 2016-2018. So that in this study obtained a small total sample.

Suggestion
Based on the results and limitations of the research conducted by researchers, some suggestions can be submitted by researchers for further researchers, namely the next researcher is expected to look for audited company financial statements in other data sources that list the company's financial statements formally.

REFERENCES


