The Effect of Firm Size and Sales Growth on Profitability Mediated by Capital Structure (Study on Manufacturing Companies Registered on the IDX in the Consumer Good Industry Sub Sector)

Nekky Rahmiyati1*, Listiana Sri Mulatsih2, Alfiana3, Puji Afriyeni4, Teguh Setiawan Wibowo5
1*Universitas 17 Agustus 1945, Surabaya, Indonesia
2Universitas Bung Hatta, Padang, Indonesia
3Universitas Muhammadiyah Bandung, Bandung, Indonesia
4STAIN Bengkalis, Riau, Indonesia
5STIE Mahardhika, Surabaya, Indonesia
E-mail: nekky@untag-sby.ac.id, listiana@bunghatta.ac.id, alfiana.dr@umbandung.ac.id, afriyenipuji056@gmail.com, teguh10setiawan@gmail.com

DOI: https://doi.org/10.56457/jimk.v11i1.328

Abstract
The purpose of this study was to determine the effect of firm size and sales growth on profitability mediated by capital structure. The object of this research is a manufacturing company in the consumer goods industry sub-sector on the IDX 2018-2022. This research occurred because there was a phenomenon of increasing and decreasing profitability that occurred in several consumer good industry companies on the IDX during the 5 year period. This type of research is quantitative research, sampling using purposive sampling method that meets the criteria. This study uses secondary data obtained from the IDX. The research results show that firm size, sales growth, and capital structure have a positive effect on profitability.

Keywords: Firm Size, Sales Growth, Profitability, Capital Structure

INTRODUCTION
Economic growth and development mark the pace of globalization. The number of companies that exist today makes the competition between companies even tighter. In increasing competition in the current era of globalization, every company must be able to make adjustments and manage the functions implemented within the company, which makes the company capable and superior in the competition it faces. Going public companies aim to improve the welfare of shareholders (stakeholders) so that in carrying out its operations it can increase maximum profitability for shareholders. For go public companies, the value of the company can be seen from the value of shares and the price of shares traded on the stock exchange.

Profitability is the company's ability to earn profits in relation to sales, total assets, and own capital. Thus, long-term investors will be very interested in profitability analysis, for example, shareholders will see the benefits that will actually be received in the form of dividends (Sartono, 2010). The company has always been a concern for company owners, company management and investors. Profitability explains about ability company in obtaining profits through all existing capabilities and resources in order to determine the effectiveness of the company. Profitability is needed to measure the level of effectiveness of a company's management through profits derived from sales, as well as investment income, which is used as a benchmark for company success. For companies, the higher the profitability, the more opportunities the company has to increase employee salaries. Various types of profitability according to (Hery, 2017) which explain the returns on assets (Return on assets), returns on equity (Return on equity), gross profit margin (Gros profit margin), operating...
profit margin (Operating profit margin). measured using ROE (Return on equity).

Based on the existing data, it can be seen that the phenomenon of several manufacturing companies in the Customer Good Industry sector has experienced increases and decreases in profitability in 2018-2022. Profitability itself has experienced a significant increase from 2018 to 2020 from an average ROE of 1061.96 to 1342.1 to 1405.35, but in 2021 ROE has decreased from ROE 2020-2021 with an average ROE of 1405. 35 to 1159.98. In 2022 ROE has increased to 1892.59. It can be said that profitability fluctuates according to research conducted by Hakim (2013) and Lusangaji (2013) which states that profitability has a negative effect and this is not in line with research conducted by Liwang (2013).

Profitability can be affected by firm size and company growth. Firm size can affect profitability if total assets are high then profitability is high. In other words, companies that have a larger size affect company profitability and company value (Hasen and Juniarti, 2014). There is previous research regarding the effect of firm size on profitability. That there is no relationship between company size and profitability according to Niers and Velnampy (2014). In research conducted by Liwang (2011), Hakim (2013), Tarus et al (2014) which states that firm size has no significant effect on profitability. However, in contrast to the opinion of Kurniawan (2013), Lusangaji (2013) which states that firm size has a positive and significant effect on profitability.

According to Violeta (2017), capital structure simultaneously has a significant effect on profitability. In line with this research, companies with high levels of profitability usually have good sales stability, or high growth rates tend not to need too much funding from outside parties because they have internal sources of funds in the form of sufficient profits. Based on the data it can be seen that the phenomenon occurs several manufacturing companies in the Consumer Good Industry sub-sector which experienced a significant increase from year to year. In 2018-2022 the company's growth which is calculated based on total assets has increased from 2018 with total assets of 12,046,907 to 12,395,787 in 2019. The following year, 2020, will be 13,376,630. then in 2021 it will also increase to 14,493,217. In 2022 the firm size will also increase to 15,277,661. It can be said that firm size has fluctuated, this is of course a company that has a good growth rate will also generate good profits, therefore company growth affects profitability according to research conducted by Qiuying Li, et al (2014), Boadi and Li (2015) which states that company growth positively and significantly affects profitability. In contrast to Arif et al, (2015) which states that company growth has no significant effect on profitability. this is of course a company that has a good growth rate will also generate good profits, therefore company growth affects profitability according to research conducted by Qiuying Li, et al (2014), Boadi and Li (2015) which states that company growth positively and significantly affects profitability. In contrast to Arif et al, (2015) which states that company growth has no significant effect on profitability. this is of course a company that has a good growth rate will also generate good profits, therefore company growth affects profitability according to research conducted by Qiuying Li, et al (2014), Boadi and Li (2015) which states that company growth positively and significantly affects profitability. In contrast to Arif et al, (2015) which states that company growth has no significant effect on profitability. this is of course a company that has a good growth rate will also generate good profits, therefore company growth affects profitability according to research conducted by Qiuying Li, et al (2014), Boadi and Li (2015) which states that company growth positively and significantly affects profitability. In contrast to Arif et al, (2015) which states that company growth has no significant effect on profitability. this is of course a company that has a good growth rate will also generate good profits, therefore company growth affects profitability according to research conducted by Qiuying Li, et al (2014), Boadi and Li (2015) which states that company growth positively and significantly affects profitability. In contrast to Arif et al, (2015) which states that company growth has no significant effect on profitability.

Capital structure is permanent spending which reflects the balance between long-term debt and own capital According to Riyanto (2011). According to Sundjaja and Inge (2010) Capital structure is a complex financial decision related to other financial decisions. With this the company should make efficient funding. If the capital structure is optimal, it can be said that the company has efficient funding. There is previous research that capital structure has no significant effect on profitability according to Arista and Topowijono (2017). However, this differs from the opinion of Marusya and Magantar (2016) that
capital structure has a significant effect on profitability.

METHODS
A. Research variable
According to Sugiyono (2011) Research variables are attributes or characteristics or values of people, objects or activities that have a certain version applied by researchers to study and then conclusions are drawn.
1. Free Variables
The independent variable or independent variable is the variable that influences or causes the change or the emergence of the dependent variable (Sugiyono, 2013). In this research, the independent variables are firm size and company growth($x_1, x_2$)
2. Dependent variable
The dependent variable or dependent variable is a variable that is affected or becomes a result because of the independent variables (Sugiyono, 2013). In this study the dependent variable is profitability($y_2$)
3. Intervening Variables
The intervening variable is a variable that theoretically influences the relationship between the independent variable and the dependent variable to become an indirect relationship. The intervening variable in this study is capital structure($y_1$)

B. Population and Sample
1. Population
The population is a generalization area consisting of objects that have certain qualities and characteristics. The population in this study is 37 Consumer Good Industry Companies listed on the Indonesia Stock Exchange which have published financial reports for 2018-2022.
2. Sample
The sample is part of the number or characteristics possessed by the population. The population in this study were 27 Consumer Good Industry companies that fit the research criteria. Sampling in this study using purposive sampling.
3. Data Analysis Techniques
The technique used in this research is pathanalysis technique. According to Sugiono (2013) analysis is a path from a regression model that can be used to analyze causal relationships or variables with other variables. This path analysis uses correlation, regression, and paths so that it is able to find out to arrive at intervening variables. In analyzing the data using the SSPS (Statiscal and Service) application.
4. Descriptive statistics
Descriptive analysis is data processing that aims to describe data (Yamin and Kurniawan, 2014). Meanwhile, according to Ghozali (2016) the benefits of descriptive statistics are to give an overview of a data seen from the average (mean), median (median), majority value (modus), standard division.
C. Classic assumption test
1. Normality test
The use of this normality test is used to test whether in the regression model, confounding variables or residual variables or dependent and independent variables have a nominal distribution. The residual normality test appears or can be seen in the Kolmogorov-Sminov (KS) non-parametric statistical test. Multicollinearity Test
The existence of a perfect or definite linear relationship between some or all of these independent variables is called a multicollinearity test. The purpose of the multicollinearity test is to test whether the regression model found
2. **Heteroscedasticity Test**

   The heteroscedasticity test aims to determine whether in the regression there is an inequality of variance and residual from one observation to another. If the variance from one observer's residual to another remains constant, it is called homoscedasticity and vice versa if heteroscedasticity is carried out using the Glejser test which proposes to regress the absolute value of the residuals on the independent variables (Ghozali, 2016).

3. **Autocorrelation Test**

   Basically the Autocorrelation Test has the aim of knowing whether in the linear regression model there is a correlation of confounding errors in period $t$ to perturbing errors in period $t-1$ or the previous period. According to Ghozali (2016) a good correlation model is free from autocorrelation. With this autocorrelation exists because successive observations over time are related to one another. In this study using the Durbin-Watson test with the aim to determine whether there is autocorrelation.

4. **Stage Multiple Linear Regression**

   According to Sarwono (2011) multiple linear regression has one and two or more dependent variables. The method in this study uses parameter estimation of multiple linear regression models, namely the small square method or what is often called the Ordinary Least Square (OLS) method (Kutner et al, 2010). Ordinary Least Square (OLS) method to test the effect of independent variables namely firm size ($X_1$) and company growth ($X_2$) with the dependent variable namely profitability ($Y_1$).

5. **Goodness of Fit test**

   - Partial test ($t$-test)

   - F test

   The t-test test was carried out with the aim of testing the dependent variable individually against the independent variable. This test has a character, namely if the decision to test statistics is $t$ if the p-value test is $<0.05$, the resulting hypothesis is rejected, indicating that the independent variable has an influence on the dependent variable individually (Yamin and Kurniawan 2014).

6. **Adjusted Determination Coefficient Test (R2)**

   Use of Tests The coefficient of determination test is carried out to measure how far the model is in explaining the variation of the dependent variable. According to Ghozali (2015) the adjusted determinant coefficient ranges from zero to one ($0 \leq R^2 \leq 1$). If $R^2$ is small or zero then the ability of the independent variables to explain that the dependent variable is very independent. However, if the value of $R^2$ is close to one, the dependent variable provides almost all the information needed to predict the dependent variable.

7. **Path Analysis**

   Path Analysis aims to examine the effect of intervening variables using path analysis methods (path analysis). According to Ridwan and Kuncoro (2014)
an analytical model is used to analyze patterns of relationships between variables with the aim of knowing the direct or indirect effect of a set of independent variables on the dependent variable. This research is the relationship between the independent variable and the dependent variable (profitability) mediated by the intervening variable.

RESULTS AND DISCUSSION

Based on the information obtained on November 10, 1995 the Government issued Law No. 8 of 1995 concerning Capital Markets. This law came into force from January 1996 1995 Indonesia Parallel Exchange merged with the Surabaya Stock Exchange 2000 Scripless trading system began to be applied in the Indonesian capital market 2002 JSX began to apply remote trading system 2007 Surabaya Stock Exchange merged (BES) to the Jakarta Stock Exchange (BEJ) and changed its name to the Indonesia Stock Exchange (IDX) March 2, 2009 First Launching of the New Trading System of the Indonesia Stock Exchange: JATS-NextG.

There are 27 consumer good industry companies that meet the criteria in this study, such as PT Indofood CBP Sukses Makmur Tbk (instant noodles, dairy, snacks, food flavourings, etc.), William Hesketh Lever (Royco, Molto, Lifebuoy, Rinso, and Sunlight., PT Frisian Flag Indonesia (sweetened condensed milk, ready-to-drink milk, powdered milk, mother and toddler milk, etc.), PT Darya-Varia Laboratoria or DVLA (Prescription Drug and Consumer Health products), Kapal Api (Kopi Kapal Api), PT Bentoel Group Tbk (Hand Clove Cigarettes, Machine Clove Cigarettes, and Machine White Cigarettes), PT Tri Banyan Tirta (production of alto, total, alkaline water, OEM for VIT brand bottled water, product from Danone – Aqua), PT Wilmar Cahaya Indonesia (processing of vegetable oil and vegetable oil.), PT. Gudang Garam Tbk (clove cigarettes, including low-tar nicotine types (LTN) as well as traditional hand-rolled cigarette products), PT.Kimia Farma (types of medicines in health, cosmetics and care), PT Mustika Ratu Tbk (cosmetics, body care & traditional herbal medicine based on technology), PT. Delta Djakarta Tbk or DLTA (Sodaku, pilsener beer and stout beer), PT. M (artina Berto Tbk “MBTO (Belia, Biokos, Cempaka, Catering etc.), PT. Mayora Indah, Tbk (Danisa, Slai O‘lai, Zuperr Cheese, Better, CoffeeDay, Kopiko, Kiss Minr, etc.), PT. Kedaung Indah Can Tbk (Stok Pots, Roasters, Cookware, Storage Bowls, Tableware, Tea Kettles, etc.), PT Wismal Inti Makkmur Tbk (Galan Kretek, Wismilak Slim, Wismilak Special, Wismilak Satya, Wismilak Diplomat), Chitose Indonesia Manufacturing (hotel furniture and restaurants, offices, schools and homes, besides folding chairs).

A. Descriptive Analysis

Based on the SPSS output results, it can be explained as follows:

1. Firm Size

   Based on the descriptive statistics table, it can be seen that the minimum firm size is 11.8043 and the maximum value is 18.3819. This shows that the size of the company in this study sample is between 11.8043 to 18.3819 with an average of 15.3432 at a standard deviation of 1.53811.

2. Company Growth

   Based on the descriptive statistics table, it can be seen that the minimum value of the company’s growth decreased by -0.9989 and the maximum value was 0.6258. This shows that the size of the company's growth in this study sample is between -1.0 to 0.6258 with an average of 0.06987 at a standard deviation of 0.17619.

3. Profitability

   Based on the statistical table, it can be seen that the minimum value of profitability decreased by -2.0850 and the maximum value was 158.0000. This shows that the profitability of this study sample is between -2.0850 to 158.0000 with an average of 2.531705 at a standard deviation of 13.761053.
4. Capital Structure

Based on the SPSS output results, it can be seen that the minimum capital structure value is 0.0600 and the maximum value is 5.0200. This shows that the size of the capital structure in this study sample is between 0.0600 to 5.0200 with an average of 0.923852 at a standard deviation of 0.7948275.

B. Classic assumption test

In this study, before carrying out the regression analysis, the classical assumption test must be carried out first. This is done to ensure that the model does not have problems with Normality, Heteroscedasticity, Multicollinearity and Autocorrelation. If all of these tests are met, then the analytical model is feasible to use. The results of the analysis prerequisite testing are as follows:

1. Normality test

Testing the normality of the data in this study uses the Kolmogorov-Smirnov test on the basis of decision making, namely if the probability ≥ the specified alpha value is 5% (0.05) then it can be said that the data is normally distributed, and vice versa if the probability < than 5% (0.05) then the data is not normally distributed.

Based on the results of the normality test using the Kolmogorov-Smirnov test, it can be concluded that the data is normally distributed. This can be seen from the results of the Kolmogorov-Smirnov test which shows the statistical test value for each variable is > 0.05, which is 0.085 for firm size, 0.160 for company growth, and 0.176 for capital structure.

Based on the Kolmogorov Smirnov Step 2 test table above, it can be seen that the statistical test value for each variable is > 0.05, which is 0.085 for company size, 0.160 for company growth, 0.109 for asset structure and 0.331 for capital structure. Thus it can be concluded that the data is normally distributed.

2. Multicollinearity Test

The multicollinearity test is carried out by looking at the tolerance value and the Variance Inflation Factor (VIF). The value used to indicate the presence of multicollinearity is the tolerance value < 0.10 or the same as the VIF value > 10. The results of the Variance Inflation Factor (VIF) test on the SPSS output table of coefficients, each independent variable has a value of VIF Firm Size = 1.028; Company Growth = 1.005. Firm Size tolerance value = 0.972; Company Growth = 0.995. Thus each of these independent variables has VIF < 10, while the Tolerance value of each independent variable is > 0.01. This means that there is no multicollinearity between the independent variable and the dependent variable Profitability.

The results of the Variance Inflation Factor (VIF) test on the output results of the SPSS table of coefficients, each independent variable has a value of VIF Firm Size = 1.028; Company Growth = 1.005. Firm Size tolerance value = 0.972; Company Growth = 0.995. Thus each of these independent variables has VIF < 10, while the Tolerance value of each independent variable is > 0.01. This means that there is no multicollinearity between the independent variables and the dependent variable Capital Structure.

3. Heteroscedasticity Test

The Glejser test is carried out by regressing each independent variable with an absolute residual as the dependent variable. The residual is the difference between the observed value and the predicted value, while the absolute residual is for the independent variable. If the results of the Glejser test confidence level > 0.05, there is no
heteroscedasticity problem, otherwise if the Glejser test results < 0.05 then there is a problem of heteroscedasticity. Glejser test results show that the significance value of firm size and company growth is greater than 0.05. Therefore it can be concluded that the regression model does not contain symptoms of heteroscedasticity.

4. Autocorrelation Test

The autocorrelation test aims to determine whether there is a correlation between members of a set of observational data that are described according to time (time-series) or space (cross section). One measure in determining whether there is an autocorrelation problem is the Durbin-Watson test (DW). Based on the output above, the Durbin-Watson (DW) value is 1.296, it can be concluded that there is no autocorrelation. Based on the two tables where both are between -2 to 2 which means there is no autocorrelation (Ayunda 2016).

5. Regression Analysis Results

\[ Y_1 = -5.857 + 0.444x_1 + 0.458x_2 + 0.668x_3 + e \]

The regression equation above shows the relationship between the independent variable and the dependent variable Partial Profitability. From this equation, it is obtained that the constant value decreases minus 5.857, meaning that if there is no change in the firm size variable and company growth, then the company profitability value in the Consumer Good Industry decreases minus 5.857 units. The effect of firm size on profitability. The value of the firm size regression coefficient means that if firm size variable ( increases 1% assuming company growth (, and the constant is 0 (zero), then the profitability of Consumer Good Industry companies increases by . This shows that the firm size variable contributes positively to profitability. In other words, it can be said that the greater firm size, the greater the profitability.

Effect of company growth on profitability. The value of the regression coefficient of company growth means that if the company growth variable increases 1% assuming firm size and the constant is 0 (zero), then the profitability of the

\[ Y_2 = 1.915 + 0.006x_1 + 0.231x_2 + e \]

The regression equation above shows the relationship between the independent variable and the dependent variable Partial Profitability. From this equation, it is obtained that the constant value is 1.915, meaning that if there is no change in the firm size variable and company growth, then the company profitability value in the Consumer Good Industry is 1.915 units. The effect of firm size on profitability. The value of the firm size regression coefficient means that if firm size variable ( increases 1% assuming company growth (, and the constant is 0 (zero), then the profitability of Consumer Good Industry companies increases by . This shows that the firm size variable contributes positively to profitability. In other words, it can be said that the greater firm size, the greater the profitability.
Consumer Good Industry company increases by . This shows that the company growth variable contributes positively to profitability. In other words, it can be said that the greater the company's growth, the greater its profitability.

6. t test

Effect of firm size on profitability.
Based on the t-test results table, it can be seen that the magnitude of significance for the firm size variable = 0.05 is the same as the significance level. If seen from the value of t count = 2.875 and t table 1.652, so that the value of t count > t table. This shows that the firm size variable has a negative and significant effect on profitability.

The effect of company growth on profitability. Based on the t test results table, it can be seen that the magnitude of significance for the company growth variable = 0.732 > 0.05 if seen from the value of t count = 0.344 and t table 1.652, so the value of t count < t table. This shows that the company's growth variable has a positive effect on profitability and is not significant.

Effect of firm size and company growth on profitability. Based on the t test results table, it can be seen that the magnitude of significance for the firm size variable = 0.042 < 0.05 if seen from the value of t count = 1.836 and t table 1.652, so the value of t count > t table. This shows that firm size and company growth variables have a negative and significant effect on asset structure.

7. F test

This test is used to determine whether there is a joint effect on the capital structure variable by using the F-test. Based on the table, it can be seen that the simultaneous effect of the independent variables, namely firm size and company growth on the dependent variable, namely profitability and capital structure. For step 1, the calculated F value is 2.826 with a significance level of 0.041. Based on a significance value less than 0.05, it can be concluded that firm size and company growth have a simultaneous effect on profitability. For step 2, the calculated F value is 9.688 with a significance level of 0.000. Based on a significance value smaller than 0.

8. Determination Coefficient Test (Adjust R. Square)

The coefficient of determination test is carried out to describe how much the change or variation of the dependent variable can be explained by the change
or variation of the independent variable. In determination, it means that the ability of the independent variables to explain the dependent variable is very limited. Meanwhile, the value of the coefficient of determination that is closer to one means that the variables are independent variables provide almost all the information needed to predict the variation of the dependent variable.

Adjusted R Square of 0.039 or 3.9%, this means that profitability can be explained by firm size and company growth, while the remaining 96.1% may be explained by other factors outside the model that are not included in the study. Adjusted R Square is 0.226 or 22.6%, this means that the capital structure can be explained by firm size and company growth, amounting to 22.6% while the remaining 77.4% may be explained by other factors outside the model that are not included in the study.

**CONCLUSION**

Partial research results show that firm size has a negative effect on profitability. This means that if firm size increases, then profitability will decrease. Company growth has a negative effect on profitability. This means that if the company's growth increases, the profitability will decrease. Firm size and company growth have a positive effect on profitability. The conclusion is that if firm size and company growth increase, then profitability will also increase. Firm size has a positive and significant effect on capital structure. This means that if the firm size increases, then the capital structure will also increase. Company growth has a positive and significant effect on capital structure. The conclusion is that if the company's growth increases, the capital structure will increase as well. Firm size and company growth simultaneously have a positive effect on capital structure. The conclusion is that if firm size and company growth increase, the capital structure will also increase. Capital structure mediates firm size on profitability. The capital structure mediates the company's growth on profitability.

**REFERENCES**


Arista, BD (n.yr.). The Effect of Capital Structure on Profitability (Studies in Automotive Sub-Sector Companies on BEI0.


Hasen, V.d. (2014). The Influence of Family Control, Zise, Sales, Growth, and Leverage on Company Profitability and Value in


