TAX RATES, FREE CASH FLOWS, ASSET STRUCTURE, AND DEBT POLICY

(Empirical Study of Manufacturing Companies in the Consumer Goods Industry Sector Listed on the Indonesia Stock Exchange for the Period 2013-2017)

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ABSTRACT
Debt policy is a company's decision in order to obtain funding that is used to fund the company's operational activities. This study aims to examine the effect of tax rates, free cash flow, asset structure, on debt policy in manufacturing companies in the consumer goods industry sector listed on the Indonesia Stock Exchange (IDX). This research uses secondary data. The population in this study is manufacturing companies in the consumer goods industry registered in the Indonesia Stock Exchange in the period 2013-2017. Using the purpose sampling method, the number of manufacturing companies sampled in this study 110 samples from 22 companies with observations over 5 years and used multiple linear regression analysis techniques with the application of eviews 9. The results of this study indicate that free cash flow and asset structure affect the debt policy. The tax rate has no effect on debt policy. Simultaneously the tax rate, free cash flow, asset structure, affect the debt policy.

Keywords: Tax Rates, Free Cash Flows, Asset Structure, Debt Policy

1. INTRODUCTION

The aim of each company management is to maximize the prosperity of their owners (Brigham and Gapenski, 1996) in Nuraini (2015). However, in reality a company often faces various problems to reach these goals, including three main problems that are interrelated with one another. These problems include investment decisions, funding decisions, and decisions in determining how much dividend the company must distribute to shareholders. In making funding decisions, companies have alternatives where one of them is to use a debt policy. Where companies that have relatively high debt policies, will have a much higher return on expectations when the economy is in a normal state, but has the risk of loss when the economy goes into a recession. Therefore, the decision to use debt requires companies to balance a relatively higher rate of return expectations with increased risk (Brimingham & Houston, 2006) in Subagja (2017). From the explanation above it can be concluded that, in determining the amount of debt a company must be careful in considering the capital structure owned. In addition to the financial condition and strategy owned by the company, they also took part in determining the amount of company funding. Some things in this study are limited to tax rates, free cash flow and the structure of company assets.

In determining the debt policy one of the things to consider is the tax rate. Companies with high tax rates have more incentives to apply for debt, because companies can take advantage of interest expense, as a deduction from the tax

payable. The higher the tax rate, the greater the profits the company will get from using the debt. So the company will adopt a higher debt policy.

Another thing that influences debt policy is free cash flow. Ross et al (2000) in Gusti (2013) defines free cash flow as corporate cash that can be distributed to creditors or shareholders that are not needed for working capital or investment in assets. In other words, free cash flow can be used to pay off debts the company has. The greater the free cash flow available, the greater the company's ability to repay debt. So when the company has adequate cash flow, the company management can adopt a policy to use higher debt to fund the company.

Besides the factors that influence debt policy is the structure of assets. The structure of assets also tends to have an impact on the loan decisions of a company, because the company's fixed assets can be used as collateral for loans (Mamduh, 2004) in Affandi (2015). Because in general companies that have collateral, it will be easier to obtain debt than companies that do not have collateral.

2. LITERATURE REVIEW

Trade of theory to explain the balance relationship between the advantages and disadvantages of the use of debt by companies where there is a corporation tax that is taken into account. According to trade of theory, the company will owe to a certain level of debt where the tax savings from additional debt is equal to the cost of financial difficulties. The costs of these financial difficulties consist of bankruptcy and agency fees which arise as a result of the company's declining credibility.

This trade off theory uses the choice of optimal debt usage. The optimal level of debt is reached when the tax savings reach the maximum amount against the cost of financial difficulties. This means that debt provides tax protection. So the optimal capital structure is formed when the benefits of tax protection from debt equal to the bankruptcy costs received by the company (Brigham and Houston, 2011) in Sherly (2016). Trade off theory states that debt has two sides, namely the positive side and the negative side. The positive side of debt is that interest payments will reduce taxable payments. This tax savings will increase the value of the company. Debts benefit companies because of the difference in tax treatment of interest and dividends. Interest payments are calculated as expenses and reduce taxable income, so the amount of tax that must be paid by the company is reduced. And conversely, the distribution of dividends to shareholders does not reduce the amount of corporate tax. So, on the other hand the tax will be more profitable if the company finances the investment in the form of debt because there will be savings in tax payments.

Debt Policy

Debt policy is a policy taken by management in order to obtain sources of financing for the company so that it can be used to finance the company's operational activities. Corporate financing or financing decisions will affect the company's capital structure. According to Munawir (2004) in Affandi (2015). The debt policy can be measured by:

$$\text{DER} = \frac{\text{Total Amoun Of Debt}}{\text{Total Equity}}$$

Tax Rates

The definition of tax written in Article 1 of Law No.28 of 2007, explained that Tax is a mandatory contribution to the state by individuals or groups, tax is compulsive, based on the law, with no direct reciprocity and is used for the benefit of the state for -the magnitude of people's prosperity. The

amount of taxation for taxpayers is often referred to as tax rates. Tax collection is inseparable from the element of justice or fairness in its implementation so as to create a social balance for the welfare of society. The tax rates in this study use the following formula:

Tax Rates = Profit Before Tax – Profit After Tax

Free Cash Flow

Ross et al (2000) in Sinaga (2017) defines Free cash flow is company cash that can be distributed to creditors or shareholders that are not needed for working capital or investment in assets. Based on the above theory, it is concluded that free cash flow is cash that is available and ready to be distributed to investors after the company invests in fixed assets, new products, and working capital needed for company growth. Free cash flow is calculated using the ratio of Ross et al (2000) in Gusti (2013), namely:

$$\text{FCF} = \frac{\text{AKO} - \text{PM} - \text{MKB}}{\text{Total Asset}}$$

Information:
FCF =free cash flow
AKO = Operating cash flow in year t
PM = Capital expenditure in year t
MKB = Net working capital in year t

Structure Assets

Asset structure is a wealth or economic resources owned by a company that is expected to provide benefits in the future. The structure of assets (tangibility of fixed assets) can be measured by fixed assets with total company assets. The size of a company's fixed assets can determine the amount of debt used. The calculation ratio is as follows:

$$\text{Asset Structure} = \frac{\text{Fixed Assets}}{\text{Total Assets}}$$

3. DATA AND RESEARCH TECHNIQUE ANALISYS

Classical Assumption Test

The classic assumption test is carried out to ensure that the sample under study is free from heteroscedasticity, muticollinearity, autocorrelation and normality.

Heteroscedasticity Test

The heteroscedasticity test aims to test whether in the regression model there is an unequal variance from the residuals of one observation to another. If the variant of the residuals from one observation to another is fixed, then it is called homoscedasticity. If different variants, they are called heteroscedacity (Santoso, 2002) in Affandi (2015). In this heteroskedacity test using the glacier test that is if the value of Prob. Chi-Square> 0.05 then the data is free from heteroskedacity, and vice versa if the value of Prob. Chi-Square <0.05 then there is a violation of heteroskedacity.

Multicollinearity Test

Multicollinearity Test aims to test whether the regression model found a correlation between independent variables (independent). To find out whether there is multicollinearity between variables, it can be seen from (1) tolerance value and its opponents (2) Variance Inflation Factor (VIF). Where the limit of correlation between independent variables is not more than 0.90 (Ghozali, 2013). As for the multicollinearity test equation as follows:

$\text{VIF} = \frac{1}{(1-R1^2)}$

Autocorrelation Test

Autocorrelation test aims to test whether in the linear regression model there is a correlation between the error of the intruder in the period t with the error of the intruder in the period t-1 (Ghozali, 2013: 110). The presence or absence of autocorrelation symptoms can be detected by the Breush-Godfrey test. If

the Chi-Square probability value <0.05, it can be concluded that the data have autocorrelation problems. Conversely, if the Chi-Square probability value> 0.05 then the data is free from the autocorrelation problem.

Normality Test

The normality test aims to test whether in the regression model the dependent variable, the independent variable or both have normal distribution or not (Ghozali, 2009) in (Cindi Chintya, 2017). Detect whether the residual is normally distributed or not by comparing the Jarque-Bera (JB) value with the probability value (p-value). If the JB value is greater than 0.05 then the data is normally distributed.

Multiple Linear Regression Test

This regression equation aims to predict the magnitude of the relationship by using the data of independent variables that are already known to be of magnitude according to Cindi Chintya Devi (2017). Variables consisting of dependent variables (Y) and independent variables (X). The dependent variable consists of one variable, namely debt policy (DER) and the independent variable consists of tax rate (TP), free cash flow (FCF), and asset structure (SA). From these variables an analysis will be examined whether the influence of variable X on Y in the panel data regression analysis.

$Yit = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \varepsilon$

Information :

α : A constant
Yit : Debt policy (DER)
β_0-β_3 :Regression Coefficient
X_{1it} : Tax Rates (TP)
X_{2it} : Free Cash Flow (FCF)
X_{3it} : Asset Structure (SA)
ε : *Eror Term*

Hypothesis Testing

Partial Test (t Test Statistics)

The t test statistic shows how far an independent variable is in explaining the dependent variable individually. If t-count> t-table or t-count <t-table and sig <0.05 then the hypothesis will be accepted whereas if t-count <t-table or t-count> t-table and sig value> 0, 05 then the hypothesis will be rejected or not affect the dependent variable (Ghozali, 2013: 99).

Simultaneous Significance Test (Statistical test F)

F statistical test is used to determine whether all independent variables included in the model have a joint influence on the dependent variable (Ghozali, 2013: 98). If the probability value is less than 0.05 (for a significance level of 5%), then the dependent variable together influences the dependent variable. Whereas if the probability value is greater than 0.05, the independent variable simultaneously does not affect the debt policy.

Coefficient of Determination (*R*)

The coefficient of determination (R2) is essentially measuring how far the model's ability to explain the variation of the dependent variable. The coefficient of determination (R2) is between 0 (zero) and 1 (one). A small value (R2) means that the ability of the independent variables to explain the variation of the dependent variable is very limited.

4. RESULT AND DISCUSSION

Descriptive Statistics

Descriptive statistical tests function to provide a description or description of data seen from, among others, the mean (mean), standard deviation, maximum and minimum, sum, range, kurtosis, and skewness.

Table 4.1
Descriptive Statistics Test Result

	DER	SA	FCF	TP
Mean	0.787283	0.325177	-0.223127	0.248426
Median	0.618827	0.298935	-0.274967	0.252415
Maximum	2.654552	0.783978	0.614477	0.368232
Minimum	0.152942	0.067106	-0.652949	0.059770
Std. Dev.	0.547067	0.146112	0.233990	0.043161
Skewness	1.217881	0.602782	1.784163	-1.839478
Kurtosis	4.317490	2.888365	7.293330	9.812488
Jarque-Bera	35.14829	6.718466	142.8425	274.7466
Probability	0.000000	0.034762	0.000000	0.000000
Sum	86.60115	35.76951	-24.54402	27.32683
Sum Sq. Dev.	32.62178	2.327013	5.967876	0.203051
Observations	110	110	110	110

Source : *Output Eviews 9*

Classic Assumption Test
Normality Test

The normality test aims to test whether in the regression model the dependent variable, the independent variable or both have normal distribution or not (Ghozali, 2009) in Devi (2017).

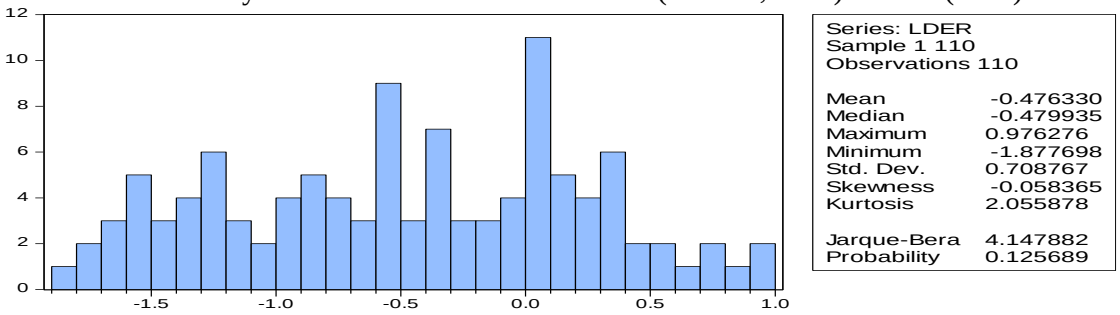

Figure 4.1
Normality Test Results
Source : *Output Eviews 9*, 2019

Heteroscedasticity Test

The heteroscedasticity test aims to test whether in the regression model there is an unequal variance from the residuals of one observation to another. The following table 4.2 is the test results of the heteroskedacity test, which is as follows:

Table 4.2
Heterocedasticity Test Result

F-statistic	0.536666	Prob. F(3,106)	0.6582
Obs*R-squared	1.645756	Prob. Chi-Square(3)	0.6491
Scaled explained SS	1.957987	Prob. Chi-Square(3)	0.5812

Source : *Output Eviews 9,* 2019

From the results of the Glejser test above the value of Prob. Chi-Square is 0.6491, Prob. Chi-Square> 0.05 so that it can be concluded that this study is free from heteroscedasticity.

Multicollinearity Test

Multicollinearity Test aims to test whether the regression model found a correlation between independent variables. The following table 4.3 is the test results of the multicollinearity test, which is as follows:

Table 4.3
Multicollinearity Test Results

	SA	**FCF**	**TP**
SA	1.000000	0.538787	-0.020173
FCF	0.538787	1.000000	0.034243
TP	-0.020173	0.034243	1.000000

Source : *Output eviews 9,* 2019

From the table above it can be seen that there is no relationship between the independent variables that indicate a correlation value> 0.90. So it can be concluded that the data used in this study is free from multicollinearity problems.

Autocorrelation Test

The autocorrelation test is a correlation test between an observational disturbance variable and another observational disturbance variable. The following table 4.4 is the test results of the autocorrelation test, which is as follows:

Table 4.4
Autocorrelation Test Results

F-statistic	1.608056	Prob. F (2,103)	0.2053
Obs*R-squared	3.300405	Prob. Chi-Square(2)	0.1920

Source : Output Eviews 9, 2019

Based on table 4.4 above, the Prob value is obtained. Chi-Square is 0.1920. So the value of Prob. Chi-Square> 0.05, it can be concluded that the data do not have autocorrelation problems.

Hypothesis Testing
Multiple Linear Regression

Multiple linear regression analysis aims to determine whether the independent variable influences the dependent variable that uses more than two independent variables. The multiple linear regression equation can be stated in the following equation:

Table 4.5
FEM (Fixed Effect Model) Selected Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.301319	0.218844	1.376867	0.1722
SA?	1.210792	0.498112	2.430762	0.0172
FCF?	0.412628	0.204874	2.014059	0.0472
TP?	0.741914	0.566120	1.310524	0.1935
	Effects Specification			
Cross-section fixed (dummy variables)				
R-squared	0.879106	Mean dependent var		0.787283
Adjusted R-squared	0.844971	S.D. dependent var		0.547067
S.E. of regression	0.215400	Akaike info criterion		-0.035920
Sum squared resid	3.943772	Schwarz criterion		0.577825
Log likelihood	26.97561	Hannan-Quinn criter.		0.213018
F-statistic	25.75401	Durbin-Watson stat		1.547839
Prob(F-statistic)	0.000000			

Source : *Output Eviews 9*, 2019

Based on the test results shown in table 4.5, the double linear equation used in this committee is as follows:

DER = 0,1722 + 0,0172.SA + 0,0472.FCF + 0,1935.TP + ε

Information:

DER = Debt Policy
TP = Tax Rates
FCF = Free Cash Flow
SA = Asset Structure
ε = standard error

From the multiple linear regression equation used in this study can be explained as follows: Constant with a value of 0.1722 shows that if all independent variables are equal to zero then the debt policy (DER) is worth 0,1722

1. The tax rate coefficient is 0,1935 meaning free cash flow shows no effect on debt policy.
2. The coefficient of free cash flow with an FCF ratio of 0,0472 means that free cash flow shows a positive effect on debt policy. This figure shows that if free cash flow rises by one unit, with the other variables being fixed it will raise the debt policy by 0,0472.
3. The coefficient of the structure of assets is 0,0172 meaning that the structure of assets shows a positive effect on debt policy. This shows that if the asset structure rises by one unit, with other variables fixed then it will raise the debt policy by 0,0172.

Partial Test (Statistical Test t)

T-test testing is done by using criteria based on the comparison of statistical values (t-counts) of each coefficient of the independent variable to the value of the table and also based on probability. In this study, df (n-k) produced 110, where n 110 is the number of observations and k = 4 is the number of dependent and independent variables. Then 110-4 = 106 So that the resulting df value of 106 and 0.05 significance. Then the value of the table is 1.98260 to find out whether the independent variables have a significant effect on the dependent variable. The t test results shown in table 4.6 are as follows:

Table 4.6
t-Test Results (Partial)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.301319	0.218844	1.376867	0.1722
SA?	1.210792	0.498112	2.430762	0.0172
FCF?	0.412628	0.204874	2.014059	0.0472
TP?	0.741914	0.566120	1.310524	0.1935

Source : *Output eviews 9*, 2019

1. Based on the test results shown in table 4.6 it can be explained the effect of each independent variable on the dependent variable as follows:
   Effect of tax rates on debt policy
   Based on the t test presented t count of 1,310524 with a significance level of 0,1935. This shows that t count is smaller than t table (1,310524<1,98260) with a significance value (0,1935>0,05). So it can be concluded that the tax rate has no significant effect on debt policy.
2. The effect of free cash flow on debt policy
   Based on the t test presented in the table above, free cash flow has a t count of 2,014059 with a significance level of 0,0472. This shows that t count is greater than t table (2,014059>1,98260) with a significance value (0,0472<0,05). So it can be concluded that free cash flow has a significant positive effect on debt policy.
3. Effect of asset structure on debt policy
   Based on the t test presented in the table above, the asset structure has a t count of 2,430762 with a significance level of 0,0172. This shows that t arithmetic is greater than t table (2,430762>1,98260) with a significance value (0,0172<0,05). So it can be concluded that the asset structure has a significant positive effect on debt policy.

4.3.3 Simultaneous Significance Test (Statistical test F)

The f test is used to prove whether the independent variables simultaneously have an influence on the dependent variable. If the probability value is smaller than 0,05. Then the independent variables together affect the dependent variable. Meanwhile, if the probability value is greater than 0,05 then the independent variable simultaneously does not affect the dependent variable. Hippotesis test partially can be seen from the following table 4.7:

Table 4.7
Test Results F (Simultaneous)

Effects Specification			
Cross-section fixed (dummy variables)			
R-squared	0.879106	Mean dependent var	0.787283
Adjusted R-squared	0.844971	S.D. dependent var	0.547067
S.E. of regression	0.215400	Akaike info criterion	-0.035920
Sum squared resid	3.943772	Schwarz criterion	0.577825
Log likelihood	26.97561	Hannan-Quinn criter.	0.213018
F-statistic	25.75401	Durbin-Watson stat	1.547839
Prob(F-statistic)	0.000000		

Source : *Output eviews 9*, 2019

Based on table 4.7 above, the f-static probability value is 25.75401, using a 5% confidence level. Where the prob significance level (f-statistic) of 0.000000 means that there is found significance between the independent variables of tax rates, free cash flow and the structure of assets simultaneously to the debt policy variable. Thus, it can be concluded that H0 is rejected and Ha is accepted which means there is a significant influence between all independent variables.

Determination Coefficient Test (R2)

The coefficient of determination (R2) aims to find out how far the ability of the independent variable to explain the dependent variable. Testing the coefficient of determination (R2) is done using adjusted R-Squared in the regression equation. The coefficient of determination (R2), the higher means the stronger the relationship between the dependent variable and the independent variable. The test results of the coefficient of determination (R2) are shown in table 4.8 below:

Table 4.8
Determination Coefficient Test Results (R2)

Effects Specification			
Cross-section fixed (dummy variables)			
R-squared	0.879106	Mean dependent var	283
Adjusted R-squared	0.844971	S.D. dependent var	0.547067
S.E. of regression	0.215400	Akaike info criterion	-0.035920
Sum squared resid	3.943772	Schwarz criterion	0.577825
Log likelihood	26.97561	Hannan-Quinn criter.	0.213018
F-statistic	25.75401	Durbin-Watson stat	1.547839
Prob(F-statistic)	0.000000		

Source : *Output eviews 9*

Based on the test results shown in table 4.8 it can be concluded that the adjusted R2 value of the independent variables in this study is 0.844971 or 84.49%. This means that 84.49% of the debt policy is influenced and can be explained by the three independent variables in this study namely tax rates, free cash flow, and asset structure. While 15.51% is explained by other variables outside the regression.

5. CONCLUSION

Based on the results of the analysis and discussion processed with the help of eviews 9 programme, it can be concluded that:

1. Based on the results of the t test (partial) variable tax rate (TP) has a t count of 1,310524 with a significance level of 0,1935. This shows that t count is smaller than t table (1,310524<1,98260) with a significance value (0,1935> 0,05). So it can be concluded that the tax rate has no significant effect on debt policy.
2. Based on the results of the t test (partial) free cash flow (FCF) has a t count of 2.014059 with a significance level of 0,0472. This shows that t count is greater than t table (2,014059>1,98260) with a significance value (0,0472 <0,05). So it can be concluded that free cash flow has a significant positive effect on debt policy.
3. Based on the results of the t test (partial) the asset structure variable (SA) has a t count of 2,430762 with a significance level of 0,0172. This shows that t arithmetic is greater than t table (2.430762>1,98260) with a significance value (0,0172 <0,05). So it can be concluded that the asset structure has a significant positive effect on debt policy.
4. Based on the results of the f (simultaneous) test, the f-static probability value is 25,75401, using a 5% confidence level. Where the prob significance level (f-statistic) of 0,000000 means that significance is found between the independent variables of asset structure, free cash flow, and tax rates simultaneously affecting the debt policy.

REFERENCES

Affandi, Chafidz (2015) The Effect of Free Cash Flow, Company Growth, Profitability, and Company Size on Debt Policy for Manufacturing Companies Listed on the Indonesia Stock Exchange (Skripsi). Retrieved from http://eprints.uny.ac.id/27288/1/ChafidzAffandi_11408141043.pdf

Febriani, Feni (2016) Effect of Managerial Ownership. Institutional Ownership, Investment Opportunity Set and Tax Rates on Debt Policy for Manufacturing Companies Registered on the IDX (Skripsi) Retrieved from https://core.ac.uk/download/pdf/159370328.pdf

Firdaus A. Dunia (2013) Introduction to Accounting I, Issue 4. Jakarta: Faculty of Economics. University of Indonesia

Hidayat, Syaifiudin (2013) Managerial Influence, Dividend Policy, Asset Structure, Sales growth, and Company Size. Dynamics of Accounting, Finance and Banking, May 2015, Pages: 20-28. ISSN: 1979-4878

Kusumawardani, Pipit (2017) Effect of Corporate Leverage and Size on Tax Avoidance (Skripsi). Retrieved from http://eprints.unpam.ac.id/id/eprint/2393

Mubin, Ilham, Bugis et al (2017) Effects of Return On Assets, Current Ratio, Company Size, Asset Structure, and Sales Growth Against Debt Policy Existing Consumer Goods Industry Sector Companies that are registered in the Indonesia Stock Burs for the period 2013-2016 (Skripsi). Retrieved from http://repository.umrah.ac.id/1286/1/Bagus%20Ilham%20Mubin-140462201035-FE-2018.pdf