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Effect of Capital Structure and Sales Growth on Profitability (Empirical Study on Sub-Manufacturing Companies) Food and Beverage Sector Listed on Stock Exchange Indonesia Period 2016-2020)

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Abstract : *The purpose of this study is to determine the influence of capital structure and sales growth on profitability in food and beverage subsector manufacturing companies listed on the Indonesia Stock Exchange in 2016-2020. This research is causal research with a quantitative approach, while based on the level of exploration includes associative research using secondary data. The sampling technique used is the purposive sampling method. The population in this study is all food and beverage subsector companies with a research sample of thirteen food and beverage subsector companies listed on the Indonesia Stock Exchange for the period 2016-2020 with data sources obtained through the official website of the Indonesia Stock Exchange and the company's official website. Based on the results of the analysis, it was found that partially the capital structure had a positive but insignificant effect on profitability. Partial sales growth has a positive and significant effect on profitability. While simultaneously the capital structure and sales growth have a significant effect on profitability as evidenced by a probability value of 0.000000 smaller than the significance level of 0.05.*

1 INTRODUCTION

The development of the era of globalization is increasing today, accompanied by the occurrence of the covid-19 pandemic, as well as the increasing number of similar companies that have sprung up, resulting in increasingly fierce competition in the business world. Competition in the business world makes every company strive to be more competitive so as not to lose to compete with other companies. Return on Assets(ROA) is the balance between net profit after tax with total assets owned by the company.Return on Assets (ROA)illustrates what percentage of net profit the company gets when measured through the use of assets. The higher the ROA value, the better because it shows the position of the owner of the company is getting stronger, as well asIndonesian economy has experienced a very drastic decline in 2020, this was caused by the COVID-19 pandemic which made all industrial sectors in Indonesia be unable to operate optimally.

PT. XYZ is one of the companies that have experienced the impact of the economic downturn during the COVID-19 pandemic. Sales of goods in the electronics industry also experienced a significant decline. Finally, the company took action the other way around (Pantooring and Mariam, 2016).Return on assetscan influence the policies of investors to invest, if many investors invest in the company, the company will have the opportunity to expand its business. The elements that are suspected to affect profitability include capital structure and sales growth. According to Pantororing and Mariam (2016) a poor capital structure decision will lead to high capital costs, on the other hand effective financial decisions will be able to lower the cost of capital, effective and efficient capital structure management will greatly affect the company's performance. Capital structure in this study is measured using the ratioleveragewhich is proxied byDebt to Equity Ratio.Debt to Equity Ratio or DER aims to determine the ratio between total debt and equity. The higher the leveldebt to equity ratiothe higher the risk of failure that occurs in the company. Sales is an important criterion for assessing the profitability of the company and is the

main indicator of the company's activities (Andrayani, 2013). Sales growth is an increase in the number of sales within the company from year to year, if sales growth has increased, it proves that the demand for products has also increased, this will affect the company's profit. If the company can control its expenses, then the profit earned by the company will be stable or even increase, this gives a good profitability assessment of the company. Based on previous research on the effect of capital structure on profitability conducted by Irna Rahmawati and Mohammad Kholiq (2018), it is concluded that capital structure has a negative effect on profitability. Meanwhile, research conducted by Ni Wayan and Nyoman Triaryati (2019) obtained the results that capital structure has a positive effect on profitability. Furthermore, research on sales growth on profitability conducted by I Ketut Alit Sukadana and Nyoman Triaryati (2018) concluded that sales growth had a positive effect on profitability. This is different from research conducted by Annisa Surya Ningsih and Yulia Tri Kusumawati (2020) which states that sales growth has a negative effect on profitability..

2 LITERATURE REVIEW

Profitability

According to Hery (2015: 228) profitability is the result ofreturnon assets which shows how big the contribution of assets in generating net income. According to Sudana (2015) the higher the level ofReturn On Assets, shows the more effective the utilization of company assets or with the same total assets can generate higher profits for the company, if the level ofReturn On Assetslow indicates the company's inefficiency in the utilization of assets owned in generating profits.

ROA =Net profit/Total Assets

Capital structure

The capital structure is a combination of the use of capital which includes long-term debt, short-term debt and own capital which includes common shares and ordinary shares. The company determines the capital structure needs to consider or pay attention to the state of the company and determine the survival and growth of the company, (Dini Twenti Yuniar, 2020). Hery (2015: 196) states that the debt-to-equity ratio is the ratio used to measure the proportion of debt to equity. DER =Total Debt/Total Equity

Sales Growth

According to Harahap (2016:310) the sales growth ratio shows the percentage increase in sales this year compared to last year. The higher the level of sales growth ratio, the better the company's performance.
Sales Growth = Psalest- Salet- 1 Salet-1

Theoritical Framework

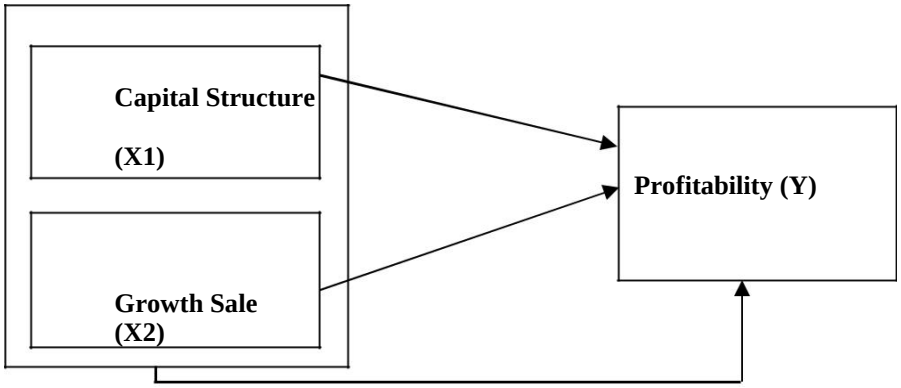


Figure 1 Theoretical Framework

Hypothesis:
H1:Capital structure has a negative effect on profitability.
H2:Sales growth has a positive effect on profitability.
H3:Capital Structure and Sales Growth simultaneously have an effect on Profitability.

3. Research Method

This research uses quantitative research. The research location is on the Indonesia Stock Exchange which is accessed through the official websitehttp://www.idx.co.id . The time of data collection in this study was carried out from 2016 to 2020. The population in this study amounted to 26 food and beverage sub-sector companies listed on the IDX, while the research sample amounted to 13 companies. Sampling method with*purposive sampling*. The data used in this study is secondary data, namely in the form of financial statements.

Methods of collecting data in this study is the method of documentation and literature study. The data analysis method used is panel data regression.the panel data is a combination of data*time series*with*cross-section*, there are three models that can be used to perform panel data regression, namely*Common Effect Models*, *Fixed Effect Models*,and*Random Effect Model*(Basuki & Prawoto, 2017). The test data used in this study include descriptive analysis, classical assumption test (normality test, multicollinearity test, autocorrelation test and heteroscedasticity test), panel data regression analysis, hypothesis testing (f test and t test), analysis of the coefficient of determination.

4. Results and Discussion

Descriptive Analysis

Descriptive analysis aims to determine the minimum, maximum, average, and standard deviation of each variable. The following are the results of the descriptive analysis test which are presented in table 1.1:

Table 1. Descriptive Analysis Test Results

Deskriptif	DER	Pert. Penjualan	ROA
Mean	0.769262	0.078769	0.118277
Maximum	1.831000	0.504000	0.527000
Minimum	0.164000	-0.465000	0.001000
Std. Dev.	0.442898	0.146161	0.101777
Jarque-Bera	3.176976	34.97652	126.5723
Probability	0.204234	0.000000	0.000000
Observations	65	65	65

Source:*Output Eviews*12 (processed data)

Based on table 1 above, it can be seen that the minimum value of the Profitability variable as measured by ROA is 0.001 and the maximum value is 0.527, with an average value of 0.118277 which is greater than the standard deviation value of 0.101777, this means that the distribution of profitability values as measured by *return on assets* good. The capital structure variable as measured by DER shows a minimum value of 0.164 and a maximum value of 1.831, with an average value of 0.769262 greater than the standard deviation value of 0.442898, which means that the distribution of DER values is good.

The Sales Growth variable shows that the minimum value is -0.465 and the maximum value is 0.504, with an average value of 0.078769 which is smaller than the standard deviation value of

0.146161 which means that the distribution of sales growth values is not good because the standard deviation reflects deviations from the data. relatively larger than the average value.

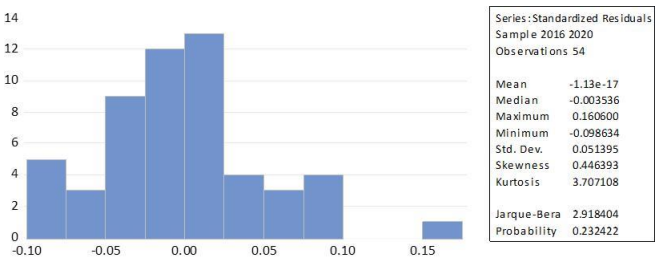
Classic assumption test

a. Normality test

According to Rukajat (2018:16) the normality test aims to test whether in the model regression, confounding variables or residuals have a normal distribution. To test the normality of the data, it is done by using the test*Jarque-Bera*(JB-*Test*). Based on the results of the normality test on the initial data of 65 data, it is known that the confounding variables are not distributed normal, so that the stage of removing data is carried out through*outliers*. After doing *outliers* then the data obtained as many as 54 data.

Normality test results with test*Jarque-Bera*(JB-*test*) after removing the outlier data is as follows:

Table 2 Normality Test Results



After removing 11 data*outliers*, based on table 2 above it can be seen that the probability*Jarque-Bera*>0.5 (0.232422 > 0.05), so the data in this study were normally distributed.

b. Multicollinearity Test

Rukajat (2018:17) states that the multicollinearity test aims to assess whether in the regression model there is an interrelation or relationship between independent variables. Multicollinearity can be seen from the correlation value, if the correlation value is > 0.80 then multicollinearity occurs, while the correlation value is < 0.80 then there is no multicollinearity problem. The results of the multicollinearity test are as follows:

3 RESEARCH METHOD

3.1. Research Design

In this study, researchers conducted descriptive research that can assist researchers in analysing the application of marketing strategies used by PT. XYZ on medical device products. Descriptive research is research that seeks to describe a symptom, an event that is happening now or an actual problem.

	DER	Sales Growth
DER	**1.0000000**	**0.145309**
Sales Growth	**0.145309**	**1.0000000**

Based on the multicollinearity test in table 3, it shows that the correlation value between the independent variables, namely capital structure and sales growth is less than 0.80. This means that there is no multicollinearity problem between independent variables in the regression model

c. Heteroscedasticity Test

Rukajat (2018:16) states that the heteroscedasticity test aims to determine whether in the regression model there is an inequality of variance from the residual observations to other observations. The heteroscedasticity test

Table 4 Heteroscedasticity Test Results

Heteroskedasticity Test: Harvey

F-statistics	1.738711	Prob. F(2,62)	0.1842
Obs*R-squared	3.452066	Prob. Chi-Square(2)	0.1780
Scaled explained SS	4.166807	Prob. Chi-Square(2)	0.1245

Source:*Output Eviews*12 (processed data)

Based on table 4 above, it can be seen that in the heteroscedasticity test using the Harvey test the probability value of chi-square> 0.05 (0.1780> 0.05), thus means that there is no heteroscedasticity in this study.

d. Autocorrelation Test

According to Rukajat (2018:17) the autocorrelation test aims to test whether in the regression model

There is a linear correlation between the confounding error in period t and the error in period t-1 (previous). The results of the Durbin-Watson autocorrelation test in this study are as follows

Table 5 Autocorrelation Test Results

	Durbin-Watson	Conclusion
	1.747827	No Autocorrelation

Source:*Output Eviews*12 (processed data)

Based on table 5 above, the Durbin-Watson value is 1.747827 or between -2 to + 2, thus it can be concluded that this study is free from autocorrelation

Selection of Regression Model

Analysis of the panel data model in this study was carried out with three models to determine which model is better in this study, namely the approach*common effects models*(CEM), *fixed effect*model (FEM) and*random effects model*(BRAKE). The following are the results of testing the selection of the panel data regression model in this study.

a. Chow test

The Chow test was carried out to determine the model used*fixed effects model*or *common effects models*in estimating panel data. The following are the results of the Chow Test in this study

Table 6 Chow Test Results

Redundant Fixed Effect Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistics	df	Prob.
Cross-section F	19.919664	(12.50)	0.0000
Cross-section Chi-square	114.044328	12	0.0000

Source:*Output Eviews*12 (processed data)

Based on table 6, the temporarily selected models are*fixed effects model*. This is because the probability value is 0.0000 < 0.05 which means the test is carried out with*Fixed Effect*Model. Furthermore, Hausman test is carried out to determine whether the model *random effects* or model*fixed effect*for better use in this study.

b. Hausman test

Hausman test is carried out to determine the model used*fixed effect*or*random effects*good to use. The following are the results of the Hausman test in this study:

Table 7 Hausman Test Results

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistics	Chi-Sq. df	Prob.
Cross-section random	13.895883	2	0.0010

Source:*Output Eviews*12 (processed data)

Based on table 7 above, it shows that the model chosen in this study is*Fixed Effect Model*(FEM). This is because the probability is smaller than = 0.05 (0.0010 < 0.05).

Panel Data Regression Model Equation

Based on the model testing that has been done, the model that should be used is:
in this study is a model*fixed effects*. The panel data regression equation model in this study is as follows:

$$Y_{it} = +_1X_{1it}+_2X_{2it}+_{it}$$

Table 8 Panel Data Regression Results

Dependent Variable: Profitabilitas (ROA)
Method: Panel Least Squares
Date: 04/13/22 Time: 23:51
Sample: 2016 2020
Periods included: 5
Cross-sections included: 13
Total panel (balanced) observations: 65

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.096598	0.018125	5.329546	0.0000
DER	0.006743	0.022734	0.296584	0.7680
Pertumbuhan Penjualan	0.209393	0.047243	4.432242	0.0001

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.833029	Mean dependent var	0.118272
Adjusted R-squared	0.786278	S.D. dependent var	0.101788
S.E. of regression	0.047057	Akaike info criterion	-3.075746
Sum squared resid	0.110717	Schwarz criterion	-2.573964
Log likelihood	114.9617	Hannan-Quinn criter.	-2.877760
F-statistic	17.81812	Durbin-Watson stat	1.747827
Prob(F-statistic)	0.000000		

SOURCE:*OUTPUT EVIEWS*12 (PROCESSED DATA)

Based on table 8 above, the regression model equation is obtained between the variables independent (X) namely capital structure and sales growth with the dependent variable (Y) namely profitability, especially ROA as follows:

$$Yit = 0.096598 + 0.006743X1it + 0.209393X2it + eit$$

From the above equation it can be explained that:

a. The constant of 0.096598 indicates that if the capital structure variable (DER) and sales growth are equal to zero (0), then the resulting profitability value is 0.096598.

b. In the X1 variable (capital structure as measured by DER) the coefficient value is 0.006743 with a positive sign indicating that if the capital structure increases by 1 unit then profitability will increase by 0.006743.

c. In the X2 variable (sales growth) the coefficient value is 0.209393 with a positive sign indicating that if sales growth increases by 1 unit then profitability will increase by 0.209393.

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Hypothesis test

a. Partial Test (T Test)

The partial test or t test aims to determine the effect and significance of each independent variable on the dependent variable. Test the hypothesis partially with*fixed effects model*can be seen in the following table:

Dependent Variable: Profitabilitas (ROA)
Method: Panel Least Squares
Date: 04/13/22 Time: 23:51
Sample: 2016 2020
Periods included: 5
Cross-sections included: 13
Total panel (balanced) observations: 65

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.096598	0.018125	5.329546	0.0000
DER	0.006743	0.022734	0.296584	0.7680
Pertumbuhan Penjualan	0.209393	0.047243	4.432242	0.0001

Source:*Output Eviews*12 (processed data)

Based on the results of the t-test in table 9 above, it shows that: (a) the capital structure as measured by DER shows a tcount value of 0.296584 and a probability value of 0.7680 > sig 0.05 with a positive coefficient value, so it can be concluded that the capital structure (DER) has no effect on profitability. (b) sales growth shows a tcount value of 4.432242 and a probability value of 0.0001 < sig 0.05 with a positive coefficient value, so it can be concluded that sales growth is positive and significant to profitability

b. Simultaneous Test (F Test)

The F test aims to test the simultaneous (together) effect of the independent variable on the dependent variable. Test the hypothesis simultaneously or together with the method*fixed effect*can be seen in the following table:

Table 10 F . Test Results

Effects Specification			
Cross-section fixed (dummy variables)			
R-squared	0.833029	Mean dependent var	0.118272
Adjusted R-squared	0.786278	S.D. dependent var	0.101788
S.E. of regression	0.047057	Akaike info criterion	-3.075746
Sum squared resid	0.110717	Schwarz criterion	-2.573964
Log likelihood	114.9617	Hannan-Quinn criter.	-2.877760
F-statistic	17.81812	Durbin-Watson stat	1.747827
Prob(F-statistic)	0.000000		

Source:*Output Eviews*12 (processed data)

Based on the results of the F test in table 10 shows the probability value (F-Statistics) of 0.000000 < 0.05, it can be concluded that with the F-statistic value of 17.81812 and the prob value of Fstatistic 0.000000 simultaneously there is a significant effect between the variables of capital structure and sales growth on profitability

The coefficient of determination is used to show how much variation of the dependent variable can be explained by the independent variable. Indra Sakti (2018) states that a good research model is if the R^2 value is close to 1 and is said to be poor if R^2 is close to 0.

Based on table 10, it can be seen that the value of*Adjusted*R-*Square*is 0.786278. This shows that profitability can be explained by the variable capital structure and sales

growth of 78.62%. While the rest (100% - 78.62% = 21.38%) is explained by other factors outside the research variables.

Discussion

Effect of Capital Structure on Profitability

Based on the results of the analysis shows that the Capital Structure has no effect on Profitability,this can be seen from the probability value of 0.7680 which exceeds the significance value of 5% or 0.05 (0.7680 > 0.05). With a positive regression coefficient direction of 0.006743 so that the hypothesis (H1) which states that capital structure has a negative effect on profitability is rejected.

These results indicate that the capital structure has no effect on profitability, which means that funds from debt do not affect the company's ability to generate profits because the interest rate that must be borne by the company is also higher so that it does not affect the company's profitability.

This research is in line with previous research conducted by Ni Wayan and Nyoman Triaryati (2019), and Selvi Kartika, et al (2021) which also stated that capital structure had no effect on profitability.

The Effect of Sales Growth on Profitability

Based on the analysis results show that Sales Growth has a significant positive effect on Profitability,this can be seen from the probability value of 0.0001 which is smaller than the significance value of 5% or 0.05 (0.0001 < 0.05). With a positive regression coefficient direction of 0.209393 so that the hypothesis (H2) which states that sales growth has a positive effect on profitability is accepted.

The results of this study can be concluded that sales growth is in line with profitability, where the higher the sales growth rate, the higher the company's profitability. By knowing how much sales growth the company has, the company can predict how much profit it will get.

This research is in line with previous research conducted by Imwi Brastibian, et al (2020), and Rina Tresnawati, et al (2021) which stated that sales growth had a positive and significant effect on profitability.

Effect of Capital Structure and Sales Growth on Profitability

Based on the test results from the data processed by the data processor*eviews*12 shows that the independent variables in this study, namely capital structure and sales growth together or simultaneously have a positive and significant effect on profitability (ROA), which means if the value of the capital structure increases followed by the value of increased sales growth it will cover the

interest expense that must be borne by the company to outsiders (creditors) so that the company's profits also increase and can increase the value of the company's profitability .

5 CONCLUSIONS AND RECOMMENDATIONS

5. 1. Conclusions

This study aims to determine how the effect of Capital Structure (DER), Sales Growth on Profitability (ROA). The conclusions of an empirical study on 13 food and beverage sub-sector companies listed on the IDX for the 2016-2020 period are as follows:

1. Partially, Capital Structure (DER) has no effect on Profitability (ROA) with a probability value of 0.7680, this is because the probability value is greater than the significance level.

2. Partially, Sales Growth has a positive and significant effect on Profitability (ROA) with a probability value of 0.0001, this is because the probability value is smaller than the significance level.

Simultaneously, Capital Structure (DER) and Sales Growth have a significant positive effect on Profitability (ROA) with a probability value of F-*Statistics*of 0.000000

5.2. Recommendations

In this section, the researchers give recommendations to PT. XYZ, especially in the digital marketing and sales section

a. It is expected that the company is able to determine the right funding for the company, both from own capital, short-term debt and long-term debt so that it can increase the company's profitability. And the company is expected to be able to maintain increased sales growth so that the profits obtained also increase.
b. It is expected that the company is able to determine the right funding for the company, both from own capital, short-term debt and long-term debt so that it can increase the company's profitability. And the company is expected to be able to maintain increased sales growth so that the profits obtained also increase.
c. Given the limitations in this study, it is necessary to conduct further research to improve this research, it is recommended that further researchers expand the research, for example by extending the research period and adding other variables.

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