International Journal of Innovation, Creativity and Change. www.ijicc.net
Volume 6, Issue 7, 2019

# The Leverage Affect on Tax Avoidance (Study in mining and agriculture companies listed on the Indonesia Stock Exchange in the period 2015-2017)

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This study aims to determine the influence of leverage on tax avoidance in mining and agriculture companies listed on the Indonesia Stock Exchange in the period 2015-2017. The factors tested in this study is leverage as an independent variable, while tax avoidance is the dependent variable. The population in this study are time listed companies listed on the Indonesia Stock Exchange for the period 2015-2017, which amount to 42 companies. The sampling technique used in this study is non probability sampling with a purposive sampling method, so that the number of samples is 19 companies. While the data analysis used in this study is panel data regression analysis at a significance level of 5%. Based on data, the study results showed that leverage has an affect on tax avoidance.

**Key words:** *Leverage, Tax avoidance.*

## Introduction

Tax is the most potential source of state revenue and occupies the highest percentage in the APBN when compared to other revenues. Tax revenues will be used for financing, both at the central and regional levels (Gemilang, 2017)

**Table 1:** Target and Realization of Tax Revenues for 2013-2017 (in Trillion Rupiah)

| Year | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|
| Revenue Target | 1.148,02 | 1.246,1 | 1.489,3 | 1.539,2 | 1.498,8 |
| Revenue Realization | 1.071,7 | 1.143,3 | 1.235,8 | 1.283,6 | 1.339,8 |
| Percentage of revenue | 93,3% | 91,7% | 83% | 83,4% | 91% |

**Source:** Republic of Indonesia Ministry of Finance, data processed 2019

From this information, it can be seen that tax revenues in Indonesia has experienced a decline from 2013-2015 while in 2015-2017 it has increased. Despite the increase, tax revenues have never reached the target set by the government.

According to the budget analysis and APBN implementation bureau report in evaluating the low realization of state revenues in 2013 (dpr.go.id), the achievement of state revenue targets due to a decrease in tax rates, intensive tax administration that is not targeted, low public awareness in paying taxes, high tax avoidance and tax evasion by personal and corporate taxpayers, low integrity of tax employees and pressure from the global economy.

The company conducts tax management to minimize the amount of tax that must be paid. One form of earnings management conducted by the company is tax planning. Tax planning is the effort of taxpayers to minimize tax payable in order to save the amount of cash that comes out. With the implementation of mature tax planning, management can estimate the size of the company's cash needs so that the company can formulate a cash budget accurately (Suandi, 2011). Many strategies are carried out in tax planning, including tax avoidance and tax evasion.

According to NA Barr James AR Prest, in the book Rahayu (2010: 147), "Tax avoidance is a legal manipulation of income that is still in accordance with the provisions of applicable tax laws and regulations to minimize the amount of tax owed". It is different from the tax evasion, where this action is an effort of the taxpayer to avoid taxes illegally by hiding the real income situation. This method is not safe for taxpayers, because the methods and techniques used are not within the corridor of tax laws and regulations. The methods taken are at high risk and potentially subject to sanctions of violation of law or fiscal or criminal offenses (Pohan, 2016: 23).

One of the phenomena in tax avoidance is that there is a company engaged in the affiliated health services company in Singapore, namely PT RNI allegedly engaged in tax avoidance efforts. By business entity, PT RNI has been registered as a limited liability company. However, in terms of capital, the company is dependent on affiliate debt. That is, owners in Singapore provide loans to RNI in Indonesia. So the owner does not invest money but rather makes it a debt, so that when the debt and interest are paid it is considered a dividend by the owner in Singapore because the capital is included as a debt of the company. In the 2014 PT RNI financial report, there was a debt of Rp. 20.4 billion. Meanwhile, the company's turnover is only Rp. 2.178 billion. Not to mention there are losses held in the same year's report valued at Rp. 26.12 Billion (Suryowati, 2016).

The measurement of tax avoidance can use many varied proxies. According to Dyreng at al., (2010) tax avoidance is proxied by the Effective Tax Rate (ETR). ETR is cash issued for tax costs divided by pre-tax profit. The greater the ETR indicates the lower the level of corporate tax avoidance (Budiman and Setiyono, 2012).

While the factors that can influence tax avoidance are tax leverage (Permata, Siti and Endang, 2018). Leverage is a ratio used to measure the extent to which a company's assets are financed by debt. This means how much the debt burden is borne by the company compared to its assets (Kasmir, 2017: 151). The greater the use of debt by the company, the more the amount of interest expense incurred by the company, so that it can reduce the company's taxable profit which will then be able to reduce the amount of tax that the company must pay (Surbakti, 2012).

There are several previous studies that are still inconsistent regarding the effect of leverage on tax avoidance. Based on the research of Hidayat (2018), leverage has no effect on tax avoidance. This is in contrast to Marfirah and Syam (2016) who state that leverage affects tax avoidance.

Based on the background and problems of the above research, and the results of studies that have not consistently caused this issue to be an important and interesting topic to be examined again, the authors are interested in researching the title proposed as follows: "Leverage Effect on Tax Avoidance (Mining and Agriculture Companies Registered on the Indonesia Stock Exchange for the 2015-2017 Period)"

**Theoretical Framework and Development of Hypotheses**

The definition of tax, according to Sommerfeld Ray M., et al in Sumarsan (2013: 4):
"Tax is a transfer of resources from the private sector to the government sector, not a result of violations of law, but must be carried out, based on the provisions stipulated in advance, without direct and proportional compensation, so that the government can carry out its duties to run the government.

According to H. Rochmat Soemitro quoted by Diana Sari (2013: 34):
"Tax is the contribution of the people to the State Treasury based on law (which can be imposed) by not receiving lead services (counter-achievements) which can be directly shown and used to pay for public expenses."

The definition of leverage according to Bambang Hermanto and Mulyo Agung (2012: 112):

"Leverage is a ratio that measures how far a company is financed by debt, a leverage ratio that measures the comparison between funds provided by the owner and funds originating from third parties / creditors".

Definition of leverage according to Kasmir (2017: 151):
"Leverage is a ratio used to measure the extent to which a company's assets are financed by debt. This means how much the debt burden is borne by the company compared to its assets.

***Relationship between Leverage and Tax Avoidance***

The tax avoidance estimation model uses the Effective Tax Rate (ETR) model which is expected to be able to identify corporate tax planning actions (Dyreng al, 2010) with the following formula (Hussain, Abidin, Ali & Kamarudin, 2018):

$$ETR=\frac{Tax\ Expense}{Income\ after\ Tax}$$

ETR is a corporate tax burden divided by pre-tax profit; measurement of tax avoidance. The greater the ETR indicates the lower the level of corporate tax avoidance (Budiman and Setiyono, 2012; Meyer, 2018).

Leverage is the use of corporate financing sources, both long-term and short-term sources. Leverage is usually used to describe the ability of a company to use assets or funds that have a fixed burden to increase the level of income for company owners (Diamonalisa, 2017; Tabor, 2018).

In this study, the indicators used in leverage are the Debt to equity ratio (DER), which is the ratio used to assess debt with equity. The DER formula according to Kasmir (2017) is:

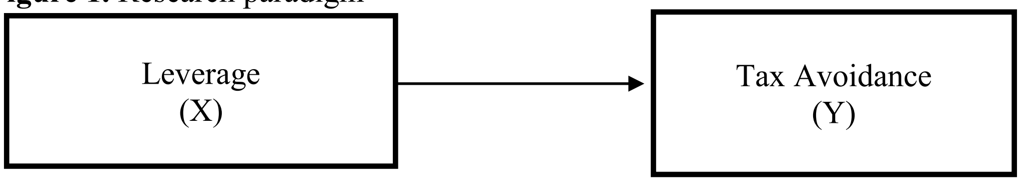
$$DER = \frac{total\ debt}{equity}$$

Companies that have high debt for financing their operations rather than financing originating from equity, the company has a low tax rate. Companies that have high debt take advantage of interest generated from debt (interest on loans) so that the taxes paid are low because of interest originating from debt (interest on loans can reduce taxes), therefore the framework of leverage to tax avoidance has a positive effect (Nobanee, 2018). This is in accordance with the Diamonalisa (2017) study.

**H1: Leverage affects tax avoidance**

The relationship can be contained in a research paradigm chart as follows:

**Figure 1.** Research paradigm




**Research methods**

The research method used will be descriptive analysis. This study uses *cross sectional and times series* data where the data consists financial reports and data taken made from time to time in accordance with the time period of 3 (three) years in the period of 2015-2017.

***Population and Sample***

The population in this study are mining and agricultural companies listed on the Indonesia Stock Exchange, which number 62 for 3 years, namely from 2015-2017. The data used in this study are secondary data with a total population of 186 companies.

The sample in this study is a company listed on the Indonesia Stock Exchange that publishes financial statements within the period of 2015-2017. The sampling technique in this study is a non-probability sampling technique with a purposive sampling method.

***Variable Operationalization***

The dependent variable in this study is Leverage. While the independent variables in this study is Tax Avoidance.

**Table 2:** Operational Variable

| Variable | Concept | Indicators | Scale |
|---|---|---|---|
| Tax avoidance (Y) | The greater the ETR indicates the lower the level of corporate tax avoidance (Budiman and Setiyono, 2012). | ETR=$\frac{Tax\ Expense}{Income\ After\ Tax}$ Dyreng et al(2010) | Ratio |
| Leverage (X) | Measuring the extent to which a company's assets are financed by debt. This means how much the debt burden is borne by the company compared to its assets (Kasmir, 2017: 151). | DER =$\frac{total\ debt}{equity}$ Kasmir (2017) | Ratio |

***Data analysis method***

In this study, data analysis methods used descriptive statistical analysis, testing classical assumptions, linear regression analysis and hypothesis testing.

***Analysis of Regression***

In this study, the variables classified as independent variables (X) are leverage and profitability while the dependent variable (Y) is tax avoidance, the analytical method used in this study is a panel data regression model whose equation can be written as follows:
$Y = a + \beta X$
Information:
Y: Tax avoidance
X: Leverage
a: Constant
β: Regression coefficient

***Hypothesis testing***

In this study hypothesis testing uses a model match test, significant test individual parameters (t test) and simultaneous hypothesis test (f test) with a significance level of 5%.
hypothesis:

$H_{o1} < \beta$ Leverage has an affect Tax Avoidance.
$H_{a1} > \beta$ Leverage has not affect Tax Avoidance

**Results**

***Linear Regression Test Results***

The results of multiple linear regression calculations are presented in the following table:

**Table 4:** Regression Data Panel Model *Random Effect*

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 0.218324 | 0.029878 | 7.307097 | 0.0000 |
| DER | 0.062592 | 0.028405 | 2.203557 | 0.0318 |
| R-squared | 0.262653 | Mean dependent var | | 0.193295 |
| Adjusted R-squared | 0.235344 | S.D. dependent var | | 0.078049 |
| S.E. of regression | 0.068250 | Sum squared resid | | 0.251535 |
| F-statistic | 9.617762 | Durbin-Watson stat | | 1.973723 |
| Prob(F-statistic) | 0.000267 | | | |

Source: Output Results Eviews 8

To test this hypothesis, researchers set the regression equation as follows:

$$\mathbf{Y = \alpha + \beta X}$$

Based on the results of the regression analysis in table 4. a regression equation is obtained as follows:

ETR= 0,218 + 0,062 DER

It can be explained that Regression coefficient for leverage of 0.062 with a regression coefficient marked positive, shows every increase in leverage, predicted to increase tax avoidance by 0.062 times.

***Hypothesis testing***

The statistical t- *test* is used to test hypotheses partially to show the effect of each individual independent variable on the dependent variable.

$H_0$; $\beta1 = 0$ This means that leverage has no effect on tax avoidance in mining and agricultural companies listed on the Indonesia Stock Exchange for the period 2015-2017.

$H_1$; $\beta1 \neq 0$ This means that leverage has an effect on tax avoidance in mining and agricultural companies listed on the Indonesia Stock Exchange for the period 2015-2017.

The error rate ($\alpha$) used is 5%.

Based on the table above, it can be seen that the calculated value obtained by the variable size of the company is 2,203, seen from the t-count value of 6.474329 with a significant level of less than 5%, which is equal to 0,000. This means that leverage affects the tax Avoidance. Therefore, according to the hypothesis testing, $H_0$ is rejected and $H_1$ is accepted, meaning leverage has an effect on tax avoidance in mining and agricultural companies listed on the IDX for the period of 2015-2017.

### *Discussion*

The effect of leverage on tax avoidance can be known from the level of significance. The results of the t test in table 4.13 show the static t value of 2.203 with a significance level of 0.031, smaller than the significance level of 0.05 (5%). This indicates that $H_0$ is rejected and $H_1$ is accepted. This result is in line with the theory revealed and the hypothesis; that is leverage affects tax avoidance.

According to Hendy and Made (2014) leverage is a ratio that shows the amount of debt held by a company to finance its operations. The greater the use of debt by the company, the more the amount of interest expenses incurred by the company, so that it can reduce the company's before tax income, which in turn will be able to reduce the amount of tax that the company must pay (Surbakti, 2012).

The results of this study are in line with the research of Marfirah and Syam (2016) where the results state that leverage affects tax avoidance. Thus, this research is not in line with the results of the research of Hidayat (2018) which states that leverage does not affect tax avoidance

## Conclusions, Implications, Limitations, and Suggestions

### *Conclusion*

Based on the results of data analysis and discussion, the authors conclude that leverage affects tax avoidance in mining and agricultural companies listed on the Indonesia Stock Exchange for the period of 2015-2017.

### *Suggestion*

Based on the conclusions of the results of the above research, the suggestions that can be given are as follows:

1. For Companies

The company is expected to consider and be more careful in making decisions related to tax planning in accordance with the applicable tax laws so that it does not pose a risk of receiving tax sanctions and does not harm other stakeholders.

2. For the Government

In determining a new tax policy or regulation, the government is always the Directorate General of Taxes needs to obtain information and pay attention to the important factors that influence tax avoidance such as leverage and profitability to optimize government revenues from the tax sector.

3. For Other Parties

For further research it is recommended to increase the time span of the study, expand the research sample and add other variables that can influence tax avoidance.

**REFERENCE**

Agung, Mulyo and Bambang Hermanto. 2012. Analysis of Financial Statements. Jakarta: Scholar Science Lanterns

Anita, Wjiayanti, Endang Masitoh, Sri Mulyani. 2018. Effects of Corporate Governance on Tax Avoidance. Journal of Accounting and Business Research Vol. 3 No. 1, 322-240. Through http://jraba.org/journal/index.php/jraba/article/download/91/31. Accessed on January 2, 2019

Ayu, Ida and Ery, Putu. 2016. Effect of Company Size, Company Age, Profitability, Leverage and Sales Growth on Tax Avoidance. Journal of Accounting Volume 14 Number 3. Through https://ojs.unud.ac.id/index.php/Akuntansi/article/view/16009/14016. Accessed on March 2, 2019

Budiman, Judi and Setiyono. 2012. Effect of Executive Character on Tax Avoidance. Journal. Via: http://webcache.googleusercontent.com/search?q=cache:bqp_DveKxU8J:sna.akuntansi.unikal.ac.id/makalah/092-PPJK-29.pdf+&cd=3&hl=en&ct=clnk&gl=en. Accessed on January 2, 2019.

Bureau of Budget Analysis and APBN Implementation. 2013. Evaluation of the Low Realization of State Revenues in 2013. Through http://www.dpr.go.id/doksetjen/dokumen/apbn_EVALUASI_ROWERNYA_REALISASI_PENDAPATAN_NEGARA_TAHUN_201320140821142652.pdf. Accessed on December 29, 2018

Chen, shuping, Xia Chen, Qiang Chen.2010. Are family firms more tax aggressive than non-family firms. Journal Through https://ink.library.smu.edu.sg/soa_research/823/. Accessed on February 28, 2019

Christina, Veronica and Nuryaman. 2015. Accounting and Business Research Methodology. Bogor: Ghalia.

Darmawan, I Gede Hendy and I Made Sukartha. (2014). Effect of Application of Corporate Governance, Leverage, Return on Assets and Company Size on Tax Avoidance. Journal of Accounting Volume 9 Number 1. Through https://ojs.unud.ac.id/index.php/Akuntansi/article/view/8635/7643. Accessed on March 1, 2019

Diamonalisa, Edi and Mardiah. 2017. Effect of Profitability, Leverage, and Institutional Ownership on Tax Avoidance. Accounting Journal, Through http://karyailmiah.unisba.ac.id/index.php/akuntansi/article/download/8397/pdf. Accessed on February 28, 2019

Dyreng, et al., 2010. The Effect of Executives on Corporate Tax Avoidance. The Accounting Review. Via http://taxdoctoralseminar.web.unc.edu/files/2016/02/Dyreng-Hanlon-Maydew-2010.pdf. Accessed on January 6, 2019

Fahmi, Irham. 2014. Introduction to Financial Management, Answer Theory and Questions, Third Matter. Bandung: Alfabeta

Gemilang, Dewi. 2017. Effect of Liquidity, Leverage, Profitability, Company Size and Capital Intensity on Corporate Tax Aggressiveness. Essay. Via http://eprints.iain-surakarta.ac.id/282/1/Desi%20Nawang%20Gemilang.pdf. Accessed on January 2, 2019

Ghozali, Imam and Dwiratmono. 2013. Analysis of Multivariate and Ekonomeirika. Semarang: Diponegoro University

Ghozali, Imam and Dwiratmono. 2017. Multivariate Analysis and Econometrics with E-views 10. Semarang: Diponegoro University

Handayani, rini. 2017. Effect of Return on Assets (ROA), Leverage and Company Size on Tax Avoidance. Maranatha Accounting Journal. Via https://journal.maranatha.edu/index.php/jam/article/view/930/773. Accessed on March 28, 2019.

Hidayat, wastam. 2018. Effect of Profitability, Leverage and Sales Growth on Tax Avoidance. Journal of Management and Business Research Volume 3 Number 1. Through http://jrmb.ejournal-feuniat.net/index.php/JRMB/article/view/82. Accessed on March 2, 2019

https://www.kemenkeu.go.id

Hussain, H.I., Abidin, I.S.Z., Ali., A. & Kamarudin, F. (2018) Debt Maturity and Family Related Directors: Evidence from a Developing Market, Polish Journal of Management Studies, 18 (2), 118 – 134.

Kasmir. 2017. Analysis of Financial Statements. Jakarta: PT RajaGrafindo

Law of the Republic of Indonesia Number 16 of 2009 concerning Third Amendment to Law Number 6 of 1983 concerning General Provisions and Tax Procedures.

Maharani and Suardana. 2014. Effects of Corporate Governance, Profitability and Executive Character on Manufacturing Tax Avoidance. Accounting journal. Via https://ojs.unud.ac.id/index.php/Akuntansi/article/view/9290. Accessed on March 2, 2019

Mardiasmo. 2016. Latest 2016 Taxation Edition Yogyakarta: Andi

Marfirah, Dina and Fazli Syam BZ. 2016. Effects of Corporate Governance and Leverage on Tax Avoidance in Manufacturing Companies Listed on the Stock Exchange in 2011-2015. Via http://www.jim.unsyiah.ac.id/EKA/article/download/814/587. Accessed on December 29, 2018

Merkusiwati, Ni Ketut Lely Aryani and I Gst Ln Ngr Dwi Cahyadi Putra. 2016. Effect of Independent Commissioner, Leverage, Size and Capital Intensity Ratio on Tax Avoidance Volume 17 Number 1 Through https://ojs.unud.ac.id/index.php/Akuntansi/article/view/22025/15615. Retrieved on March 8, 2019

Meyer, D. F. (2018). Predictors of good governance and effective government management: the case of Poland. Polish Journal of Management Studies, 18 (1), 206-217.

Nobanee, H. (2018). Efficiency of working capital management and profitability of UAE construction companies: size and crisis effects. Polish Journal of Management Studies, 18 (2), 209-215.

Permata, Amanda Dhinari, Siti Nurlaela and Endang Masitoh W. 2018. Effects of Size, Age, Profitability, Leverage, and Sales Growth on Tax Avoidance. Accounting and Tax Journal. Via http://journal.stie-aas.ac.id/index.php/jap. Accessed on February 2, 2019.

Pohan, Chairil Anwar. 2016. Tax Management and Tax and Business Planning Strategy. Jakata: Gramedia Main Library

Rahayu, Siti Kurnia. 2010. Indonesian Taxation: Concepts & Formal Aspects. Graha Sciences: Yogyakarta.

Riberio, Ana et al. 2015. The Determinants of Effevtive Tax Rates: Firm 'Characteristic and Corporate Governance. Journal of Economics and Management. Via https://ideas.repec.org/p/por/fepwps/567.html. Accessed on March 2, 2018

Saputra, Moses Dicky Refa. 2017. Effect of Profitability, Leverage and Corporate Governance on Tax Avoidance. Essay. Via https://webcache.googleusercontent.com/search?q=cache:b35s9ubB3vAJ:https://core.

ac.uk/download/pdf/151521737.pdf+&cd=3&hl=en&ct=clnk&gl=en. Accessed on March 13, 2019

Sari, Diana. 2013. Taxation: Basic Concepts of Taxation. Bandung: PT Refika Aditama

Simanjuntak, Timbul Hamonangan and Imam Mukhlis. 2012. Dimensions of the Taxation Economy in Economic Development. Bogor: Achieve Asa Success

Suandi, Erly. 2011. Tax Law Edition 5. Jakarta: Salemba Empat

Sujarweni, V.Wiratna. 2017. Analysis of Financial Statements. Yogyakarta: New Library Press

Sujarweni, Wiratna. 2015. Business and Economic Research Methodology. Yogyakarta: PT Pustaka Baru.

Sumarsan, Thomas (2013). Indonesian Taxation (Vol 3). Jakarta: PT. Index.

Supriyana, Iwan. 2017. Minister Susi Reveals Fisheries Company Tax Avoidance Mode through https://ekonomi.kompas.com/read/2017/03/14/140044626/menteri.susi.ukah.modus.penghindaran.pajak.perusahaan. Fisheries accessed on December 10 2018

Surbakti, Theresa Adelina Victoria. 2012. Effect of Company Characteristics and Tax Reform on Tax Avoidance in Manufacturing Industry Companies Listed on the Indonesia Stock Exchange 2008-2010. Thesis Accounting Journal Faculty of Economics, University of Indonesia, Jakarta through http://lib.ui.ac.id/file?file=digital/20298969-S-Theresa%20Adelina%20Victoria%20Surbakti.pdf accessed on March 3, 2019.

Suryana, Anandita Budi. 2012. Mea and Efforts to Prevent Transfer Pricing through https://www.pajak.go.id/node/12640?lang=en accessed on January 12, 2019

Suryowati, Estu. 2016. Terkuak, Tax Avoidance Mode of Singapore Health Services Company. Via https://money.kompas.com/read/2016/04/06/203829826/Terkuak.Modus.Penghind.Pajak.Company.Jasa.Kesehatan.Asal.Singapura accessed on January 4, 2019.

Susyanti, Jeni and Ahmad Dahlan. 2015. Taxation. Malang: Four two

Tabor, J. (2018). A grey-based decision-making approach to the improvement of OHS management system. Polish Journal of Management Studies, 18 (1), 389-402.

Tempo.co. 2010. The Long Way for KPC Tax Cases. Via https://bisnis.tempo.co/read/224682/jalan-panjang-kasus-pajak-kpc. Accessed on January 2, 2019.

Widarjono, Agus. 2017. Econometrics. Yogyakarta: UPP STIM YKPN

www.idnfinancials.com

www.idx.co.id