Determination Causes of Tax Avoidance on Indonesian Manufacturing Firms with Capital Intensity as Intervening Variables

Theresia Trisanti

Abstract. This study examine and analysis the effect of the firms characteristic which are return on assets (ROA), debt to assets ratio (DAR), company size, and capital intensity on the dependent variable in the form of tax avoidance. The population in this study was manufacturing companies listed on the Indonesia Stock Exchange for the period 2016 - 2019. Selection of company data using purposive sampling technique and hypothesis testing using SmartPLS analysis. The test results show that the variables return on assets (ROA), debt to assets ratio (DAR), company size, and capital intensity affect the tax avoidance. Capital intensity can mediate the relation for variable return on assets (ROA), debt to assets ratio (DAR), company size to tax avoidance.

Keywords: return on assets (ROA), debt to assets ratio (DAR), company size, capital intensity and tax avoidance.

Introduction

The main income in the country of Indonesia comes from taxes collected from the community and used by the government for state development and expenditures of all other state needs. However, the tax payment for the company is calculated as a burden that must be borne by the company. The reduction in expenses will cause the company's net profit to decrease. Meanwhile,
the main goal of the company is to maximize net income. Therefore, the company will try to minimize tax payments. In minimizing the amount of tax payments, the company will carry out tax management. Aditama & Purwaningsih, (2016) and Law & Mills, (2015) explains that tax management is a company means in regulating correct tax obligations by reducing the tax burden that should be paid to be low so that profits and liquidity are obtained as expected. Thus, tax management consists of two objectives, namely: fulfilling tax obligations properly and efficiently in order to obtain profit and liquidity as expected by the company. One of the company's efforts to solve this problem is by planning future taxes (tax planning) (Oktaviani & T. Pohan, 2017; Putri, 2019). Tax planning is an effort to save cash expenses by minimizing tax payments that should be paid. By doing good tax planning, the company's future cash flow can be predicted through the preparation of a cash budget (Amanah et al., 2014; Luqman & Shahzad, 2012). Tax avoidance is one of the company's strategies to save cash expenses. Tax avoidance is a legal act by reducing the tax that should be paid by taking advantage of the weaknesses of the tax law. For companies, tax avoidance is considered as a reduction in expenses, which causes net income to increase. Meanwhile, for the government / tax authorities, tax avoidance is a loss due to not achieving the tax revenue target (Aditama & Purwaningsih, 2016; Blouin, 2014; Piga, 2003).

The company's financial condition is one of the factors that affect tax avoidance which can be indicated by profitability, solvency, company size and capital intensity (Putranti & Setiawanta, 2015; Amanah et al., 2014; Luqman & Shahzad, 2012). In their analysis, return on asset (ROA) is used to test the company's profitability. ROA is a measure determined by dividing the income after tax by all assets owned by the company. That means, with the company's ROA, it will be known how much profit after tax can be obtained with all the assets it owns. Companies that have a high ROA show good management in utilizing their assets (Noor et al., 2010; Ylönen & Laine, 2015). Good management performance can be shown by a good cash turnover, so that companies can pay their taxes. Meanwhile, companies with high ROA levels cause low tax avoidance. Solvency shows the company's ability to pay off its obligations / debts. The solvency ratio can be shown by the company's DAR (Debt to Assets Ratio). DAR shows the percentage to finance operations and investments with debt. Companies can reduce tax payments with their debts because obligations / debts will result in fixed interest expenses. Interest expense is a net income deduction account, so a lower profit will result in lower tax payments because this profit is the basis for calculating tax expense. As a result, many companies use debt to avoid the amount of taxes that need to be paid.

Tax planning strategies can be carried out by utilizing fixed assets. Fixed assets will incur a fixed expense called depreciation expense. Depreciation expense is a cost that may be charged as deductible expenses, the rate of which has been stipulated. The higher depreciation expense results in lower company profits so that the opportunity for tax avoidance is higher. Companies that invest assets in the form of fixed assets can be calculated using the capital intensity ratio. Fixed assets consist of buildings, property, equipment and others (Amanah et al., 2014; Luqman & Shahzad, 2012). The depreciation expense or depreciation expense will be considered by management to avoid the amount of tax paid. Tax evasion measures can also be influenced by company size. Large companies can cause managers to disobey or violate tax laws (Oktaviani & T. Pohan, 2017; Putri, 2019). Because large companies tend to have quality human resources in carrying out tax planning
so that they can reduce tax payments. Meanwhile, small companies tend to find it difficult to do tax avoidance due to the lack of human resources who are experts in the field of taxation (Noor et al., 2010; Ylönen & Laine, 2015).

Previous researchers have conducted research related to factors that affect tax avoidance, (S. Dyreng et al., 2017; Pohan, 2019) with the results of the analysis that leverage cannot affect tax avoidance, while company size, company age, profitability, and sales growth can affect tax avoidance (Oktaviani & T. Pohan, 2017; Putri, 2019). In accordance with the explanation of the problem above, there are several studies whose results are inconsistent, the researcher will conduct research on the same topic but there are changes in variables, therefore this research aims to:

1. To analyze whether tax avoidance influenced by Return on Assets (ROA).
2. To analyze whether tax avoidance influenced by Debt to Total Assets Ratio (DAR).
3. To analyze whether tax avoidance influenced by company size.
4. To analyze whether capital intensity can intervene the relationship between tax avoidance and ROA.
5. To analyze whether capital intensity can intervene the relationship between tax avoidance and DAR.
6. To analyze whether capital intensity can intervene the relationship between tax avoidance and company size.

**Literature Review And Hypothesis Development**

The definition of agency theory is the theory of the relationship or contract between agent and principal (Jensen & Meckling, 1976). Agency theory is a cooperative relationship between agent and principal, in which the shareholder as the principal will authorize the manager as the agent to run the company (Badertscher et al., 2013). Managers are tasked with assisting shareholders in managing the company and making decisions, while shareholders have an responsibility to reward company management (Shapiro, 2005). Corporate conflicts can result from different goals of managers and shareholders. Shareholders expect managers to do their job for the welfare of shareholders with a large return on capital, while managers expect large compensation or incentives for their own interests (Oktaviani & T. Pohan, 2017; Putri, 2019). This difference in interest creates an agency conflict. Agency conflicts cause managers to do tax avoidance because managers expect to get large compensation or incentives, but shareholders want to reduce costs (Eisenhardt, 1989).

**Taxes**

On the basis of Law Number 16 of 2009 Article 1 paragraph 1 which includes General Provisions and Tax Procedures, it is explained that the definition of tax is a compulsory and compelling contribution by an entity or individual as stipulated in the legislation. Individuals and entities who have paid their tax obligations do not receive direct compensation from the government because tax levies are used for state needs for the welfare of the people. In Indonesia, it uses a self-
assessments in collecting taxes, which means that taxation matters are handled by the taxpayer themselves, so that taxpayers will do the calculation, payment and reporting themselves, but still based on the applicable regulations. Meanwhile, the tax collection institution has a role to supervise, examine and carry out investigations in tax matters (CNN, 2018; Yenny, 1999).

Taxes play a significant role in state development and the prosperity of society, therefore tax functions are: First, as reception function (budgetary) because taxes have a function as the main source of state income which is then spent on state needs. For example, to build public roads. Second, as regulatory function taxes have the aim of controlling and enforcing state policies in the economic and social fields. For example, PPNBM (value added tax) is used to regulate taxable goods that are categorized as luxury goods. Third, for redistribution function are taxes used for justice and equality in society. This is indicated by the progressive tax rate so that the income of low taxpayers will be subject to low tax rates and vice versa. Fourth, as function of Democracy are taxes used as a form of mutual assistance system. This is the right of the community to the tax paid to the tax authorities (Pohan, 2019; Rusydi, 2013).

The tax function above is a general tax function that is often found in every country, but in Indonesia it is more focused on the revenue function (budgetary) and the function of regulating (regulatory). Public awareness and active role in paying taxes is needed. Many people fight against paying taxes to minimize tax costs. The various resistances can be distinguished as follows: active resistance, tax resistance is actively carried out deliberately by taxpayers to minimize or avoid tax obligations that should be paid. Here are 3 ways to fight taxes: (a) Tax avoidance, as taxation resistance which is carried out by exploiting weaknesses in applicable tax laws to minimize or avoid taxes that should be paid. This is an act that is allowed (legal), but it can cause loss to the state because the tax income received is not optimal. (b) Tax evasion, namely tax resistance which is carried out by not complying with applicable tax laws (illegal) to reduce tax payments. (c) Tax negligence, as tax resistance deliberately refusing to pay taxes in accordance with the provisions and refusing to carry out according to the applicable formal provisions. Passive Resistance. Passive tax resistance is carried out not at the taxpayer's own initiative, but because of the circumstances around the taxpayer (Ahmad et al., 2016a, 2016b).

**Tax Avoidance**

Tax avoidance is usually defined as a tax avoidance scheme for the purpose of minimizing the tax burden by exploiting a loophole in a country's taxation provisions. Conceptually, tax avoidance schemes are actually legal or legitimate because they do not violate taxation provisions. Tax avoidance is a step taken by taxpayers in order to reduce the object of paying taxes as a basis for imposing taxes based on the provisions of the applicable law (Badertscher et al., 2013). This aims to minimize or reduce the amount of tax that should be paid to tax authorities and increase the company's cash flow. This action will result in low state cash receipts resulting in inappropriate tax revenue targets. This has resulted in a decline in facilities for community welfare, such as: education, health and state infrastructure development. The characteristics of tax avoidance are as follows (Pohan, 2019): First, there is an element of artificial arrangement, which is as if an arrangement was
made when in fact it does not exist, this is due to the absence of tax factors. Second, using loopholes tax laws for specific purposes by applying legal provisions, even though the purpose of making laws is not like that. Second, taxpayers take advantage of consultants to do tax avoidance because the amount of tax is too large on the condition that the taxpayer must keep this a secret.

**Hypotheses Development**

**ROA on Tax Avoidance**

An explanation of tax avoidance practices can be started from the Agency Theory approach. The practice of tax avoidance in the perspective of agency theory is influenced by the conflict of interest between the agent (management) and the principal that arises when each party tries to achieve or maintain the level of success in achieve the profit (Amanah et al., 2014; Luqman & Shahzad, 2012). The success of a company can be determined based on the acquisition of profits from operational activities, which is indicated by its profitability. One of the measures of profitability can be done by using Return on Assets (ROA). The amount of ROA is determined by dividing profit after tax with all company assets.

A company with a large ROA ratio means that the profits earned are greater so that it reflects a company that is good at managing its assets. The high level of profitability of a company illustrates good management, especially in managing cash turnover, so that the company is able to pay taxes with its cash (Oktaviani & T. Pohan, 2017; Putri, 2019). Thus, a high ROA ratio can lead to low tax avoidance actions by companies. Based on the research results, it is stated that ROA can negatively and significantly influence tax avoidance (Pohan, 2019; Rusydi, 2013; Putri, 2019).

\[ H_1 : \text{ROA has a negative and significant effect on tax avoidance.} \]

**DAR on Tax Avoidance**

Agency theory explains that the phenomenon that occurs in companies is that companies do tax avoidance, of course also through policies taken by company leaders themselves, for example taking large loans from banks, resulting in large interest payments. Debts occur because company decisions and policies are taken by the leader of the company (Pohan, 2019; Rusydi, 2013; Putri, 2019). In this study, the focus is on paying off the company's liabilities / debts that are paid with assets, so that the solvency ratio used is Debt to total Asset Ratio (DAR). The measurement of this ratio is done by dividing all liabilities / debts by all assets owned. The company will be safe (solvable) if it has a low DAR level. Conversely, if the DAR level of the company is high, the company will also face high risks. This happens because if the company's assets are unable to pay its obligations / debts, the company will experience financial problems. This will encourage companies to increase profits and reduce tax costs (Oktaviani & T. Pohan, 2017; Putri, 2019). The interest expense incurred from debt will be utilized by the company because interest expense is a profit deduction account which will later become the basis for tax imposition. Balakrishnan et al., (2019), Yenny( 1999) conducted research in which it can be concluded that leverage or solvency can affect companies in doing tax avoidance negatively and significantly.

\[ H_2 : \text{DAR has a negative and significant effect on tax avoidance.} \]
Company Size to Tax Avoidance
Companies that are agents will prioritize their interests in optimizing company profits with the lowest possible tax burden. The character of the company manager will certainly influence the manager's decision to minimize the burden, including the tax burden, by considering various ways (Pohan, 2019; Rusydi, 2013; Putri, 2019). Companies that are included in large companies tend to have greater resources than companies that have a smaller scale to do tax management well. Many companies in Indonesia, especially manufacturing companies, are of different sizes, some are large or small (Oktaviani & T. Pohan, 2017). Company measurements can be classified based on the size of the company's profits, number of sales, number of assets owned, log size, number of employees employed and others. The measurement of the company in this study is based on the total amount of its assets. Companies with large amounts of assets are assumed to be able to increase productivity in carrying out business activities (Restianti & Agustina, 2018). Increased company productivity will result in higher profits generated so that it will affect the taxes that should be paid (Amanah et al., 2014; Luqman & Shahzad, 2012). Companies with a large size have the opportunity to avoid large amounts of taxes because of the many operational activities that are increasingly complicated, so that companies will use tax experts to carry out tax planning. Thus, a large company size will lead to greater opportunities to avoid paying too large taxes. Alexander, (2013) Sikka and Willmott (2013) have conducted research in which it can be concluded that company size can positively and significantly affect tax avoidance.

H₃: Company size has a positive and significant effect on tax avoidance

The Influence of Capital Intensity as Intervening Variable
Many manufacturing companies invest their capital in fixed assets, this investment choice is due to the manufacturing production activities and will affected on depreciation expenses (Oktaviani & T. Pohan, 2017; Putri, 2019). Depreciation of fixed assets results in depreciation costs on the financial statements. With a large amount of fixed assets, the depreciation expense will also be greater so that it will reduce the company's profit which results in lower taxable income. This will affect tax payments because the basis for calculating corporate income tax is taxable income. This results in tax avoidance by companies by utilizing their assets which can be calculated by the capital intensity ratio (Amanah et al., 2014; Luqman & Shahzad, 2012). Based on previous research conducted by Mills et al., (1998b) and Zeng (2010) it is concluded that capital intensity can positively and significantly affect tax avoidance.

H₄: ROA has a negative and significant effect on tax avoidance with capital intensity as intervening variable.
H₅: DAR has a negative and significant effect on tax avoidance with capital intensity as intervening variable.
H₆: Company size has a positive and significant effect on tax avoidance with capital intensity as intervening variable.
Based on the explanation above, it can be concluded that the figure of research framework as follow:

**Figure 1. Research Framework Direct Effect**

**Figure 2. Research Framework Indirect Effect**

**RESEARCH METHOD**

In this study the data were collected using the documentation method. The definition of documentation according to Lin et al., (2013) and Piaw (2013) the acquisition of data and information by looking at past records in the form of archives, books, pictures, documents and written numbers in the form of reports or information that can help the research process. The information and data used in this study are documents in the form of audited and published company annual financial reports during 2016-2019. Data was collected by accessing the related company website and www.idx.co.id and recording data related to the research variables. The sample was obtained using a purposive sampling method with certain criteria. The sampling procedure is carried out with the following criteria:

**Table 1. Sample Selection Result**

| No. | Description                                                                 | Unit |
|-----|-----------------------------------------------------------------------------|------|
| 1.  | Manufacturing companies listed on the IDX as of 31 December 2019             | 187  |
2. Manufacturing companies listed on the IDX 2015-2019 have been delisted (7)
3. Manufacturing companies that do not publish complete financial reports during 2015-2019 (39)
4. Manufacturing companies that do not use Rupiah in their financial reports for 2015-2019 (27)
5. Manufacturing companies whose profits and working capital were negative in 2015-2019 (49)
6. Manufacturing companies with Cash Effective Tax Ratio > 1 (13)
7. Number of Sample Companies 52
   Total sample used in research for four years (2016-2019) 208

The scope of this research is limited to testing the effect of Return On Assets (ROA), Debt to Total Asset Ratio (DAR), company size, and capital intensity on tax avoidance. In addition, the research period used is only 2016-2019 and only companies engaged in manufacturing. The following are the results of the PLS Algorithm processing in the research model used as follows:

![Figure 2. PLS Algorithm Processing](image)

**Operational Definitions of Variables**

The scope of this research is limited to testing the effect of ROA, DAR, company size, capital intensity, and tax avoidance, therefore operational definitions of variables in this research consisting of:

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ROA this ratio is a ratio that has the aim of knowing how far management is in managing the company's assets so that the expected profit can be obtained. The following is the formula for calculating ROA:

\[
\text{Return On Assets} = \frac{\text{Earning after Tax}}{\text{Total Asset}} \times 100\%
\]

DAR this ratio shows the amount of liabilities or debts to finance company assets or the amount of influence of liabilities or debts on asset management. The following is the formula for calculating DAR:

\[
\text{Total Debt to total Assets ratio} = \frac{\text{Total Debt}}{\text{Total Assets}} \times 100\%
\]

Company size can be calculated in a number of ways. Company measurements in this study are classified based on the number of assets owned or formulated as follows:

\[
\text{Company Size} = \ln(\text{Total Asset})
\]

Capital Intensity this ratio shows the amount of investment in the form of fixed assets compared to the total assets of the company. The following is the formula for calculating the capital intensity ratio (Mills et al., 1998a):

\[
\text{Capital Intensity} = \frac{\text{Total Net Fixed Assets}}{\text{Total Assets}} \times 100\%
\]

Tax avoidance can be measured in certain ways. How to calculate tax avoidance according to S. D. Dyreng and Lindsey (2009); Zeng (2010) namely with general accepted accounting principle (GAAP) between effective tax ratio (ETR) and Cash Effective Tax Ratio (CETR). However, some researcher such as Prencipe (2012) argue that Cash ETR can describe short-term tax management which is paid in cash. Thus, the researcher uses Cash ETR which takes into account the cash paid for tax on profit after income tax with the following formula:

\[
\text{Cash ETR} = \frac{\text{Total Tax Payment}}{\text{Profit Before Tax}}
\]

Cash ETR is a ratio that compares tax payments in cash to profit after income tax in the current year, if company with a low Cash ETR ratio means that the more likely it is to avoid tax. Meanwhile,
companies with high cash ETR ratios mean that the possibility of tax avoidance is lower (S. Dyreng et al., 2014; Pohan, 2019).

Result And Discussion

R square is also referred to as the coefficient of determination which explains how far the dependents data can be explained by independent data. R square is between 0 - 1 provided that the closer to number one means the better. A value can be said to be "good" if it is above the number 0.5, on the other hand, a determination coefficient value is said to be "not good" if it is below 0.5 (Lin et al., 2013; Piaw, 2013). R Square shows the ability of ROA, DAR and company size in this research model to explain variations in tax avoidance, which is 0.749. The value of R Square (R²) = 0.738 greater than 0.50 is classified as all independent variables have good ability to explain variations in the dependent variable.

| Variable          | R Square | R Square Adjusted |
|-------------------|----------|-------------------|
| Capital Intensity | 0.462    | 0.402             |
| Tax Avoidance     | 0.749    | 0.738             |

Path Coefficients in the table below contain the path coefficient values (the numbers are located in the original sample column). All path coefficients in this study are positive as based on the Path Coefficients table, the researcher can test for each path with the results listed in the table below. A positive sign and p value less than 0.05 indicates that the independent variable has a positive effect on the dependent variable.

| Influence Between Pathways | Beta (Original Sample) | Sign | Sample Mean | T-Statistic | P-value | Meaning                                      |
|----------------------------|------------------------|------|-------------|-------------|---------|----------------------------------------------|
| ROA => Tax Avoidance       | 0.416                  | -    | 0.420       | 5.498       | 0.000   | ROA has negative effect on tax avoidance    |
| ROA => Capital Intensity   | 0.135                  | -    | 0.140       | 2.082       | 0.038   | ROA has negative effect on capital intensity |
| DAR => Tax Avoidance       | 0.647                  | -    | 0.655       | 9.467       | 0.000   | DAR has negative effect on tax avoidance     |
| DAR => Capital Intensity   | 0.135                  | -    | 0.140       | 2.067       | 0.007   | DAR has negative effect on capital intensity |
| Size => Tax Avoidance      | 0.509                  | +    | 0.504       | 7.750       | 0.001   | Size has positive effect on tax avoidance    |
| Size => Capital Intensity  | 0.456                  | +    | 0.448       | 5.557       | 0.000   | Size has positive effect on capital intensity |
According to the research results described above, it can be concluded that the first hypothesis is accepted so that the ROA variable \((X_1)\) can negatively and significantly affect tax avoidance \((Y)\). The direction of the negative correlation shows that the higher the ROA, the lower the company's chances of taking tax avoidance. Profitability is an indicator of the achievement of company profits which can affect tax payments (Oktaviani & T. Pohan, 2017; Putri, 2019). Manufacturing companies in this study have an average high ROA level. With a high ROA ratio, it describes a good company performance, so that the company is getting better at generating profits by utilizing all its assets. Companies with good performance are indicated by good cash turnover, so that companies are better able to meet tax obligations with cash (Amanah et al., 2014; Luqman & Shahzad, 2012). The results obtained from this study are supported with other research results that can be concluded that ROA has a negative and significant effect on tax avoidance (Abdul Wahab & Holland, 2012; S. Dyreng et al., 2017).

The results of the data processing described above show that the second hypothesis is effect of debt to total asset ratio \((DAR)\) on tax avoidance is accepted. It can be concluded that DAR \((X_2)\) can negatively and significantly affect tax avoidance \((Y)\). The direction of the negative correlation shows the high DAR ratio which can lead to low opportunities for companies to take tax avoidance actions. A high DAR ratio illustrates that the amount of loans \((\text{debt})\) made by the company is getting higher, which causes the loan interest to get bigger. Thus, the net profit earned by the company is getting lower because interest expense is a profit deduction account which will later become the basis for tax imposition. This means that the company will use corporate debt to increase interest payments, so that the taxes that should be paid will be even lower. The results obtained from this study are supported by Abdul Wahab and Holland (2012) S. Dyreng et al., (2017) with research results which can be concluded that leverage has a negative and significant effect on tax avoidance (Abdul Wahab & Holland, 2012; S. Dyreng et al., 2017).

The influence of company size on tax avoidance according to the results of data processing that has been done is accepted, so it can be concluded that company size \((X_3)\) can positively and significantly affect tax avoidance \((Y)\). The direction of the correlation shows positive, which means that the bigger the company will cause the company to avoid taxes, which is getting bigger and vice versa. The manufacturing companies studied have a large average asset. A large company means that the company is able to increase productivity in carrying out its business activities, thus increasing profits (Amanah et al., 2014; Luqman & Shahzad, 2012). The bigger the net profit, the bigger the tax that should be paid. Large companies have a great opportunity to avoid taxes because of the more complexity and many operational activities that are carried out, so the company will take advantage of experts in the field of taxation to carry out tax planning carefully. Thus, companies can reduce their tax payments. The results obtained from this study are in line with research by
Alexander, (2013) Sikka and Willmott (2013) who state that company size has a positive and significant effect on tax avoidance.

The effect of capital intensity on tax avoidance, according to the results of the data processing that have been described, it proves that the fourth hypothesis is accepted, so it can be concluded that capital intensity can affect tax avoidance. This indicates that the fixed assets owned by the manufacturing company studied are used for depreciation costs and also for operating activities and as company investment. Manufacturing companies use fixed assets for operational activities with the aim of producing product for increasing sales and for corporate investment in fixed assets. The application of depreciation will affect the financial statements, including the taxable income of a company, the manufacturing companies studied focus on depreciation costs which are used to avoid paying too large taxes. The results of this study are in line with research conducted by Alexander, (2013) Sikka and Willmott (2013) with the conclusion that capital intensity can positively and significantly affect tax avoidance.

### Table 4. Specific Indirect Hypotheses Result Effect

| Hypothesis | Beta (Original Sample) | Sign | Sample Mean | T-Statistic | P-value | Meaning |
|------------|------------------------|------|-------------|-------------|---------|---------|
| ROA => Capital Intensity => Tax Avoidance | 0.035 | - | 0.037 | 2.482 | 0.018 | ROA has negative effect on tax avoidance with capital intensity as intervening variable. |
| DAR => Capital Intensity => Tax Avoidance | 0.015 | - | 0.021 | 1.425 | 0.005 | DAR has negative effect on tax avoidance with capital intensity as intervening variable. |
| Size => Capital Intensity => Tax Avoidance | 0.067 | + | 0.065 | 2.189 | 0.029 | Company size has positive effect on tax avoidance with capital intensity as intervening variable. |

Significant P-value (Sig.) at $\alpha = 5\%$

Mediating or intervening variables are variables that theoretically affect the relationship between the independent and dependent variables into an indirect relationship (Lin et al., 2013). It can also be interpreted that the intervening variable is a variable that can weaken and strengthen the relationship between variables (moderator variables), but cannot be measured and observed. The mediating or intervening variables are located between the independent and dependent variables so that the dependent variable cannot be directly affected by the independent variable. According to Joe F. Hair Jr, et al., (2014) and Sarstedt et al., (2014) there are 2 (two) types of mediation, namely partial mediation and perfect mediation. Partial mediation occurs when the direct effect (independent variable $\rightarrow$ dependent variable) is significant and the indirect effect (independent variable $\rightarrow$ mediation $\rightarrow$ dependent variable) is also significant. Meanwhile, perfect mediation occurs when the
direct effect (independent variable => dependent variable) is not significant and the indirect effect (independent variable => mediation => dependent variable) is significant.

Based on table 4 it can be seen for H4 up to H6 capital intensity can act as partial mediating variable for ROA, DAR and company size. This indicates that the fixed assets (e.g. machinery, factory buildings, plants assets) owned by the manufacturing company in this research are generally used as company investment and the depreciation costs are recorded. Fixed asset depreciation expense has an effect on profit acquisition because the depreciation cost of fixed assets is one of the elements of operating costs so that the large depreciation cost of fixed assets will affect profitability in an accounting period. Thus, the manufacturing companies increasing depreciation costs which can affect to avoid paying too large for company tax.

Researchers analyzed the capital intensity ratio using agency theory, this is because agency theory puts more emphasis on reducing the company's tax burden. Unemployed funds in the company by managers will be invested in fixed asset investments, with the aim of obtaining profits in the form of depreciation expenses which can be used as a tax deduction so that taxable profits are low. CIR is an investment activity carried out by a company that is associated with investment in the form of fixed assets (capital intensity). Therefore this research shows that the capital intensity can act as intervening variable and can partially mediate the effect of ROA, DAR, company size on tax avoidance, so that hypothesis H4 up to H6 is accepted. The research result consistent with research by Alexander (2013) Sikka and Willmott (2013).

Conclusion

In the discussion section, the results of the research have been explained in detail, so that the following conclusions are obtained as follows: First, tax avoidance can be influenced by profitability negatively and significantly, so that the amount of profitability as measured by ROA can influence management to avoid paying too large a tax. Second, tax avoidance can be affected by solvency negatively and significantly, so that the amount of solvency as measured by DAR can influence management to avoid paying too large a tax. Third, tax avoidance can be influenced by company size positively and significantly, so that the size of the company can influence management to avoid paying too large a tax. Fourth, tax avoidance can be influenced by capital intensity, so the magnitude of the capital intensity ratio can influence management in implementing tax avoidance.

The contribution of this research: first that the result of this research expected to help the government in seeing the gaps that companies can use in implementing tax avoidance. Because even though tax avoidance basically does not violate the provisions of the law, in terms of state revenue it is detrimental revenue. Second, increase government and public knowledge by providing an overview and empirical evidence regarding the factors that affect tax avoidance.

The limitations of the research that has been carried out is that the sample used is only companies engaged in manufacturing that are on the Indonesia Stock Exchange list and the annual
financial reports issued by the company are incomplete according to the research period used, thus there are 208 data used in this study, so the data that can’t represent manufacturing companies is still too little. For the next researchers, it is suggested researchers can increase the amount of sample data and update the calculation period to achieve better results and hope to add other variables for example the liquidity ratio and the ratio of activities that can affect tax avoidance.

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