



LIQUIDITY, LEVERAGE, TAX AVOIDANCE: THE MODERATING ROLE OF FIRM SIZE

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ARTICLE INFO

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Submitted:
02 – Februari - 2022
Revised:
19 – Februari - 2022
Accepted:
25 – Maret - 2022



ABSTRACT

This study examines the effect of liquidity and leverage on tax avoidance. In addition, this study employs firm size as a moderating variable. This type of research is quantitative by using purposive sampling. The population in this study are all mining companies listed on the Indonesia Stock Exchange in 2016-2020. Determination of research sample based on purposive sampling method with a total sample of 60 firm-year. Research data is secondary data accessed through www.idx.co.id and www.idnfinancials.com. This study concludes that liquidity is positively associated with tax avoidance, while leverage is not associated with tax avoidance. Other findings indicate that firm size does not provide a moderating role in testing the effect of liquidity and leverage on tax avoidance. This study suggests that the Indonesia Tax Authority needs to pay attention to the characteristics of certain companies in identifying tax avoidance by companies.

Keywords: company characteristics, income tax, tax planning

INTRODUCTION

Tax is a mandatory contribution to the state-owned by an individual or entity that is coercive under the law, without getting a direct reward and is employed for the needs of the state for the greatest prosperity of the people (Laws Of The Republic Indonesia, 2007). Tax revenue until April 2021 is IDR 374.9 trillion. This achievement is 30.94% of the 2021 tax revenue target of IDR 1,229.6 trillion (Ministry of Finance, 2021). Tax revenue accounts for 70 percent to 80 percent of total state revenue; this tax revenue is used for infrastructure costs and to build various things, especially during the pandemic

that hit Indonesia from 2020 until now (Ministry of Finance, 2021). The comparison between tax revenue and gross domestic product (GDP) in percent is called the tax ratio (tax ratio), where the tax ratio gives an idea of the state's ability to collect taxes from annual income (Putra & Firmansyah, 2018). The decline in the tax ratio in Indonesia is the highest compared to other countries in the world (Kontan.co.id, 2021). Indonesia adheres to a self-assessment system in the tax payment system so that taxpayers are given complete discretion in calculating, paying, and reporting their tax obligations. This condition can provide an opportunity for taxpayers to minimize the tax expenses that must be paid (Chandra & Trisnawati, 2019). The government expects to optimize state revenues through taxes, but most taxpayers try to pay taxes to a minimum (Aryotama & Firmansyah, 2020a). Most taxpayers consider tax expenses are the company burden, so it must be minimized or the costs incurred because it reduces profits (Abdullah, 2020). Tax avoidance has a risk in the future with errors that may be made in the tax avoidance process that is not legally correct. However, in practice, many companies are still doing tax avoidance. It is conducted when the Tax Assessment Letter (SKP) has not been issued (Manurung, 2020).

The government intends taxpayers to fulfill the obligation to pay the tax expenses following the provisions that must be paid. However, companies always attempt to minimize the tax amount paid to the government because tax payments can reduce company profits (Nurfauzi & Firmansyah, 2018). Therefore, companies tend to carry out tax planning to reduce the number of tax obligations paid to the government (Artinasari & Mildawati, 2018). In agency theory, a contractual relationship separates the functions between the owner as of the principal and management as the company's agent. It can lead to two agency problems: asymmetric information and the circumstance of conflicts of interest. The existence of differences in interests between the government and companies in viewing tax obligations is one of the problems that is often discussed practically and academically (Yulianty et al., 2021). The government considers that tax avoidance activities can cause losses to the state, causing a tax gap that weakens tax power in state revenues (Wibawa et al., 2016).

Meanwhile, from the company's point of view, tax avoidance is one component of political costs that can reduce the profits earned by the company in a certain period (Ferdiawan & Firmansyah, 2017). The difference in interests between the government and the company raises the attention of the company owner. The government expects tax revenue from corporate taxpayers as state income. On the other hand, companies tend to minimize the tax expenses to get more significant profits. Companies use loopholes in tax regulations and financial accounting standards for tax avoidance. Also, tax avoidance by the company can result in a decrease in shareholder confidence. Managers have discretion in influencing company policies, including corporate tax planning policies. There is asymmetric information between managers and shareholders, and managers use perfect information to avoid tax. Managers may have certain motives through tax planning actions. Although tax avoidance does not violate tax provisions, it can harm the company in the future. Thus, the review of tax avoidance needs to be investigated further.

Arham et al. (2020) have mapped different research results on tax avoidance from 1999 to 2019. The majority of the results of testing the effect of firm size is positively associated with tax avoidance. In contrast, most of the testing results of institutional ownership, audit committee, leverage, and independent commissioners are not associated with tax avoidance. Several previous studies have tested tax avoidance,

among others, with liquidity (Abdullah, 2020; Artinasari & Mildawati, 2018; Budianti & Curry, 2018; Gultom, 2021; Mariani & Suryani, 2021; Pasaribu & Mulyani, 2019; Rozak et al., 2018), leverage (Artinasari & Mildawati, 2018; Pajriansyah & Firmansyah, 2017; Pasaribu & Mulyani, 2019; Permata et al., 2018; Saputra et al., 2020), firm size (Martinus et al., 2021; Permata et al., 2018; Saputra et al., 2020), earnings management (Ferdiawan & Firmansyah, 2017; Irawan et al., 2020; Pajriansyah & Firmansyah, 2017), corporate social responsibility disclosure (Firmansyah & Triastie, 2020; Zeng, 2019), firm age (Permata et al., 2018), with related party transactions (Aryotama & Firmansyah, 2020a), company business strategy (Aryotama & Firmansyah, 2020b), customer concentration (Aryotama & Firmansyah, 2019), transfer pricing aggressiveness (Pramudya et al., 2021; Utami & Irawan, 2022; Wijaya & Rahayu, 2021), company life cycle (Irawan & Afif, 2020), and capital intensity (Artinasari & Mildawati, 2018; Budianti & Curry, 2018; Puspitasari et al., 2021; Saputra et al., 2020; Yulianty et al., 2021; Zeng, 2019).

The debt policy carried out by management is closely related to the company's liquidity conditions. The debt selection policy is a company policy that is possible in line with the company's tax planning policy (Nurhandono & Firmansyah, 2017; Pajriansyah & Firmansyah, 2017). Short-term obligations can be fulfilled if the company's liquidity ratio is in a high state (Martinus et al., 2021). High liquidity indicates the company's ability to fulfill its current obligations that will mature (Utama et al., 2021). High liquidity also suggests the success of management in managing resources in obtaining higher existing assets, regardless of the asymmetric information (Utama et al., 2021). The better the company's liquidity, the more effort to tax avoidance will decrease. Artinasari & Mildawati (2018), Fadli et al. (2016), and Pasaribu & Mulyani (2019) found that liquidity is negatively associated with tax avoidance. Meanwhile, Abdullah (2020) and Budianti & Curry (2018) concluded that liquidity is positively associated with tax avoidance. Furthermore, Gultom (2021) and Rozak et al. (2018) concluded that liquidity is not associated with tax avoidance. The inconsistency of the results of previous studies has resulted in a retest of liquidity against tax avoidance that is important to do.

The funding policy that indicates the company is doing tax avoidance is the leverage policy. In the long term, interest expense on the debt will reduce the existing tax expenses (Abdullah, 2020). Leverage is the level of debt used by the company in financing (Artinasari & Mildawati, 2018). The increase in debt will result in the emergence of interest expenses that the company must pay. This component of interest expense will reduce the company's pre-tax profit, so the company must pay the tax expenses will be reduced. Companies tend to use resources for their operational activities rather than interest expenses to reduce their tax expenses (Saputra et al., 2020). In line with this, Abdullah (2020) and Pajriansyah & Firmansyah (2017) found that leverage positively affected tax avoidance.

Meanwhile, Saputra et al. (2020) concluded that leverage is negatively associated with tax avoidance. Furthermore, Artinasari & Mildawati (2018), Pasaribu & Mulyani (2019), Permata et al. (2018), and Puspitasari et al. (2021) found that leverage is not associated with tax avoidance. The existence of differences in test results in previous studies resulted in the need to re-examine the effect of leverage on tax avoidance needs to be conducted.

This study investigates the effect of liquidity and leverage on tax avoidance. This study includes firm size as a moderating variable in testing the relationship between the independent and dependent variables, which is still rarely conducted in previous studies. Firm size is a characteristic that investors can easily recognize (Hadi et al., 2021). In addition, the company's size describes the level of wealth owned by the company (Parendra et al., 2020). Company activities can be seen from the firm size (Parendra et al., 2020), including the tax avoidance activities of a company. According to Martinus et al. (2021) and Zeng (2019), firm size positively affects tax avoidance. Large companies tend to have better resources (Firmansyah et al., 2021) for better tax planning.

Agency theory explains that an agency relationship is a contract between one or several people (principals) who employ other people (agents) to perform several services and provide decision-making authority (C.Jensen & H.Meckling, 1976). Sometimes managers take action for their own sake instead of acting in the principal's interests (C.Jensen & H.Meckling, 1976). The existence of information asymmetry causes managers to tend to take actions according to certain motives (Scott, 2015). One is corporate tax avoidance (Desai & Dharmapala, 2006). Tax avoidance is a way of reducing taxes that are still within the limits of the provisions of tax laws and regulations and can be justified, mainly through tax planning (Dyrenge et al., 2008). Tax avoidance can be categorized as a legal action as long as it is carried out through a plan and does not violate applicable tax regulations, and is carried out to delay or shift the tax expenses to the next period (Pasaribu & Mulyani, 2019). Thus, the tax expenses in the current period do not burden the company even to the point of disrupting the company's cash flow (Pasaribu & Mulyani, 2019). Artinasari & Mildawati (2018), Fadli et al. (2016), and Pasaribu & Mulyani (2019) found that liquidity is negatively associated with tax avoidance. Companies that have high liquidity reflect good financial conditions so that companies will have the ability to pay all their obligations, including the obligation to pay taxes. On the other hand, companies with low liquidity will prefer to maintain cash flows rather than pay taxes to secure company finances.

In agency theory, managers prefer funding sources from debt compared to share capital (Firmansyah et al., 2020; Jananto & Firmansyah, 2019). As a result, asymmetric information between managers and shareholders increases because managers will be more transparent to creditors regarding the terms of the debt provided (Firmansyah et al., 2020). Even though greater debt causes the company to experience potential financial difficulties (Nugroho & Firmansyah, 2017), the use of funding sources from debt can not only be used following certain motives of the manager. Still, it can also be used to reduce the company's tax expenses that must be borne (Nurhandono & Firmansyah, 2017). Abdullah (2020) and Pajriansyah & Firmansyah (2017) found that leverage is positively associated with tax avoidance. A high leverage ratio shows the large amount of company funding that comes from debt, so it will cause a higher amount of interest expense which can reduce profits (Abdullah, 2020; Pajriansyah & Firmansyah, 2017). As a result, conditions can reduce the company's tax expenses. The company also has an incentive to maintain solvency to pay off its debts so that it has an incentive to do tax avoidance so that its tax obligations are lower.

Large companies usually have more adequate assets and can operate with better economies of scale (Parendra et al., 2020). In addition, large companies have more sufficient resources and operating systems in carrying out their activities (Firmansyah et al., 2021). Therefore, the company has experience in doing tax planning.

Large companies tend to tax avoidance. Although tax avoidance does not violate the applicable legal provisions, the action is based on specific motivations from managers (Firmansyah & Triastie, 2020). Companies with a high liquidity level tend to minimize tax avoidance (Artinasari & Mildawati, 2018; Pasaribu & Mulyani, 2019). Companies with high levels of liquidity indicate that tax avoidance options are not the best course of action. Managers managed to take advantage of their ability to get better performance than taking advantage of certain loopholes to tax avoidance. On the other hand, large companies tend to be able to carry out tax planning well so that the condition of the company's size is an indication of tax avoidance actions taken by the company.

Large companies usually have better financial fundamentals than companies with more minor scales (Firmansyah et al., 2021). The existence of trust from creditors makes it easier for larger companies to get funding sources from debt. On the other hand, companies take advantage of conditions with more significant debt to reduce the tax expenses paid to the government (Abdullah, 2020; Pajriansyah & Firmansyah, 2017). Companies with a larger size can utilize the issued debt more effectively and efficiently through better economies of scale operations than similar companies with smaller company sizes. The existence of economies of scale in the company's operations will cause the company to operate better and have better performance. However, this condition causes companies to be more inclined to save their tax burden.

Furthermore, this study included profitability as a control variable. Companies with large profits will tend to pay taxes, while companies with low yields will avoid taxes because they will experience losses if they have to pay taxes (Budianti & Curry, 2018). Martinus et al. (2021) and Puspitasari et al. (2021) found that high profitability encourages companies to tax avoidance.

This research is expected to add to the literature on tax avoidance research and research in the field of financial accounting. In addition, this research is expected to contribute to the tax authorities in Indonesia to improve regulations related to income tax. In addition, the Financial Services Authority (FSA) can use this research to improve policies about financial literacy for investors in the capital market. The sample selection in this study employs data on mining companies listed on the Indonesia Stock Exchange for the period 2016-2020 with the consideration that research is still rare using mining sector data as a result of "mapping based on the unit of analysis" conducted by Arham et al. (2020). In addition, the mining sector in Indonesia is one of the pillars of economic development and its role as a provider of energy resources that are indispensable for economic growth (Putra & Alamsyah, 2018). Stocks in the mining sector are in great demand by investors, with the high volume of trading shares in the mining sector will encourage companies to display financial reports as well as possible (Rahmawati, 2020). This study starts from 2016 because, in 2015, trade-in Asia experienced a slowdown caused by weakening mining commodity prices and high volatility of mining commodities.

METHODS

The data used in this study is secondary data in the form of quantitative data from financial statement data of mining sector companies listed on the Indonesia Stock Exchange. Financial reports are obtained through www.idx.co.id and

www.idnfinancials.com. Determination of research samples based on purposive sampling method with the following criteria:

Table 1. Research Sample Criteria

Criteria	Amount
Mining companies listed on the Indonesia Stock Exchange for the period Nov 2021	53
Mining companies listed after January 1, 2016	-30
Mining companies that suffered losses in the 2016-2020 period	-8
Companies with incomplete financial statements during the 2016-2020 period	-3
Number of company financial statements that can be used in research	12
Number of the year of research	5
Total Research Sample	60

Source: data processed

The dependent variable in this study is tax avoidance by using an effective tax rate proxy as Hanlon & Heitzman (2010), Pramudya et al. (2021), and Puspitasari et al. (2021).

$$ETR = \frac{\text{Tax Expenses}}{\text{Pretax income}}$$

The higher the ETR value indicates that the company has low tax avoidance. On the other hand, a low ETR value suggests that the company is doing higher tax avoidance. The independent variables in this study consist of liquidity and leverage. The liquidity proxy in this study follows Artinasari & Mildawati (2018), Fadli et al. (2016), Pasaribu & Mulyani (2019):

$$\text{Current Ratio (CR)} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

The leverage proxy in this study follows Abdullah (2020), Pramudya et al. (2021), and Puspitasari et al. (2021) using the Debt to Equity Ratio (DER).

$$DER = \frac{\text{Total Liabilities}}{\text{Total Equities}}$$

Furthermore, the moderating variable in this study is firm size. Firm size is measured using the natural logarithm of total assets as Martinus et al. (2021) and Parendra et al. (2020).

$$\text{Size} = \text{Ln} (\text{Total Assets})$$

In addition, this study also uses profitability as a control variable. Profitability in this study uses return on assets (ROA) as Martinus et al. (2021), Pramudya et al. (2021), and Puspitasari et al. (2021).

$$\text{ROA} = \frac{\text{Net Income}}{\text{Total Assets}}$$

Data analysis used multiple linear regression analysis with panel data. The research model consists of 2 hypotheses testing 1 and 2 using model 1 and hypothesis testing 3 and 4 using model 2.

$$\text{ETR}_{it} = \beta_0 + \beta_1\text{CR}_{it} + \beta_2\text{DER}_{it} + \beta_3\text{ROA}_{it} + \varepsilon_{it} \dots \dots \dots (1)$$

$$\text{ETR}_{it} = \beta_0 + \beta_1\text{CR}_{it} + \beta_2\text{DER}_{it} + \beta_3\text{Size}_{it} + \beta_4\text{CR} * \text{Size}_{it} + \beta_5\text{DER} * \text{Size}_{it} + \beta_6\text{ROA}_{it} + \varepsilon_{it} \dots \dots \dots (2)$$

RESULTS

Table 2 summarizes descriptive statistics for all variables used in the study, including the mean (mean), minimum value, maximum value, maximum value, and standard deviation.

Table 2. Descriptive Statistics

Var	Obs	Mean	Med	Std Dev	Min	Max
ETR	60	0.3161	0.2775	0.145	0.0004	0.7268
CR	60	2.4328	1.6473	1.880	0.7319	10.074
DER	60	0.6830	0.4352	0.579	0.0965	3.3831
ROA	60	0.1461	0.1306	0.112	0.0022	0.4556
SIZE	60	29.513	29.547	1.029	27.589	31.137

Source: data processed

The data above shows that the average ETR value is relatively low, namely 0.3161. This condition indicates that the mining sector companies, on average, do tax avoidance, evidenced by the median value of 0.2775. The standard deviation of the ETR value is 0.145, the minimum value is 0.0004, and the maximum value is 0.7268. The average current ratio value is 2.4328. This condition shows that mining companies can fulfill their existing obligations well. The median value is 1.6473, the standard deviation is 1.880, the minimum value is 0.7319, and the maximum value is 10.074. The average

DER value of mining companies is 0.6830. This condition shows that mining companies use debt in their funding structure on average. However, most mining companies use equity in their funding structure because the median value is 0.4352. The standard deviation is 0.579, the minimum value is 0.0965, and the maximum value is 3.3831. The ROA value of mining companies is 0.1461. This condition shows that mining companies can utilize their total assets to get a net profit of 0.1461 times of total assets. The median value is 0.1306, the standard deviation is 0.112, the minimum value is 0.0022, and the maximum value is 0.4556. The average size of mining companies is 29,513. This condition shows that other companies have quite significant total assets on average of IDR 6.56 trillion. The median value is 29.547, the standard deviation is 1.029, the minimum value is 27,589, and the maximum value is 31.137.

Tests for model selection through the Chow test, Hausman test, and LM (Lagrange Multiplier) test. From the test results, the most suitable model 1 and model 2 is to use the random-effects model. The summary of the effects of hypothesis testing is as follows:

Table 3. The Summary of Hypothesis Test Results

Var.	Model 1			Model 2		
	Coeff.	t-Stat.	Prob	Coeff.	t-Stat.	Prob
C	0.458	8.603	0.000 ***	1.253	1.028	0.308
CR	-0.018	-1.812	0.038 **	-0.430	-0.821	0.415
DER	-0.015	-0.433	0.333	-0.066	-0.959	0.343
ROA	-0.593	-3.693	0.000 ***	-0.587	-3.523	0.001 ***
SIZE				-0.026	-0.643	0.523
CR*SIZE)				0.014	0.776	0.441
DER*SIZE)				0.0008	0.797	0.429
R ²	0.254			0.263		
Adj. R ²	0.214			0.178		
F- test	6.369			3.154		
Prob- (F-test)	0.001			0.010		

Source: data processed

The test result suggests that liquidity is negatively associated with ETR or positively impacts tax avoidance. The test result is in line with Abdullah (2020) and Budianti & Curry (2018), but not in line with Artinasari & Mildawati (2018), Fadli et al. (2016), Gultom (2021), Pasaribu & Mulyani (2019), and Rozak et al. (2018). The result indicates that companies with a high level of liquidity tend to do tax avoidance. Mining companies have a greater risk than other sector companies. The company's ability to

meet its current liabilities from its existing assets does not cause the company to reduce its tax avoidance actions. Managers are still looking for loopholes to keep obtaining high internal funding sources related to their operating activities. In addition, mining companies tend to use the available cash to meet their maturing obligations, and also they use the available cash to explore potential mining resources. Therefore, mining companies require substantial funding. Thus, mining companies with a high liquidity level tend to save on taxes. Moreover, tax avoidance is an action that is still legal and does not violate tax provisions.

Furthermore, the test result suggests that leverage is not associated with ETR or tax avoidance. The result is in line with Artinasari & Mildawati (2018), Pasaribu & Mulyani (2019), Permata et al. (2018), and Puspitasari et al. (2021), but are not in line with Abdullah (2020), Pajriansyah & Firmansyah (2017), and Saputra et al. (2020). Managers in mining companies do not use debt financing conditions for tax avoidance. Mining sector companies with a high risk require managers to meet their debt obligations still to avoid the risk of bankruptcy. Managers do not notice that a high source of debt financing can be exploited for tax avoidance. Managers still consider creditors' trust in providing loans within the company so that the use of debt by the company is carried out to develop the company's business. In addition, managers in mining companies maintain good performance to obtain support from investors as shareholders. Managers do not take advantage of relationships with creditors in getting benefits with certain motives. Managers realize that the company's business activities can run well with the support of shareholders and creditors. Therefore, tax avoidance is not a good strategy when the company has high debt or low debt.

The test result suggests that firm size does not succeed in weakening the negative effect of liquidity on tax avoidance. In mining sector companies, the company's scale does not mean that companies with a high level of liquidity or a low level of liquidity can affect their tax avoidance activities. Even though larger companies have better resources (Firmansyah et al., 2021), managers are not used to taxing avoidance, especially when the company has a high level of liquidity. Usually, large companies are closely related to a high level of liquidity. It is evidenced from descriptive statistics that mining companies have assets of more than IDR 1 trillion, which shows that they are large on average. In mining companies, it does not apply that large companies tend to carry out tax planning well. Therefore, the firm size condition is not an indication of tax avoidance by the company.

The test result suggests that firm size does not strengthen the positive effect of leverage on tax avoidance. In mining sector companies, its scale does not mean that companies with high debt levels or low debt levels can affect their tax avoidance activities. Mining companies need significant funding sources from debt and share capital, so companies need support from creditors and shareholders. The company's larger scale is used to develop the company's business compared to exploiting the loopholes in tax regulations with the aim of tax avoidance. Mining sector companies get special tax treatment to encourage this industry to continue to grow. This unique treatment includes procedures for reporting income tax (Taxation, n.d.). In addition, the mining sector is also one of the six sectors that contribute the highest tax revenue in Indonesia, so the mining sector will receive special attention in terms of tax oversight when companies have high debt. Therefore, the tax authorities will pay more attention to research to examine the fairness of debt and debt interest as deductions from taxable

income. The tendency of managers to avoid tax is not related to the amount of debt owed by the company.

CONCLUSION

Companies with a high level of liquidity tend to avoid tax. Meanwhile, leverage does not affect tax avoidance. Another finding is that firm size does not moderate the effect of liquidity and leverage on tax avoidance. Although large companies have adequate resources for tax planning, they are not used for tax planning. This study has several limitations: the number of samples used is relatively small. Further research can use a sample of other sector companies or a broader company and tax avoidance proxies other than ETR and Cash ETR to eliminate a larger sample. This study indicates that the Indonesia Tax Authorities can identify the characteristics of certain companies in the mining sector in improving income tax policies.

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