Determinants of Tax Avoidance in Five Countries of Southeast Asia

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ABSTRACT

Multinational companies are using gaps in rules to pursue tax avoidance, considering various characteristics and company practices. Therefore, this study aimed to investigate many aspects of tax avoidance. During the 2015-2021 timeframe, 518 observations from 74 samples of non-financial companies in Indonesia, Malaysia, Philippines, Singapore, and Thailand were tested using Generalized Least Squares. A company size, financial performance, and research and development intensity are significantly related to tax avoidance practices in Southeast Asian countries. Still, the degree of leverage did not affect the tax avoidance variable. The results supported the political cost theory that there was a negative relationship between company size and tax avoidance, as well as a positive relationship, showed by financial performance factors and research and development intensity. The results stated the significance of tax authorities' role in managing the activities and performance of successful companies. In addition, the importance of monitoring the benefits of tax incentives following established regulations needs to be done to enforce compliance and control tax avoidance practices in companies.

Keywords: companies size; financial performance; leverage; research and development; tax avoidance

INTRODUCTION

This study was carried out to investigate the factors influencing tax avoidance by companies in Southeast Asia. The act of tax avoidance naturally arises when taxpayers seek to maximize their profits. This concept is not considered illegal but is a legally permissible procedure to reduce the tax burden by exploiting gaps within the regulations. However, legal actions can become issues when tax authorities perceive the procedures used as evasion attempts (Kim & Im, 2017). Previous studies have explored determinants of tax avoidance, such as companies size (Zimmerman, 1983; Wang, 1991), financial performance (Gupta & Newberry, 1997), leverage (Stickney & McGee, 1982; Huang et al., 2013), innovation (Jing & Li, 2023), and capital intensity (Cao & Cui, 2017). However, these studies have focused on developed markets such as the United States (Zimmerman, 1983; Wang, 1991; Gupta & Newberry, 1997; Stickney & McGee, 1982), Europe (Barbera et al., 2020), Australia (Richardson & Lanis, 2007), and China (Huang et al., 2013; Jiang & Li, 2023; Cao & Cui, 2017). According to the World Bank classification based on Gross National Income, China has been considered a developed country since 2010.

This study is different from the previous research in several ways. First, our studies investigate tax avoidance in developing countries, specifically in Southeast Asia, because it is still limited, and the characteristics of developing countries may differ. Moreover, the Tax Justice Network reports developed countries namely the United Kingdom, Luxembourg, the Netherlands, and Switzerland as the biggest avoidance offenders. However, the world also feels the total loss from tax avoidance, including developing countries in Asia. Second, this research examines a wide range of factors in tax avoidance issues, such as company size as firm characteristics, financial performance as profitability aspect, leverage

as liquidity aspect, and research and development (R&D) intensity as government policy. R&D intensity in this study is represented as a government policy to encourage innovation by providing tax incentives. Many countries in the Southeast Asian region are dependent on tax incentives, especially during the Covid-19 pandemic. Therefore, this study aims to investigate the factors influencing tax avoidance by public companies in Southeast Asia.

Zimmerman (1983) documented the negative influence of company size on tax avoidance and supported the political cost theory. A recent study by Stamatopoulus et al. (2019) found similar results. Furthermore, Stamatopoulus et al. (2019) identified a positive influence of companies size on the Effective Tax Rate (ETR), meaning that larger companies tend to bear a higher tax burden. The political cost theory posited that larger companies attracted more attention from tax authorities or the government, resulting in a higher tax burden. However, some earlier studies also found results contrary to the political cost theory. Bubanic & Simovic (2021) and Yoon et al. (2023) reported a positive influence of company size on the variable. However, Bubanic & Simovic (2023) and Yoon et al. (2023) focused on the telecommunications and high-tech industries.

Several studies have also examined the relationship between profitability and tax avoidance. Companies with high profitability should bear a larger income tax burden. Meanwhile, those with failed profits in a particular year do not need to pay income tax and can offset current losses against future profits or obtain refunds through carryback procedures. In 2015 and 2016, the European Commission imposed fines on several multinational companies to repay taxes to various governments (Yang & Metallo, 2018). These included Apple, Google, Starbucks, McDonald's, Fiat, and Amazon. In 2012, Apple was recognized as one of the Most Valuable companies after reporting a pre-tax profit of $35 million in 2011. However, Apple only paid a tax rate of 9.8%, below the United States' statutory tax rate of 35%.

Another factor influencing tax avoidance, according to previous studies, is leverage. Companies need to manage the level of leverage to optimize the capital structure. In addition, leverage is a tool to reduce tax burden because interest on debt is a deductible expense for tax purposes. The variable is often referred to as a shield. According to the logic, the relationship between leverage and tax avoidance should be positive. However, previous studies have shown varying or inconclusive outcomes where a positive relationship exists between leverage and tax avoidance, such as Fernandez-Rodriguez et al. (2021). Neutral and negative relationships were reported by Vintila et al. (2018) and Yoon et al. (2023), respectively.   This study also investigated the influence of research and development (R&D) intensity on tax avoidance. Many countries provide tax incentives for R&D activities. For example, Indonesia grants partial exemptions to companies conducting investment and China also offers various tax incentives. The Chinese government provides preferential tax rates for specific industries, such as the technology sector (Cao & Cui, 2017). These companies can enjoy various incentives to reduce their tax burden by enhancing innovation. Recent results from Jing & Li (2023) showed that tax policies have a positive relationship with R&D input but are not significant in the outcomes or output of innovation.

This paper employs data from Southeast Asian countries (Indonesia, Malaysia, Singapore, the Philippines, and Thailand). These countries from Southeast Asia possess unique characteristics to be a sample for this research. These countries are emerging markets with many profitable companies that have potential for the countries' tax revenue. However, the complex issues surrounding tax revenues in these countries still require resolution. Tax avoidance remains a pressing matter for many Southeast Asian countries (Muthitacharoen & Samphantharak, 2020; Johannesen et al., 2020).

This study explores four predictors of tax avoidance, namely companies size, financial performance or profitability, leverage, and R&D intensity. Companies size and financial performance are negatively

related to tax avoidance, in line with political cost theory. This study also expected a positive relationship between leverage and R&D intensity with tax avoidance. Moreover, the Generalized Least Squares (GLS) test examines the hypotheses. The sample included 74 public companies listed in five Southeast Asian countries, namely Indonesia, Malaysia, the Philippines, Singapore, and Thailand, spanning 2015-2021. Financial companies following conventional study practices were excluded (Do et al., 2020). The tangible assets and operating cash flow variables were controlled, which became the predictors of tax avoidance based on previous studies (Kim & Im, 2017). The results showed that companies size had a negative influence on tax avoidance, while financial performance and R&D intensity had a positive influence. This study did not find a statistically significant relationship between leverage and tax avoidance.

Hypotheses Development

Political Cost Theory

The political cost theory from Zimmerman (1983) was the foundation for this study in developing factors influencing tax avoidance. The theory supports the political cost hypothesis, suggesting that companies with high effective tax rates tend to face more intensive government scrutiny, reflecting a high level of companies success. Political cost refers to the burden associated with government actions, such as regulations and tax related to companies (Watts & Zimmerman, 1978). The concept of the political cost hypothesis states the variation in companies' effective tax rates as a component of current and future political costs. This variation is influenced by several factors, such as companies size, financial performance, leverage, and R&D activities. Subsequently, the factors influence tax avoidance practices to reduce the burden on companies. From an accounting perspective, a higher effective tax rate shows better financial performance. This leads to an increased government role in monitoring large companies' compliance with tax regulations from their respective authorities (Zimmerman, 1983), thereby reducing tax avoidance practices.

The empirical examination of the political cost hypothesis involves analyzing the correlation between taxes, which serve as a component of political costs, and the size of a corporation. If it is truly the case that larger enterprises consistently experience higher effective tax rates (ETRs) in comparison to smaller firms, this outcome aligns with the political cost theory. Zimmerman (1983) conducts an empirical analysis of the relationship between size and effective tax rate (ETR) and discovers a positive correlation. The author's conclusion suggests that this discovery serves as proof for utilizing firm size as a substitute for a corporation's political expenses.

On the other hand, companies with high leverage and high investment in R&D tend to have a lower ETR due to the government's incentives through leverage and R&D mechanisms. Bigger companies are more likely to possess higher leverage and R&D investment. However, the tax shield function created by leverage and R&D investment generates a lower ETR. Companies gain benefits from tax credits and deductions on qualified R&D expenditures (Gao et al., 2016; Laplante et al., 2019) and leverage (Kim & Im, 2017; Chun et al., 2020), particularly leverage in the form of debt financing.

Companies Size and Tax Avoidance

Companies size is often associated with various aspects of business, including being a component in political cost and effective tax rate (Zimmerman, 1983). Consistent with the political cost theory and convincing previous studies, larger-scale companies tend to have higher effective tax rates and reduce avoidance practices (Kalbuana dkk., 2023; Stamatopoulos dkk., 2019). Larger companies in almost

every industry bear a higher burden than smaller ones. Despite incurring a higher burden, these larger companies are less included in tax avoidance practices (Belz dkk., 2019; Vintilă dkk., 2018) as the first target of authorities. Based on the above description, the first hypothesis built in this study is:

H_1: Companies size is negatively related to tax avoidance.

Financial Performance and Tax Avoidance

The political cost theory also addresses the connection between a companies's success and effective tax rate. Success represents well-performing companies or those with high profitability. Meanwhile, companies reporting higher profits should bear larger tax consequences. From the perspective of political cost theory, well-performing companies are more likely to comply with existing regulations (Zimmerman, 1983). This result is supported by Barbera et al. (2020), who found a positive influence between financial performance and effective tax rates in Germany, Belgium, and Greece. This positive influence is expected to reduce tax avoidance. Based on the above description, the second hypothesis built in this study is:

H_2: Financial performance is negatively related to tax avoidance.

Leverage and Tax Avoidance

Leverage is one of the components of a companies's capital structure. Besides serving as a financing component, this component can also be tax shield. Therefore, the interest arising from companies debt can function as a deductible expense, reducing the reported profit amount. This explanation of tax shield leads to the relationship between leverage and a lower Effective Tax Rate (ETR) (Richardson & Lanis, 2007), influencing higher avoidance (Fernández-Rodríguez dkk., 2021). In line with the political cost theory, a lower ETR shows looser government oversight, allowing companies with high leverage levels to engage in greater avoidance practices. Based on the above description, the third hypothesis built in this study is:

H_3: Leverage is positively related to tax avoidance.

R&D Intensity and Tax Avoidance

R&D activities are actively promoted, specifically in developing countries. Governments of some countries, such as Indonesia and China provide tax incentives by cutting rates on R&D as a motivation to continually enhance innovation and investment (Cao & Cui, 2017). These tax rate reductions are used as a form of avoidance strategy to reduce the burden. The condition has also been studied by Richardson dan Lanis (2007), who showed the influence of R&D activities on low effective tax rates. These results support Jing & Li (2023) and Hoi dkk. (2013), when viewed from the perspective of political cost theory suggests that companies tax avoidance mechanisms can be implemented through increased input. Based on the above description, the fourth hypothesis built in this study is:

H_4: R&D are positively related to tax avoidance.

The conceptual framework of the relationship between the factors influencing tax avoidance is represented in Figure 1. This shows the relationships of the independent variables, namely companies size, financial performance, leverage, and R&D intensity, with two control variables, namely tangible assets measured by Property, Plant, and Equipment (PPE), and Cash Flow from Operations (CFO), towards tax avoidance. The relationships between the four independent and the dependent variables

sequentially represent the four hypotheses built. The first hypothesis examines how size of a companies relates to tax avoidance practices. The second tests the level of companies profitability measured by the return on equity (ROE) against tax avoidance. The third hypothesis investigates leverage, representing a companies's financial health, in relation to tax avoidance. Finally, the fourth examines the effects of R&D intensity on tax avoidance strategies. These four hypotheses will be tested while controlling for PPE and CFO variables.
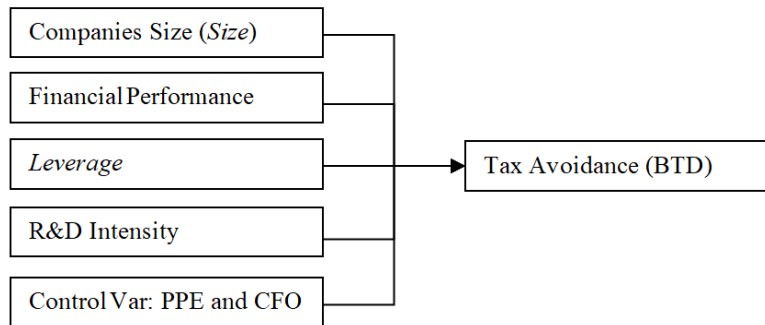

Figure 1. Conceptual Framework
Source: Author (2023)

METHOD, DATA, AND ANALYSIS

Sample Selection

The population consisted of all non-financial companies listed on the stock exchanges of Southeast Asian countries from 2015 to 2021. This article utilizes the latest data from 2015-2021, covering a span of six fiscal years, to effectively reflect the occurance of tax avoidance in Southeast Asia. Financial companies following conventional study practices were excluded (Do et al., 2020). Data collection used the Osiris database, resulting in a sample of 74 companies from Indonesia, Malaysia, the Philippines, Singapore, and Thailand. The sampling method used in this research is purposive sampling. Our sample criteria exclude financial companies, delisted companies, and companies that do not have complete data on the required variables. Finally, there were 9, 23, 11, 5, and 26 companies from Indonesia, Malaysia, Singapore, the Philippines, and Thailand. Public companies from six other Southeast Asian countries could not be used due to data completeness issues.

Table 1 shows the statistical description of the entire sample in this study. Meanwhile, Table 2 presents the statistical description of the sample from Indonesia, Malaysia, and Singapore. Table 3 provides the statistical description of the sample from the Philippines and Thailand. The average Book-Tax Difference (BTD) for the entire sample was -0.0948, showing that tax avoidance practices of Southeast Asian companies are relatively low. High and low BTD values showed increased and decreased levels of tax avoidance. Indonesia and Thailand had the lowest and highest average BTD with a score of -0.4525 and 0.1370. The average companies size for the entire sample was 3.2149, ranging from 3.1126 to 3.6274. Furthermore, the average value of tangible assets for the entire sample was 333,8459. The highest average tangible asset value was from Indonesia, with 476.4487, while others ranged from 274.2419 to 357.8370. The average financial performance measured by ROE for the entire sample was 0.0256. The highest and lowest scores were recorded by Malaysian and Filipino companies, with an average ROE of 0.0339 and 0.0138. The average leverage for the entire sample was 442.7593, where the Philippines and Singapore held the highest and lowest scores at 542.6487 and 340.1348. The entire sample's R&D intensity was 0.0020 and Singapore had the highest among the four countries at 0.0021. This was followed by Indonesia

and Thailand at a score of 0.007 and 0.0017, respectively. The sampled Filipino companies did not report R&D expenses, or engage in the activities.

Table 1. Descriptive Statistics

	Mean	Max	Min	Std. Dev
BTD	-0,0948	1,0875	-5,4925	0,6186
Size	3,2149	4,9817	1,9660	0,5802
ROE	0,0256	0,3318	5,3495	0,0424
Leverage	442,7593	955,0800	30,0031	187,1278
R&D	0,0020	0,0806	0	0,0094
PPE	333,8459	795,9147	0,0095	213,1828
CFO	130,1273	796,5496	1,6786	107,0665

Source: Processed Data (2023)

Table 2. Descriptive Statistics for Indonesia, Malaysia, and Singapore

	Indonesia				Malaysia				Singapore			
	Mean	Max	Min	Std. Dev	Mean	Max	Min	Std. Dev	Mean	Max	Min	Std. Dev
BTD	-0,4525	0,7861	-2,1567	0,4649	-0,1707	1	-2,5843	0,6927	-0,2391	0,8869	-5,4925	0,7865
Size	3,3411	3,9186	2,8209	0,3243	3,1126	4,2024	1,9769	0,5072	3,1799	3,9332	2,1425	0,5537
ROE	0,0268	0,1457	0,0012	0,0389	0,0339	0,3318	0,0007	0,0594	0,0166	0,0609	5,3495	0,0114
Leverage	398,6409	777,23014	140,7074	167,4008	486,4883	955,0800	94,1196	189,4222	340,1348	766,9851	63,0024	161,3778
R&D	0,0070	0,0806	0	0,0200	0,0007	0,0381	0	0,0038	0,0021	0,0238	0	0,0053
PPE	476,4487	795,9147	107,4383	176,9634	276,5505	781,8137	0,1191	211,3146	307,3568	695,0803	0,0095	217,5674
CFO	165,8513	499,0966	24,7273	112,1214	135,5986	796,5496	1,6786	144,4180	134,5026	582,6128	12,4389	93,2421

Source: Processed Data (2023)

Table 3. Descriptive Statistics for the Philippines and Thailand

	Philippines				Thailand			
	Mean	Max	Min	Std. Dev	Mean	Max	Min	Std. Dev
BTD	0,0097	0,6833	-0,8344	0,3492	0,1370	1,0875	-1,6433	0,4443
Size	3,6274	3,9447	3,1483	0,2035	3,1971	4,9817	1,9660	0,7163
ROE	0,0138	0,0315	0,0037	0,0076	0,0240	0,3196	0,0005	0,0363
Leverage	542,6487	780,4415	296,1404	149,71485	443,5563	861,7756	30,0031	186,4648
R&D	0	0	0	0	0,0017	0,0546	0	0,0089
PPE	274,2419	667,7472	11,9042	197,5267	357,8370	716,7631	9,8092	202,1020
CFO	103,6982	243,1641	6,4374	54,0518	116,1528	369,6531	2,1744	70,6429

Source: Processed Data (2023)

Empirical Model

This study examined the factors influencing tax avoidance in non-financial public companies in Southeast Asia. Kim & Im (2017) and Yoon et al. (2023) estimated tax avoidance using the BTD using GLS with the regression model as follows.

BTD, as a proxy for the dependent variable tax avoidance, was measured as the difference between accounting and taxable income divided by total assets. The study uses BTD as a proxy for tax avoidance rather than effective tax rates (ETR). BTD provides a more comprehensive picture of tax management strategies employed by corporations. Unlike ETR, which is influenced by various non-tax factors such as the mix of income sources and financial leverage, BTD directly captures the differences between financial

accounting and taxable income. Financial performance was measured using accounting-based variables, such as ROE. Furthermore, leverage was measured as total liabilities to total assets. Companies size was also obtained as the natural logarithm of total assets, while R&D intensity was measured as expenses to the variable.

Tangible assets and operating cash flow variables were also controlled based on previous studies influencing companies tax avoidance. This study measured tangible assets as PPE to total assets. Tangible assets have a significant impact on tax avoidance strategies (Kim & Im, 2017; Dang & Tran 2021) as they offer opportunities for tax planning through accelerated depreciation, capital gains treatment, and tax benefits associated with debt financing. Operating cash flow plays a pivotal role in shaping tax avoidance behaviors within corporations (Kim & Im, 2017; Khan et al., 2017; Saragih et al., 2024). The availability of substantial operating cash flow provides companies with the means to engage in complex tax planning activities, optimize tangible asset investments, utilize tax incentives, and strategically leverage debt financing for tax purposes.

RESULTS AND DISCUSSION

This study analyzes determinants of companies tax avoidance in Southeast Asia. Hypotheses propose that companies size, financial performance, leverage, and R&D intensity influence the variable. The results of hypothesis testing using GLS are shown in Table 4. It shows that companies size has a negative and statistically significant influence with a significance level of 1%. Therefore, the first hypothesis is accepted and in line with the political cost theory. Large companies in Southeast Asia tend to comply more with taxation and are less included in tax avoidance practices due to stringent government oversight.

Table 4 shows that the companies's financial performance (ROE) has a positive and statistically significant influence, with a significance level of 1%. This result contradicts the second hypothesis and is not accepted. Therefore, profit-making companies tend to engage in tax avoidance to reduce the burden on their current-year profits.

The study did not obtain a significant influence of leverage on tax avoidance and the third hypothesis is not accepted. Public companies in Southeast Asia do not use leverage as tax shield, making the influence of the variable neutral on avoidance.

The results of testing the influence of R&D intensity are in line with the hypothesis, hence the fourth hypothesis is accepted. The intensity has a positive and statistically significant influence on tax avoidance, with a significance level of 10%. This shows that intensity can be used as a tax-saving mechanism. Tax incentives companies obtain when engaging in R&D reduce their tax burden.

Table 4. Regression Analysis of Hypothesis Testing

Variable	Coefficient	Std. Error	t-Statistic	Prob.
(Constant)	0,9270	0,1194	7,7627	0,0000
Size	-0,2008	0,0330	-6,0848	0,0000
ROE	1,3355	0,5563	2,4003	0,0168
Leverage	-0,0001	0,0001	-1,2471	0,2130
R&D	2,5477	1,4539	1,7523	0,0804
PPE	-0,0007	0,0001	-8,7419	0,0000
CFO	-0,0009	0,0002	-3,9326	0,0001
F-statistic				0,0000
R-squared				0,3447
Adjusted R-squared				0,2265

Source: Processed Data (2023)

This study hypothesizes that companies size, financial performance, leverage, and R&D intensity are predictors of tax avoidance among public companies in Southeast Asia. The results support the first hypothesis, which posits a negative influence on companies size. This is consistent with the results of Vintila et al. (2018) and Belz et al. (2019). Vintila et al. (2018) examined determinants of ETR for public companies in Romania, Hungary, Poland, Bulgaria, and Slovenia. Determinants of ETR were investigated, including companies size, for each country. The results of Vintila et al. (2018) showed that companies size had a positive and statistically significant relationship with ETR for all five countries. Therefore, larger companies pay higher tax or are inclined to avoid tax avoidance practices. Belz et al. (2019) reported similar results by examining meta-data from 32 primary studies on tax avoidance in the United States. The meta-regression analysis, based on 172 observations from 32 publications, supported the political cost theory.

Results for the second hypothesis, stating that financial performance negatively influences tax avoidance, are significant but in opposite direction. Therefore, the second hypothesis is not accepted. The studies found a positive relationship between financial performance and tax avoidance. This result is consistent with Armstrong et al. (2012) and Barbera et al. (2020). Armstrong et al. (2012) reported a positive relationship between financial performance and tax aggressiveness, measured using tax shelter (Wilson, 2009). Furthermore, companies with high financial performance possess an increased probability of engaging in tax shelter, which is defined as the manipulation to reduce taxable income through legal and illegal planning (Frank et al., 2009). Barbera et al. (2020) found diverse results regarding the influence of financial performance on ETR. Determinants of ETR are also explained in European countries, including Germany, France, Spain, Italy, Belgium, and Greece. In addition, a positive relationship is reported between financial performance and ETR in Germany, Belgium, and Greece, and a negative result existed between the two variables in France. The relationship between financial performance and ETR in Spain and Italy was insignificant. Barbera et al. (2020) results for the sample from France are consistent with this study. Companies that report profits tend to be included in tax avoidance to pay lower taxes on their profit.

The study did not successfully find any influence of leverage on tax avoidance and the result is consistent with Vintila et al. (2018), who did not obtain a relationship between these variables in Romania, Hungary, Poland, Bulgaria, and Slovenia. A positive influence of R&D intensity was reported by public companies in Southeast Asia on tax avoidance. This result is consistent with the fourth hypothesis expectations and accepted. The result is also in line with Hoi et al. (2013), showing a positive influence on tax avoidance for all regression models with four different avoidance proxies. Hoi et al. (2013) measured tax avoidance using four different proxies, namely CETR, discretionary book difference by Desai and Dharmapala (2006), permanent BTD by Frank et al. (2009), and tax shelter by Wilson (2009). The results support the idea of tax incentives for R&D activities offered in many countries. Various countries provide incentives such as tax reductions or preferential rates. Therefore, R&D can be considered a tool or mechanism for companies tax savings.

CONCLUSION AND SUGGESTIONS

In conclusion, this study investigated the factors influencing tax avoidance, specifically among non-financial public companies in Southeast Asia. The results examined the influence of company size, financial performance, leverage, and R&D intensity on tax avoidance. A sample of public companies from Indonesia, Malaysia, Singapore, the Philippines, and Thailand was used. The hypotheses were tested using GLS on 518 observations from 74 companies from 2015-2021.

The results supported the first and fourth hypotheses, while the second and third were not accepted. The study reported a negative relationship between company size and tax avoidance, which aligns with most previous studies. These results were consistent with the political cost theory that larger companies possessed a higher burden and were less engaged in tax avoidance. Furthermore, a positive relationship was uncovered between financial performance and tax avoidance in contrast to the second hypothesis. This suggested that companies successfully avoided tax to reduce burden or achieve savings. The study identified a positive relationship between R&D intensity and tax avoidance, which aligns with the fourth hypothesis. Companies might achieve tax savings through R&D due to incentives offered by activities, which act as a burden reducer. However, no relationship was reported between leverage and tax avoidance. This showed that the study had several limitations; firstly, only tax avoidance was measured using BTD. Future studies could incorporate other measures such as the discretionary BTD by Desai and Dharmapala (2006), permanent BTD by Frank et al. (2009), or tax shelters by Wilson (2009). Secondly, financial performance measures were used based on accounting, namely ROE. Future studies could use other measures including Return on Assets (ROA) or market performance such as Tobin's Q. Thirdly, leverage was obtained as liabilities to total assets following Kim & Im (2017). Future studies could use other measures that better depict the tax shield function of leverage, such as total debt to assets.

This paper provides practical impacts, particularly for regulators. The study shows that R&D intensity positively affects tax avoidance, whereas the leverage effect is neutral. These findings suggest Southeast Asian companies exploit R&D mechanisms to optimize their tax planning rather than debt financing. These phenomena probably appear due to the untight government monitoring of the utilization of tax incentives for R&D. In contrast; regulators tend to scrutinize the utilization of debt financing because of its widely acknowledged role as a tax shield. Thus, these findings suggest the need to increase monitoring and tighten the rules of tax incentives for R&D in corporations.

REFERENCES

Armstrong, C. S., Blouin, J. L., & Larcker, D. F. (2012). *The incentives for tax planning. Journal of Accounting and Economics*, *53*(1–2), 391–411. https://doi.org/10.1016/j.jacceco.2011.04.001.

Barbera, A., Merello, P., & Molina, R. (2020). Determinants of corporate effective tax rates: evidence from the euro area. Academia Revista Latinoamericana de Administracion, 33(3–4), 427–444. https://doi.org/10.1108/ARLA-12-2019-0238.

Belz, T., von Hagen, D., & Steffens, C. (2019). *Taxes and firm size: Political cost or political power? Journal of Accounting Literature, 42*, 1-28. doi:https://doi.org/10.1016/j.acclit.2018.12.001.

Bubanić, M., & Šimović, H. (2021). Determinants of the effective tax burden of companies in the Telecommunications activities in the Republic of Croatia. Zagreb International Review of Economics and Business, 24(2), 59–76. https://doi.org/10.2478/zireb-2021-0011.

Cao, J., & Cui, Y. (2017). An Alternative View on Determinants of the Effective Tax Rate: Evidence from Chinese Listed Companies. Emerging Markets Finance and Trade, 53. https://doi:10.1080/1540496X.2016.1256113.

Chun, H. M., Kang, G. I. J., Lee, S. H., & Keun Yoo, Y. (2020). Corporate tax avoidance and cost of equity capital: international evidence. *Applied Economics*, *52*(29), 3123–3137. https://doi.org/10.1080/00036846.2019.1706716

Dang, V. C., & Tran, X. H. (2021). The impact of financial distress on tax avoidance: An empirical analysis of the Vietnamese listed companies. *Cogent Business and Management*, *8*(1). https://doi.org/10.1080/23311975.2021.1953678

Desai, M.A., & Dharmapala, D. (2006). *Corporate tax avoidance and high-powered incentives. Journal of Financial Economics*, 79(1), 145-179. https://doi.org/10.1016/j.jfineco.2005.02.002.

Do, T.K., Lai, T.N., & Tran, T.T.C. (2020). *Foreign ownership and capital structure dynamics. Finance Research Letters*, 36(566), 101337. https://doi.org/10.1016/j.frl.2019.101337.

Fernández-Rodríguez, E., García-Fernández, R., & Martínez-Arias, A. (2021). *Business and institutional determinants of Effective Tax Rate in emerging economies. Economic Modelling, 94*, 692-702. doi:https://doi.org/10.1016/j.econmod.2020.02.011.

Frank, M.M., Lynch, L., & Rego, S. (2009). *Tax reporting aggresiveness and its relation to aggressive financial reporting. The Accounting Review*, 84(2), 467-496. https://doi.org/10.2308/accr.2009.84.2.467.

Gao, L., Yang, L. L., & Zhang, J. H. (2016). Corporate patents, R&D success, and tax avoidance. *Review of Quantitative Finance and Accounting*, 47(4), 1063–1096. https://doi.org/10.1007/s11156-015-0531-3.

Gupta, S., & Newberry, K. (1997). Determinants of the variability in corporate effective tax rates: Evidence from longitudinal data. Journal of Accounting and Public Policy, 16, 1-34.

Hoi, C. K., Wu, Q., & Zhang, H. (2013). Is Corporate Social Responsibility (CSR) Associated with Tax Avoidance? Evidence from Irresponsible CSR Activities. The accounting review, 88(6), 2025-2059. https://doi.org/10.2308/accr-50544.

Huang, D.-F., Chen, N.-Y., & Gao, K.-W. (2013). *The tax burden of listed companies in China. Applied Financial Economics*, 23(14), 1169–1183. https://doi.org/10.1080/09603107.2013.786163.

Jing, H., & Li, B. (2023). *Research of the fiscal and tax policies of High-tech industry in Northeast China.* Paper presented at the SHS Web of Conferences. https:// doi.org/10.1051/shsconf/202316303029.

Johannesen, N., Tørsløv, T., & Wier, L. (2020). Are Less Developed Countries More Exposed to Multinational Tax Avoidance? Method and Evidence from Micro-Data. *World Bank Economic Review*, *34*(3), 790–809. https://doi.org/10.1093/wber/lhz002.

Kalbuana, N., Taqi, M., Uzliawati, L., & Ramdhani, D. (2023). CEO narcissism, corporate governance, financial distress, and company size on corporate tax avoidance. Cogent Business & Management, 10(1), 2167550. https://doi.org/10.1080/23311975.2023.2167550.

Khan, M., Srinivasan, S., & Tan, L. (2017). Institutional ownership and corporate tax avoidance: New evidence. *Accounting Review*, *92*(2), 101–122. https://doi.org/10.2308/accr-51529

Kim, J., & Im, C. (2017). Study on Corporate Social Responsibility (CSR): Focus on tax avoidance and financial ratio analysis. Sustainability, 9(10), 1-16. https://doi.org/10.3390/su9101710.

Laplante, S. K., Skaife, H. A., Swenson, L. A., & Wangerin, D. D. (2019). Limits of tax regulation: Evidence from strategic R&D classification and the R&D tax credit. *Journal of Accounting and Public Policy*, *38*(2), 89–105. https://doi.org/10.1016/j.jaccpubpol.2019.02.003

Muthitacharoen, A., & Samphantharak, K. (2020). Multinational tax avoidance and anti-avoidance enforcement: Firm-level evidence from developing countries. The Singapore Economic Review, 67(6), 1-17.

Richardson, G., & Lanis, R. (2007). Determinants of the variability in corporate effective tax rates and tax reform: Evidence from Australia. Journal of accounting and Public Policy, 26(6), 689-704. doi:https://doi.org/10.1016/j.jaccpubpol.2007.10.003.

Saragih, A.H., Ali, S., Suwardi, E., & Utomo, H. (2024). Finding the missing pieces to an optimal corporate tax savings: Information technology governance and internal information quality. *International Journal of Accounting Information Systems*, *52*(December 2023), 100665. https://doi.org/10.1016/j.accinf.2023.100665

Stamatopoulos, I., Hadjidema, S., & Eleftheriou, K. (2019). E*xplaining corporate effective tax rates: Evidence from Greece*. *Economic Analysis and Policy, 62*, 236-254. https://doi.org/10.1016/j.eap.2019.03.004.

Stickney, C. P., & McGee, V. E. (1982). Effective corporate tax rates the effect of size, capital intensity, leverage, and other factors. Journal of Accounting and Public Policy, 1(2), 125–152. https://doi.org/10.1016/S0278-4254(82)80004-5.

Vintilă, G., Gherghina, Ș. C., & Păunescu, R. A. (2018). Study of Effective Corporate Tax Rate and Its Influential Factors: Empirical Evidence from Emerging European Markets. Emerging Markets Finance and Trade, 54(3), 571-590. doi:10.1080/1540496X.2017.1418317.

Wang, S. (1991). The relation between firm size and effective tax rates: A test of firms' political success. The Accounting Review, 66(1), 158.

Watts, R. L., & Zimmerman, J. L. (1978). Towards a positive theory of the determination of accounting standards. Accounting Review, 112-134.

Wilson, R. (2009). *An examination of corporate tax shelter partcipants. The Accounting Review*, 84(3), 969-999. https://doi.org/10.2308/accr.2009.84.3.969.

Yang, J. G. S., & Metallo, V. N. A. (2018). *The emerging international taxation problems. International Journal of Financial Studies*, *6*(1), 1–11. https://doi.org/10.3390/ijfs6010006.

Yoon, S. M., Jiang, E. L., & Cui, Y. (2023). Tax policies for high-tech companies and tax avoidance in China. International Journal of Applied Economics, Finance and Accounting, 16(2), 308–318. https://doi.org/10.33094/ijaefa.v16i2.986.

Zimmerman, J. L. (1983). Taxes and firm size. *Journal of Accounting and Economics, 5*, 119-149. doi:https://doi.org/10.1016/0165-4101(83)90008-3.