



The Mediating Effect of Sustainability Disclosure on the Impact of Proactive Tax Planning on Firm Value: An Empirical Evidence from ESG100 Index

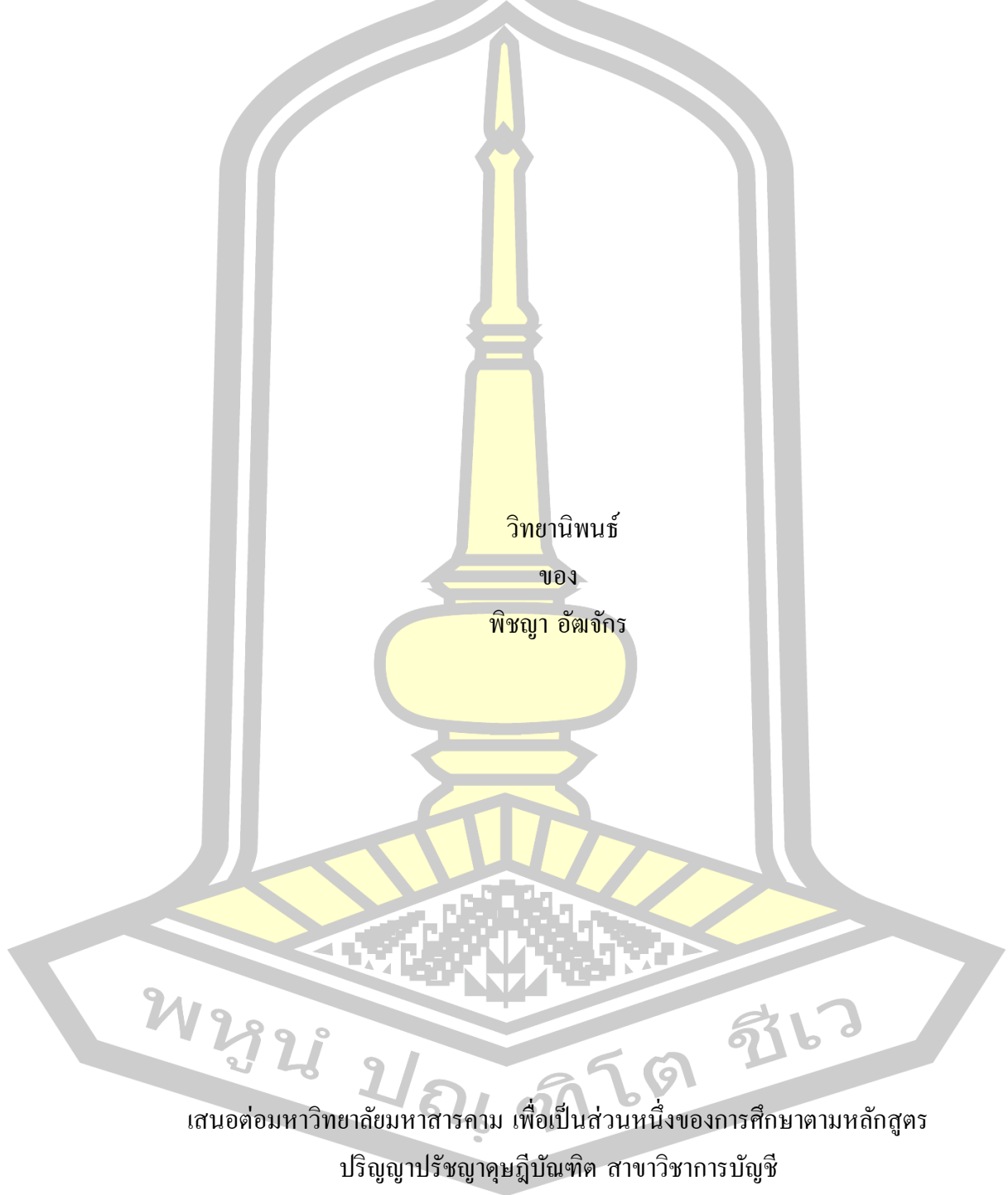
Pichaya Adthajak

A Thesis Submitted in Partial Fulfillment of Requirements for
degree of Doctor of Philosophy in Accounting

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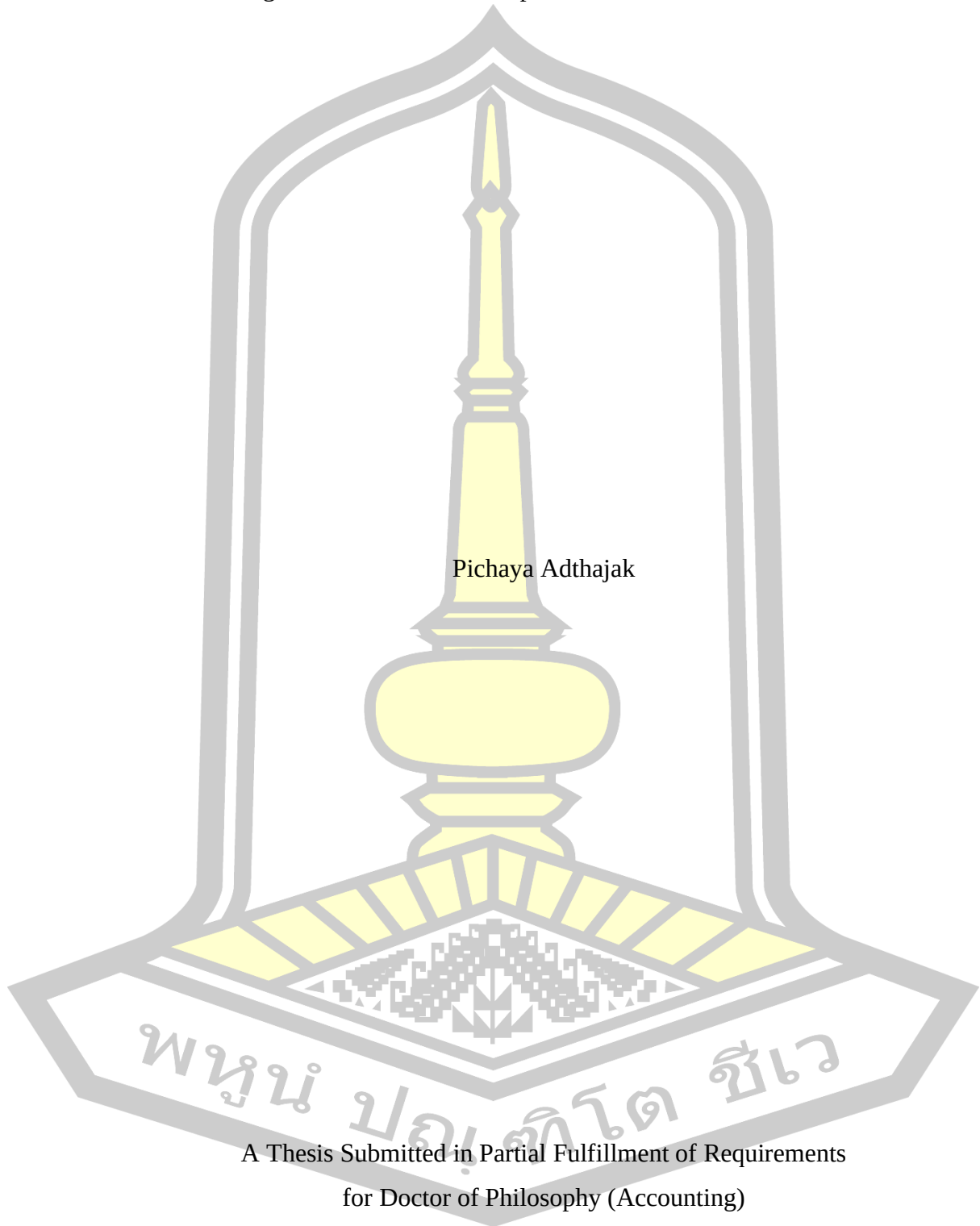
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ABSTRACT

The objectives of this study are; firstly, to investigate the mediating effect of sustainability disclosure on the impact of proactive tax planning on firm value in ESG 100 index. Secondly, to examine whether the proactive tax planning affect on the sustainability disclosure. Thirdly, to examine whether the sustainability disclosure affect on the firm value. Fourthly, to examine whether the proactive tax planning affect on the firm value. Fifthly, to examine whether the organizational characteristics affect on proactive tax planning. Finally, to examine whether the capital structure affect on proactive tax planning. The sample group is 114 firm-year observation companies on the ESG100 Index during the period from 2020 to 2022. The method of this study is based on secondary data. Moreover, the statistical regression method was used with balanced panel data analysis, where the data is collected in cross-section and time series for testing the hypothesis.

The results of this study showed that; proactive tax planning has no significance on sustainability disclosure, sustainability disclosure has a positive significant on firm value. While, the proactive tax planning has a negative significant on firm value, In term of antecedent variables, board independent has a negative significant on proactive tax planning. On the other hand, board duality has a positive significant on firm value. The current ratio and debt to equity has no significance on proactive tax planning. In addition, the study of interactions among the three variables found that sustainability disclosure does not affect the relationship between proactive tax planning and firm value. However, proactive tax planning reduces firm value because it incurs costs related to tax planning, such as tax advisory fees. Nevertheless, executives should weigh the costs against the benefits of proactive tax planning and choose the method that maximizes benefits for the company, which may lead to an increase in firm value in the long term. Therefore, understanding the tax costs of conducting business is something that executives should prioritize. The study's results reflect that regulatory agencies should formulate tax policies that are appropriate for the context of Thailand and align with the current situation. Additionally, this study found that investors prioritize sustainability disclosure. Therefore, companies should focus on preparing sustainability reports. This is evident from studies on the impact of

environmental, social, and governance (ESG) performance on the firm value of companies worldwide, including Asia, America, Europe, and Africa. These studies indicate that effective disclosure of environmental, social, and governance information will yield financial returns for companies in terms of value and profitability. The growing interest of investors and global awareness regarding risks related to environmental and other non-financial variables, including social responsibility and effective governance, compels enterprises to enhance their efforts and concentrate on non-financial dimensions of their operations. Investors, employees, suppliers, consumers, and the government increasingly expect the firm to be proactive in these domains, implement necessary mitigation methods, and deliver comprehensive reporting. Firms report their performance on these risks broadly through three categories namely environment, social and governance (ESG).

Keyword : Proactive Tax Planning, Sustainability Disclosure, Firm Value



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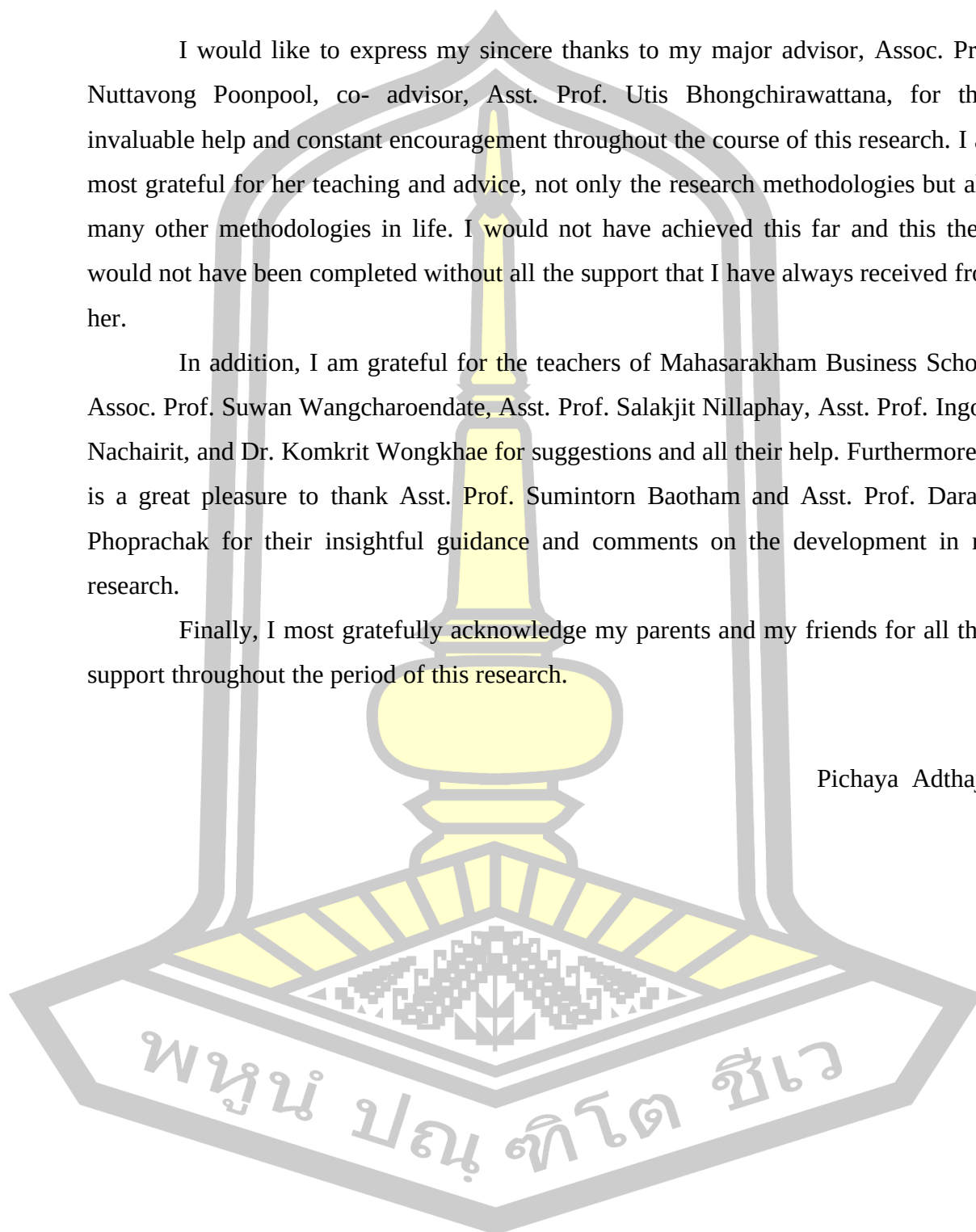
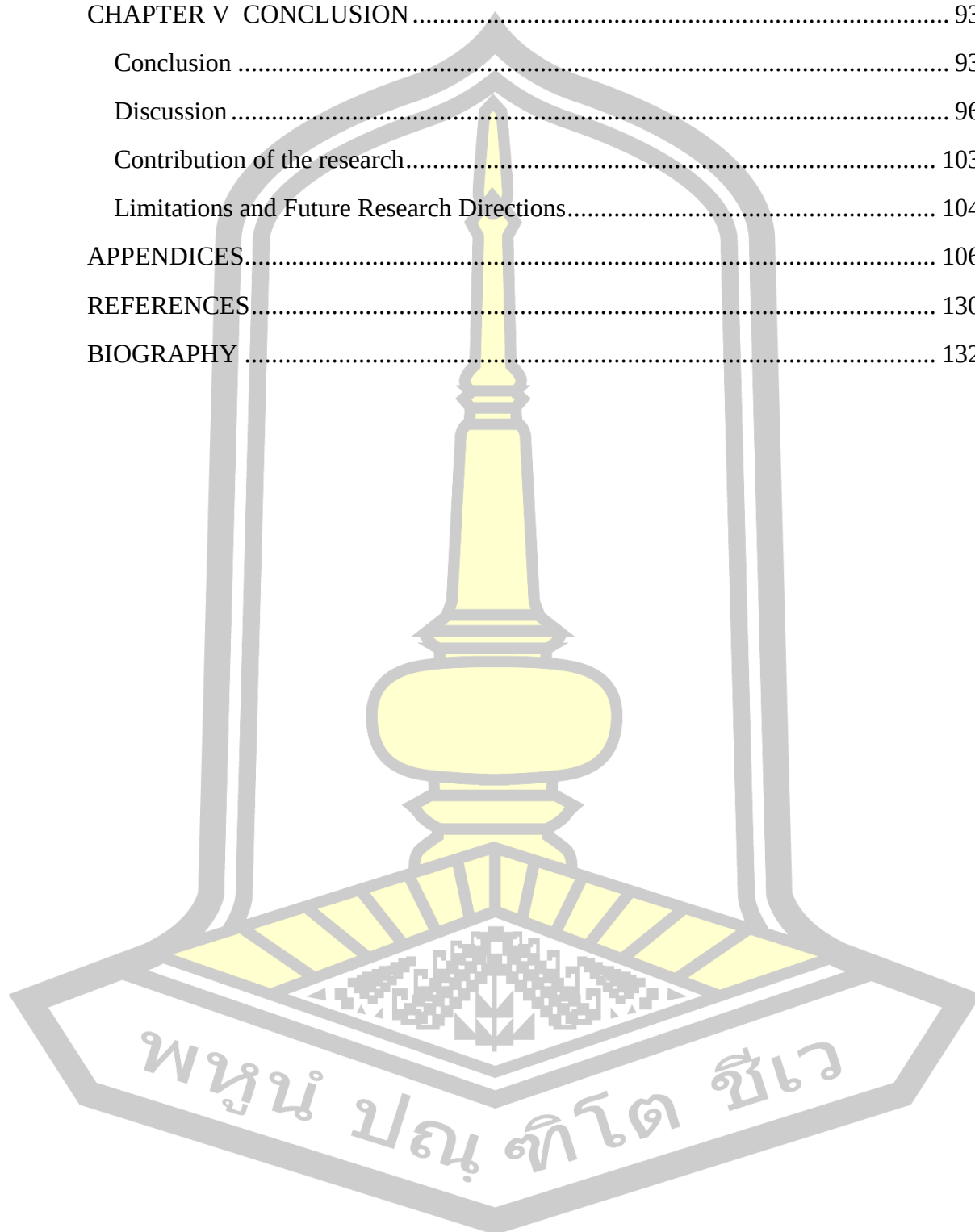


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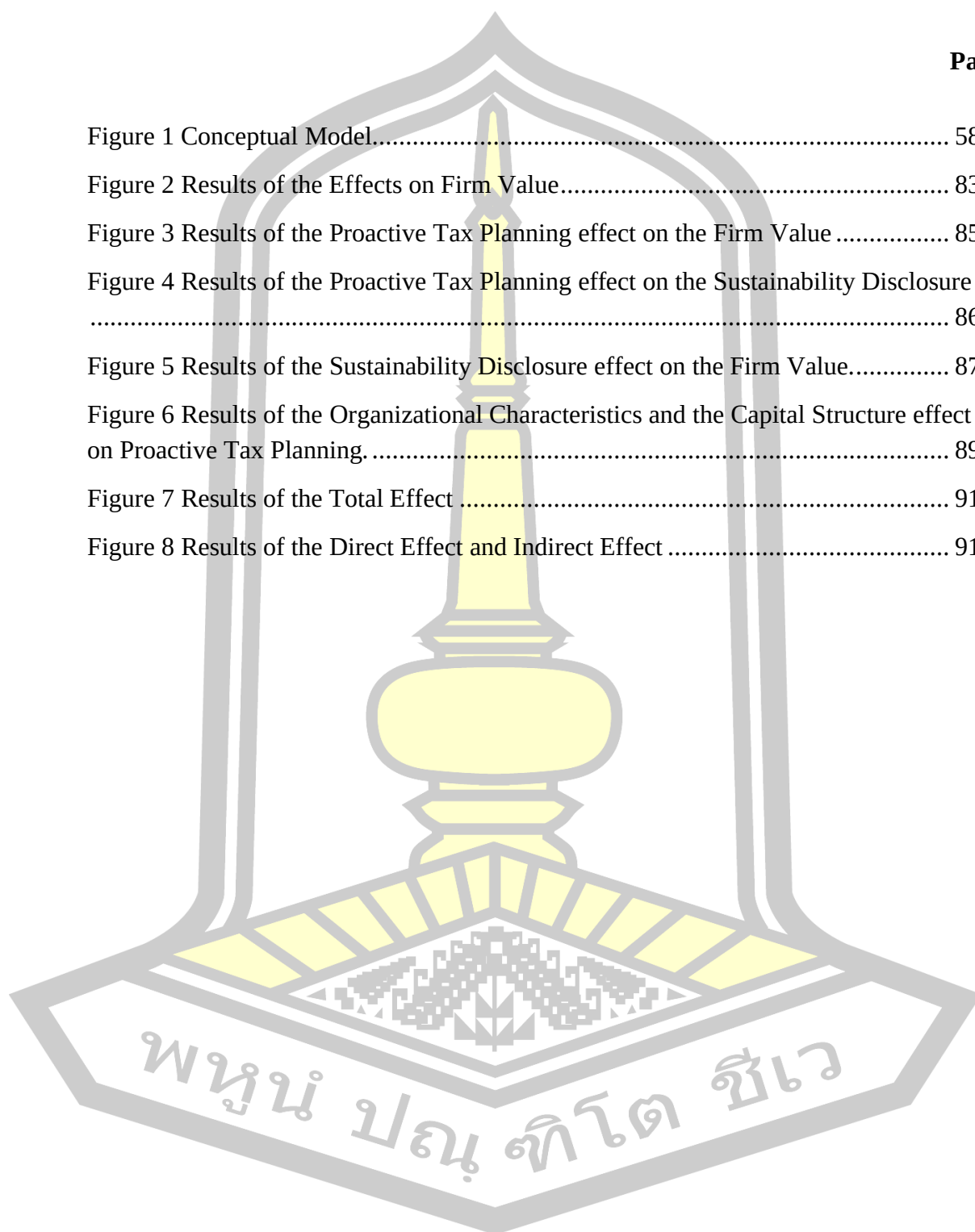


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CHAPTER I

INTRODUCTION

Overview

Thaipat Institute ranks the companies listed in the Stock Exchange of Thailand that excel in sustainability disclosure, which includes information in three areas: environmental, social, and governance (ESG), called the ESG100 index. The ESG100 index consists of companies that are developing sustainability in Thailand, while regular companies do not focus on sustainability disclosure. This index is assessed based on two publicly disclosed pieces of information: non-financial information, considering sustainability disclosure, and financial information, considering performance, and aims to meet the needs of investors who want to invest sustainably. Because companies with a high ESG score can generate good investment returns (Thaipat Institute, 2023a).

Although sustainability disclosure helps enhance the company's image, publicly listed companies have high tax costs, paying the maximum tax rate of 20 percent on taxable profits (Thanjunpong, 2018). Therefore, the government has established numerous policies that can be used to exempt income tax, such as the greenhouse gas reduction program (The Royal Gazette, 2023; The Revenue Department, 2023; Revenue Department, 2020), and the announcement of The Board of Investment of Thailand (BOI) regarding measures to promote investment in the companies listed in the Stock Exchange of Thailand (The Board of Investment of Thailand, 2021; The Board of Investment of Thailand, 1977; The Board of Investment of Thailand, 2022; Arunruangsilert, Srihirunpunlop & Boonyawat, 2022).

The aforementioned policy can be summarized as the Thai government placing importance on society and the environment. In line with Thailand's goals, which are part of the global community, to address climate change by committing to reduce greenhouse gas emissions by 20 percent in the year 2030. Moreover, this policy helps reduce the government's expenses in maintaining the country's environmental quality (Revenue Department, 2020). The government's tax mitigation policy aligns with the operational policies of the ESG100 index, which aims for sustainable development and reducing impacts on society and the environment (Thaipat Institute, 2022b), as well as benefiting from tax mitigation.

Proactive tax planning refers to preparing tax payments in accordance with regulations and utilizing tax incentives as stipulated by law for annual tax mitigation. Additionally, the company does not have to pay extra taxes or unnecessary fines because if the company has good tax planning, tax mitigation will help reduce

financial problems that could lead to a liquidity crisis (Katesorn, 2022). However, corporate income tax is a cost that comes with doing business in every country, but some countries may offer exemptions or reduced rates to attract investors. Therefore, understanding the tax costs for business operations is something that executives should prioritize (Arunruangsirilert, Srihirunpunlop & Boonyawat, 2022).

In Thailand, proactive tax planning is crucial for the growth of the companies listed on the Stock Exchange of Thailand. Proactive tax planning is the tax operation of a company registered under the law to prepare for paying taxes correctly and helps to utilize tax incentives as prescribed by law to achieve annual tax mitigation, which reduces tax expenses (Suksathit & Uachanachit, 2022). The Stock Exchange of Thailand is important to the economy of Thailand. Since it is an important capital market for investors and has a positive impact on the structural changes in the industry within Thailand. Moreover, the capital market serves as a channel to connect the global economy. Therefore, the operations of the companies listed in the Stock Exchange of Thailand need to plan their taxes rigorously to be able to utilize tax incentives and ensure that tax payments are legally compliant (Suksathit & Uachanachit, 2022). However, Thailand is a developing country, and there may be concerns about the cost and transparency of agents (Friske, Hoelscher, & Nikolov, 2023), which could affect proactive tax planning. Therefore, to reduce agency problems, the Stock Exchange of Thailand has mandated that companies adhere to good corporate governance principles.

This research measures good corporate governance from organizational characteristics and capital structure. The independence of the external committee allows for efficient decision-making. Increasing the number of independent board members in the company's board of directors will help enhance the company's operational efficiency and significantly reduce tax expenses (Wangweang, 2019). Therefore, there are many studies show that the board independence has effect on proactive tax planning (e.g., Temboonprasertsuk, 2021; Aburajab et. al., 2019; Peter, Hamid, & Ibrahim, 2020; Chaichuen et.al., 2022; Asvariwangi, Salman, & Masruri, 2023).

The board duality is a corporate board characteristic that increases proactive tax planning. This characteristic helps investors understand the role of the board of directors in preventing agency conflicts between departments and evaluating the company's tax collection approach. Additionally, the board duality is beneficial for the organization in regulating corporate board composition and managerial monitoring (Iazzi et al., 2023). There are few studies supported that the board duality has effect on proactive tax planning (e.g., Iazzi et al., 2023; Chytis, Tasios, & Filos, 2020; Khaoula & Ali, 2012).

In addition, the capital structure recommends that: the current ratio has an effect on proactive tax planning (e.g., Ann & Manurung, 2019; Krongboon & Dampitakse, 2021; Wutthimahanon, 2019; Krongboon & Dampitakse, 2021;

Petteewang & Seangkhiew, 2023). This is because a company with a high current ratio indicates that the company has a lot of cash flow from operations. Therefore, this company can pay off short-term debts. This means that if there is cash flow, the company will not hesitate to pay taxes according to the law (Suyanto & Supromono, 2012). The debt to equity ratio has effect on the proactive tax planning (e.g., Krongboon & Dampitakse, 2021; Allam (2022; Maigoshi & Tanko, 2023; Chamnong, Pajongwong & Svetalekth, 2021; Namachote, Mahoran & Masarat, 2024). This is because the company that borrows money can deduct the interest paid as an income tax expense (Chamnong, Pajongwong & Svetalekth, 2021).

However, improving the ESG performance of organizations is crucial for sustainable economic development. Therefore, the government has announced a policy regarding tax incentives to encourage companies to operate responsibly towards society. Therefore, companies that invest in ESG and comply with ESG requirements are likely to receive tax incentives (Zhu, et, al., 2023). Additionally, compliance with ESG requirements indicates social responsibility and helps enhance the organization's image (Premanichnukul, 2018). The empirical studies, found that the proactive tax planning has effect on sustainability disclosure (e.g., Zhu et, al., 2023; Aribaba et al., 2019; Premanichnukul, 2018; Thanjunpong, Chaiwong, & Dechsiri, 2018). The sustainability disclosure can help increase support from external stakeholders such as consumers, creditors, and investors to generate profits and increase investment for the company's operations. Therefore, the sustainability disclosure has an effect on firm value (Rahma & Firmansyah, 2022). Therefore, the prior studies recommend that the sustainability disclosure has effect on firm value (e.g., Siminica et al. , 2019; Waentongkom, 2020; Abdi, Li & Càmara-Turull, 2020; Kim & Koo, 2023; Wang, Shen & Li, 2023; Friske, Hoelscher, & Nikolov, 2023; Abdi, Li & Càmara-Turull, 2020; Tasnia, AlHabshi, & Rosman, 2020; Aydoğmuş, Gülay & Ergun, 2022; Tran & Tran, 2022; Nguyen, Hoan & Tran, 2022; Wu et al., 2022; Lertsabanant & Maglin, 2022).

Moreover, the proactive tax planning by utilizing maximum tax incentives and complying with tax laws correctly will result in reduced tax expenses. The consideration by executives of the costs versus the benefits obtained from tax planning, and the selection of the method that provides the greatest benefit to the company, will impact and increase the firm value (Jitkham & Yarana, 2022). Therefore, some studies show that the proactive tax planning has effect on firm value (e.g. Khaoula & Moez, 2019; Bhagiawan & Mukhlisin, 2020; Jitkham & Yarana, 2022; Sribunruang & Sutthi, 2021; Promaksorn et al., 2024). Enhancing ESG performance has become a new way to improve firm value. The study of economic consequences shows that tax incentives can further promote the role of ESG performance on firm value enhancement, and the empirical results show that tax incentives significantly promote ESG performance. The prior studies recommend that proactive tax planning has a positive effect on ESG performance that becomes more

pronounced when controlling for organizational financial redundancy. Additionally, further research shows that tax incentive policies have a more pronounced impact on the green transformation of manufacturing enterprises (Meng & Wang, 2024). Therefore, this research expands the study to investigate the mediating effect of sustainability disclosure on the impact of proactive tax planning on firm value. The firm value indicates the company's profitability, serving as a guideline for creditors and investors to decide whether to lend or invest their funds (Andayani & Yanti, 2021). The factors influencing this study focus on proactive tax planning as the independent variable and sustainability disclosure as the mediating variable.

This research measures proactive tax planning from the effective tax rate (ETR) on the equity multiplier. Effective tax rate (ETR) is a principle of tax collection that is fair, according to the concept of Hilderth & Richardson (1999) (Mongkolnchaiarunya, Verapreyagura & Buathong, 2017). Therefore, the effective tax rate (ETR) is an interesting method for measuring the independent variable. Consistent with the literature review. Most past research measured proactive tax planning using the effective tax rate (ETR), which is a variable that reduces tax profits but does not affect accounting profits (e.g., Tantiyavarong, 2009; Wahab, Shaipah & Holland, 2012; Lestari & Wardhani, 2015; Thanjunpong, 2017; Christina & Alexander, 2018; Tarmidi & Murwaningsari, 2019; Thanjunpong, 2018; Akintoye, Adegbe & Iheme-Onyeka, 2020; Ebimobowei, 2022; Khaoula & Moez, 2019; Bhagiawan & Mukhlisin, 2020; Sribunruang & Sutthi, 2021; Kulsiriwanit, 2021; Agustina et al., 2023; Promaksorn et al., 2024). In line with numerous foreign studies that use the effective tax rate (ETR) as an indicator of proactive tax planning (Thanjunpong, 2018).

If the corporate income tax is low, show that the company has a high level of proactive tax planning (Dyrenge, Hanlon & Maydew, 2008, Thanjunpong, 2018). Corporate income tax is related to asset management from investments. Therefore, this research uses the equity multiplier variable to measure asset management in relation to shareholders' equity. However, if the company operates with a small amount of equity investment from shareholders, shows that most of the investment comes from loans. This results in interest expenses that reduce profits and cash flow and have an effect on income tax expenses (Monacelli & Perotti, 2011).

The prior study suggested that proactive tax planning should collect data over a period of 3 years to reduce the impact of transitory tax items and mitigate the effects of temporary differences in taxes (Thanjunpong, 2018). Therefore, this research began collecting data from 2020-2022, totaling 3 years. Investors began to show widespread interest in ESG issues in 2020. There was a significant increase in the offering of ESG stock funds, leading to a tendency for the selection of ESG stocks to be concentrated in companies that excel in ESG. Large companies often prepare for sustainability disclosure from the Thaipat Institute (MGR Online, 2020).

Based on the literature review conducted, researchers can summarize the reasons why the study of proactive tax planning has an effect on firm value as follows: Firstly, past research has found inconclusive results because many studies have reported impacts in inconsistent directions. Therefore, past research has not been able to clearly determine the direction of the impact. This may be due to differences in study objectives, variable measurement methods, laws, tax policies, and accounting standards (Sribunruang & Sutthi, 2021). Secondly, research in developed countries such as the United Kingdom (Wahab, Shaipah & Holland, 2012) and the United States of America (Hasan, Lobo & Qiu, 2021) found that proactive tax planning does not affect firm value. This indicates that investors may not prioritize tax planning when considering stock prices. While Thailand is a developing country, most companies listed on the Stock Exchange of Thailand have evolved from family-owned businesses, resulting in a concentrated ownership structure. This leads to the CEO being a major shareholder or a family member from the same family, who will make business decisions based on their own group's interests due to their significant decision-making power (Chinchotangkul, 2007). Therefore, there is a possibility that proactive tax planning will impact firm value. Thirdly, developing countries may have concerns about the costs and transparency of agents, which could result in sustainability reporting having different impacts compared to developed countries (Friske, Hoelscher, & Nikolov, 2023). Fourthly, proactive tax planning is important in business because taxes are a significant cost and impact performance. Each company pays different amounts of tax; for example, companies that receive government incentives pay less tax than those that do not receive such incentives (Sribunruang & Sutthi, 2021). Fifthly, there is relatively little research on proactive tax planning in Thailand, so this research may be useful for future studies (Thanjunpong, 2018). Sixthly, past research measuring firm value from stock prices is limited (e.g., Tasnia, AlHabshi, & Rosman, 2020; Wahab, Shaipah & Holland, 2012; Lestari & Wardhani, 2015; Li et al., 2016; Kulsiriwanit, 2021). In line with the study by Thanjunpong (2018), this research suggested that future research should examine other factors related to stocks and investors, as these factors are expected to further explain tax planning behavior. For the reasons mentioned above, this study measures firm value based on stock price.

This research measures factors affecting firm value from two perspectives: 1) financial data measured by proactive tax planning and 2) non-financial data measured by sustainability disclosure. Finally, past research has shown that Thailand places importance on proactive tax planning because the corporate income tax is lower than the prescribed tax rate. Therefore, the government should establish tax policies that are consistent and appropriate for the current situation (Thanjunpong, 2018). However, this research may create new academic value and lead to the improvement or development of tax policies in Thailand.

Research Questions

1. How does the mediating effect of sustainability disclosure on the impact of proactive tax planning on firm value in ESG 100 index during the periods from 2020 to 2022?
2. How does the proactive tax planning effect on the sustainability disclosure?
3. How does the sustainability disclosure effect on the firm value?
4. How does the proactive tax planning effect on the firm value?
5. How does the organizational characteristics effect on proactive tax planning?
6. How does the capital structure effect on proactive tax planning?

Purposes of the Research

1. To investigate the mediating effect of sustainability disclosure on the impact of proactive tax planning on firm value in ESG 100 index during the periods from 2020 to 2022.
2. To examine whether there is proactive tax planning effect on the sustainability disclosure.
3. To examine whether there is sustainability disclosure effect on the firm value.
4. To examine whether there is proactive tax planning effect on the firm value.
5. To examine whether there is organizational characteristics effect on proactive tax planning.
6. To examine whether the capital structure effect on proactive tax planning.

Scope of the Research

This study aims to examine the mediating effect of sustainability disclosure on the impact of proactive tax planning on firm value, examine whether the proactive tax planning has effect on the sustainability disclosure, examine whether the sustainability disclosure has effect on the firm value, examine whether the organizational characteristics has effect on proactive tax planning, and examine whether the capital structure have effect on proactive tax planning. An empirical research method based on secondary data was applied in this study. The population in the study comprised all of ESG100 during the period from 2020 to 2022 for a total of 3 years.

This study started in the year 2020, the year most researchers began utilizing annual proactive tax planning for a total of 3 years. This was done in order to mitigate the impact of transitory tax items and to minimize the influence of temporary differences on proactive tax planning (Thanjunpong, 2018). Similarly, the

aforementioned rationale is consistent with previous research suggesting that tax-related studies should involve the continuous collection of data over several years to mitigate potential impacts arising from temporal fluctuations (Suwangerd, 2014).

In addition, at the end of 2019, the Thai government announced an economic stimulus policy (The Secretariat of the Cabinet, 2019), which received significant attention from the public and was beneficial for entrepreneurs (Ministry of Finance, 2019b). Furthermore, it aimed to promote private sector investment to support economic expansion (Ministry of Finance, 2019a), which could potentially impact government tax revenue.

However, the sample of this study did not include companies that (1) were registered in financial service, insurance industries, and leasehold property funds, (2) were withdrawn from listing by the SET and companies under rehabilitation, (3) whose fiscal year-ends are not on the 31 December, (4) were registered as listed companies after 2020, (5) have been incomplete data for analysis, and (6) have outlier data of the main variable. Therefore, the final sample group consisted of 43 firm-year, there are 114 firm-year observations.

This study manually collects the data on proactive tax planning and sustainability disclosure from Bloomberg's website (Aydoğmuş, Gülay & Ergun, 2022), and we manually collect the organizational characteristics, such as independent directors and board duality, from the websites of listed companies. Moreover, the SET market analysis and reporting tool (SETSMART) database and the Stock Exchange of Thailand's website (www.set.or.th) provide the data needed to measure the firm value, including the closing price, current ratio, debt to equity ratio, firm age, firm size, and the control variable.

Key Words and Definitions

The Thaipat Institute, an established ESG rating, collects data on listed securities that demonstrate outstanding performance in environmental, social, and governance (ESG) for 100 companies annually, a process known as ESG100 (Yothachan, Meeampol, & Pajongwong, 2020). The data for this variable was collected from <https://www.thaipat.org>.

Proactive tax planning is the ratio of the effective tax rate (ETR) to the equity multiplier. The data for this variable was collected from <https://www.setsmart.com>.

The sustainability disclosure is the ESG score, which evaluates the information in three areas: 1) environmental score, which is the score for disclosing environmental information; 2) social score, which is the score for disclosing social information; and 3) governance score, which is the score for disclosing governance information (Abdi, Li, & Càmara-Turull, 2020); and 4) the ESG

score is the ESG combined score, which is the overall score of a company (Thomson Reuters, 2019; Harnesk & Myhrberg, 2019).

Firm value is the market price of common stock. The closing price of common shares at the end of the year determines the firm value, as it is the price at which both the buyer and the seller agree. This is an appropriate price, and it represents the price of each value (Kulsiriwanit, 2021; Ocharatporn, 2008). The variable collected the data from <https://www.setsmart.com>.

An independent board member is a director who maintains independence by not participating in management and having no financial interests or relationships with major shareholders, shareholder groups, or the company's executives. Currently, the Office of the Securities and Exchange Commission (SEC) mandates that publicly listed companies must have at least one-third of their board of directors be independent (Office of the Securities and Exchange Commission, 2024). The percentage of independent directors on the board is calculated by dividing the number of independent directors by the size of the board (Iazzi, Vacca, Maizza, & Schiavone, 2023; Chaichuen et al., 2022; Lawati & Hussainey, 2021; Temboonprasertsuk, 2021; Khaoula & Moez, 2019; Khumtonwong, 2015). The variable collected the data from <https://market.sec.or.th>.

Board duality is a situation in which the chairman of the board at a company who is also a chief executive officer at the same time (Sabsombat et al., 2020). The variable collected the data from <https://market.sec.or.th>.

A debt-to equity ratio is one type of leverage ratio that is used to measure how much the company's capital is financed by debt. You can use the debt-to-equity ratio as a reflection of the company's capital structure. The higher the value of a company's debt-to-equity ratio, the more the company relies on debt for capital in its operations. Vice versa, the smaller the debt-to-equity ratio value, the smaller the use of debt by the company (Allam, 2022). The variable collected the data from <https://www.setsmart.com>.

The current ratio is the percentage of the firm's current assets and liabilities. (Ahmad, Shah, Ijaz, & Ghouri, 2023). It can be used to measure the company's capital and reflect the company's capital structure. The higher the value of the company's debt-to-equity ratio, the more the company uses debt as capital in its operations. Conversely, the lower the debt-to-equity ratio, the more the company's debt decreases. (Allam, 2022). The variable collected the data from <https://www.setsmart.com>.

Firm size is the size of a business unit that the measurement can be group by the total assets. This study measured the natural logarithm of total assets. (Chotsuwan, 2018; Thanjunpong, 2018; Soepriyanto, 2018; Christina & Alexander, 2018; Tarmidi & Murwaningsari, 2019; Khaoula & Moez, 2019; Abdi, Li & Càmara-Turull, 2020; Bhagiawan & Mukhlisin, 2020; Aca, Musa & Garba, 2020; Hasan, Lobo & Qiu, 2021; Jitkham & Yarana, 2022; Aydoğmuş, Gülay & Ergun, 2022; Wu, Li, Du, & Li, 2022). The variable collected the data from <https://www.setsmart.com>.

Firm age is the period from the established date to the current date of the firm. This study measured the natural logarithm of years since the date the firm was established (Tarmidi & Murwaningsari, 2019; Abdi, Li & Càmara-Turull, 2020; Aca, Musa & Garba, 2020). The variable collected the data from <https://www.set.or.th>

Organization of the Dissertation

This research is organized into five chapters. Chapter one represents an overview of the study, the research questions, the purposes of the research, the scope of the research, keywords and definitions, and the organization of the dissertation. Chapter two emphasizes the understanding of the theoretical foundation, proactive tax planning, sustainability disclosure and firm value, the definition of all constructs, relevant literature review and research hypotheses, and conceptual framework and illustrates the related hypotheses for testing. Chapter three describes the research methods including population and sample, data collection, the variable measurements, research model, and the methodology. Chapter four describes the results including the descriptive statistics, the correlation analysis, hypotheses testing, and the summary of hypotheses testing. Finally, chapter five proposes the summary of this study including the conclusion, discussion, theoretical and managerial contributions, and limitations and future research direction.

พหุ ประเด็น วิจัย

CHAPTER II

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

The previous chapter provides an overview of the situation with proactive tax planning, sustainability disclosure, and firm value and states the research questions, purposes of the research, the scope of the research, and keywords and definitions. This chapter emphasizes the understanding of the theoretical foundation, proactive tax planning, sustainability disclosure, and firm value, the definition of all constructs, relevant literature review and research hypotheses, and conceptual framework. Therefore, this chapter is divided into five sections. The first section shows the theoretical foundation consisting of tax theory, signal theory, stakeholder theory, trade-off theory, agency theory, and portfolio theory. The second section discusses proactive tax planning to explain the background, objective, definition, and benefits of proactive tax planning. Moreover, this section shows the definition and measurement of proactive tax planning.

The third section shows the definition and measurement of sustainability disclosure. The fourth section shows the definition and measurement of firm value. The fifth section shows empirical evidence on proactive tax planning and sustainability disclosure, proactive tax planning and firm value, sustainability disclosure and firm value, organizational characteristics, and capital structure on proactive tax planning. Furthermore, this section illustrates the hypothesized relationships between proactive tax planning, its consequences, and its antecedents. The final section shows a conceptual framework.

Theoretical Foundation

This study employs six main theories: firstly, the tax planning theory to explain the considerations and practices for calculating a business's taxes. Secondly, the signal theory used to explain the relationships between the sustainability disclosure issue and firm value. Thirdly, the stakeholder theory used to explain the relationships between the proactive tax planning issue and sustainability disclosure. Fourthly, the tradeoff theory used to explain the relationships between the proactive tax planning and firm value. Fifthly, the agency theory is applied to explain the relationship between the antecedents (organizational characteristics) and proactive tax planning. Finally, the portfolio theory is applied to explain the relationship between the antecedents (capital structure) and proactive tax planning. Each applied theory is detailed as follows:

Tax planning theory

Tax planning theory by Hoffman (1961), which discusses the considerations and practices for calculating a business's taxes, is based more on taxable profit than accounting profit. This is due to the implementation of tax policies, such as increased tax-deductible expenses and tax incentives, which do not affect the improvement of accounting profit. Therefore, it has a positive impact on firm value. The theoretical benefit is that this theory can be explained in the context of the stock market. If a company has high tax planning, utilizes maximum tax benefits, and complies with tax laws, it will reduce the tax expenses to be paid (Jitkham & Yarana, 2022). Tax planning entails the strategic movement of cash flows, typically directed towards tax authorities, back into the business. The objective is to minimize tax liabilities while maximizing retained earnings. Past research has shown that effective tax planning can reduce income subject to taxation to the lowest possible extent without sacrificing accounting profits (Dyreng, Hanlon & Maydew, 2008; Krongboon & Dampitakse, 2021).

Tax planning can be explained from two perspectives: the positive perspective, which is tax planning, and the negative perspective, which is tax avoidance, respectively. Tax planning is a tax strategy that executives use to apply tax benefits to reduce income tax expense, increase profits, and improve the business's cash flow to pay the least amount of income tax legally. Additionally, tax planning encompasses tax avoidance, which involves exploiting loopholes in tax laws to maximize benefits for the business, but it carries risks or hidden costs in its execution (Laewprapa, Choojan & Pholkeo, 2022).

However, this research focuses on explaining tax planning in a positive manner, leading to proactive tax planning, which is a tax planning process that requires the expertise of individuals knowledgeable in legal, accounting, and financial matters since tax planning is quite intricate. It necessitates thoroughness and a solid understanding of principles to ensure accurate tax planning according to taxation laws, regulations, and standards while also maximizing benefits. The objective of tax planning is to minimize tax burdens (Samaputra, et al., 2021). Therefore, proactive tax planning strategies are becoming common features within the business environment, as taxes represent a critical factor in the decision-making process of a company (Vacca, et al., 2020).

Signaling theory

The signal theory by Spence (1973), which explains the relationship between sustainability disclosure and firm value. The signal theory explains the behavior of two parties when they have access to different information. In other words, when the financial market receives similar news, it influences the prices of securities.

Companies listed on the Stock Exchange of Thailand demonstrate this by producing reports on their social and environmental responsibilities. Companies compile these reports to highlight their activities towards society and the environment. When companies disseminate these reports to the public, they serve as news updates for external individuals. Consequently, when external individuals receive disclosed information, it leads to changes in security prices (Spence, 1973). Because investors rely on their information to make decisions regarding securities trading and each investor possesses different sets of information, the management of each company typically has more information than individual investors. Therefore, managers strive to instill confidence in their businesses by disclosing information publicly. Dividend payments serve as a tool that managers use to signal investors (Chatiwong, 2017).

However, the signaling theory clarifies how investors receive information from the financial market, which in turn influences stock prices. Additionally, the stakeholder theory suggests that conducting socially and environmentally responsible operations affects stakeholders' confidence. This is consistent with Jizi, Nehme & Salama (2016), who stated that companies with high-quality disclosure practices tend to have higher stock prices. In conclusion, the quality of disclosure regarding social and environmental responsibility, along with the company's image, affects investors' decision-making, which in turn impacts stock price fluctuations. Therefore, the disclosure of environmental, social, and governance (ESG) information is expected to influence investors' decisions and enhance the Thai capital market's potential for acceptance at both regional and global levels (Sittichoksakunchai, Waitip, & Henglang, 2023).

In summary, this study, which focuses on the impact of sustainability disclosure on firm value, aligns well with the signaling theory. From the idea that investors need information related to the ESG disclosure, including significant risks that investors should be aware of. Therefore, the information that investors require should be audited by a manager who operates in generally accepted sustainability disclosure. When investors are informed of true and fair financial and significant risks of the business. It will affect their decision whether to invest in the company's securities or not.

Stakeholder Theory

The stakeholder theory, which was proposed by Barnard (1938), which explains the relationships between the proactive tax planning issue and sustainability disclosure by asserting that managers should not only prioritize the interests of internal stakeholders but also consider external stakeholders, such as customers, communities, and governments, even though these groups may not have decision-making authority within the organization. This aligns with Freeman's (1983) concept, which states that all stakeholders are impacted by business operations (Chatiwong,

2017). This theory explains the company's activities in relation to its stakeholders (shareholders, creditors, government, society, consumers, suppliers, analysts and other parties) and Gray, Kouhy & Lavers (1995) stated that stakeholders can support the survival of the company in the future, therefore efforts are made so that all company activities receive this support. Company communication with stakeholders can be seen from the sustainability disclosure.

In the context of stakeholder theory, companies are very concerned that a broad group of stakeholders (customers, suppliers, employees, and society) will function more effectively and create more value (Harrison et al., 2019). Stakeholder theory emphasizes how company management meets stakeholder expectations and manages relationships between companies and stakeholders (Dayacahyani, 2020). Based on the theory, corporate responsibility for its business activities will be shown internally and externally to the company (Suhardiyah et al., 2018). Thus, companies are required to behave ethically, meaning that the company's actions concerning its stakeholders are judged by core rules based on socially accepted behavioral norms. The implementation of sustainability is evidence that the company is ethical and supports transparency, while proactive tax planning may lead to unethical behavior, even if it does not violate tax provisions (Ramadhani & Firmansyah, 2022).

In summary, the stakeholder theory is in line with this study that focuses on the impact of proactive tax planning and sustainability disclosure. From the idea that managers should prioritize stakeholders both within and outside the organization, as all stakeholder groups are impacted by business operations, including proactive tax planning activities undertaken by management, companies should communicate with stakeholders through social engagement activities disclosed in sustainability reports. Additionally, disclosing sustainability-related information can help reduce information asymmetry between internal management and external stakeholders. Therefore, proactive tax planning is information that investors need to know, as it can indicate management policies and potential risks. However, if investors are informed of financial risks accurately, it will affect investment decisions.

Tradeoff Theory

The tradeoff theory by Modigliani & Miller (1963), which used to explain the relationships between the proactive tax planning and firm value. The trade-off theory assumes that the benefits of borrowing and the costs of financially distressed entities, along with tax incentives for obtaining loans, can be balanced and will achieve the optimal capital structure. Based on this theory, when tax mitigation equals debt, the company will have an appropriate capital structure. If the company wants to expand its business by increasing new investments, it will need support from external capital (Nurhayati & Kartika, 2020; Wardani, et al., 2022).

However, past studies have found that proactive tax planning through debt

financing is a popular method, as interest expenses can be deducted when calculating net taxable income. But if the company incurs a lot of debt, it may become unreliable and affect the stability of the business. This is consistent with the trade-off theory, which explains the relationship between costs and the benefits received. Costs associated with tax planning, such as expenses for restructuring operations, tax consultancy fees, and costs from reputational damage when news of wrongdoing leads to fines due to tax planning violations detected by government officials. Agency Cost by executives (agents) will use tax planning as a tool to organize activities to increase their own compensation by trying to reduce taxable income to lower the income tax expense. Therefore, aggressive tax planning may affect firm value (Thanjunpong, 2018).

Additionally, the costs incurred from borrowing money and the benefits of tax planning, such as if a company borrows money, it will have to pay interest. Therefore, it should consider whether incurring debt to utilize interest payments for tax mitigation to reduce expenses is a suitable option (Thanjunpong, 2015). Because the cost of borrowing money has a higher interest rate, it could lead to the company's bankruptcy. In summary, executives should weigh the cost of interest against the benefits derived from borrowing (tax mitigation) to decide on the method that provides the greatest benefit and positively impacts firm value. This theory aligns with previous studies (Sribunruang & Sutthi, 2021; Jitkham & Yarana, 2022).

In summary, this paper if a large amount of borrowed funds is used, it will reduce profits and increase the cost of bankruptcy. Therefore, Ross, Westerfield, & Jordan (2014) suggest that if a company wants to have an appropriate debt ratio in its capital structure, it must find a balance between the benefits of leveraging and the costs of bankruptcy risk. Because the best capital structure can increase the company's value through tax savings. Additionally, the optimal capital structure must compare the benefits of tax savings with the costs of bankruptcy.

Agency Theory

The agency theory by Jensen & Meckling (1976), which explains the relationship between the antecedents (organizational characteristics) and proactive tax planning. The agency theory explains the behaviors of individuals and the motivations that drive managers to exhibit different behaviors (Arunruangsirilert, Srihirunpunlop & Boonyawat, 2022). The principal-agent problem originates from the idea that the capital owner (the principal) cannot work efficiently, so they delegate tasks to the manager (the agent) to perform on their behalf (Jensen & Meckling, 1976). It is expected that the executives will work diligently and generate sustainable returns for the shareholders (Thanjunpong, 2015).

This type of work may create loopholes that allow executives to engage in fraudulent behavior or work for short-term personal gain without considering the

long-term benefits for shareholders. This includes hiding information, manipulating profits, avoiding taxes, cutting costs, and increasing revenues to boost executive compensation, as their pay is tied to performance. These actions may create conflicts of interest (Chatiwong, 2017). Therefore, to mitigate conflicts of interest, the Stock Exchange of Thailand requires companies to adhere to good corporate governance principles, which include appointing independent directors to oversee the management's operations and recommending the separation of the roles of chairman of the board and chief executive officer (CEO).

These provisions are considered one of the governance mechanisms that shareholders use to control and monitor the management's performance (The Stock Exchange of Thailand, 2017a, Thanjunpong, 2015), including ensuring that executives adhere to the established policies with caution and making the administration internationally recognized. Additionally, it can reduce the risk of executives seeking personal benefits (Thanjunpong, 2015). Therefore, agency theory can be used to explain the relationship between organizational characteristics and proactive tax planning, and organizational characteristics are determined by the executives. Additionally, independent directors and board duality will help address the agency problem (The Stock Exchange of Thailand, 2017a) because they are committed to maintaining corporate governance to ensure efficient operations, which in turn improves tax planning and reduces costs (Aburajab et al., 2019; Beasley et al., 2021).

In summary, agency theory is used to explain the relationship between organizational characteristics and proactive tax planning. Corporate governance allows companies to demonstrate their actions, legitimizing social expectations. Therefore, organizational characteristics are crucial in creating levels of proactive tax planning. This study considers organizational characteristics, including independent directors and board duality. Thus, this study expects to incorporate organizational characteristics. Independent directors and board duality may influence proactive tax planning.

Portfolio Theory

The portfolio theory by Markowitz (1991), which explains the relationship between the antecedents (capital structure) and proactive tax planning. Markowitz proposed the concept of investment diversification to support efficient investment in securities by considering the expected return from the securities and the risk of the securities. Additionally, study the impact of asset risk, return rates, and risk diversification on expected investment returns. This theory explains that when investors decide to invest in a group of securities, it indicates that they are interested in the returns they will receive from future investments, which are uncertain. Investors predict future returns that differ from the expected returns. The variance of

the expected return rates is a factor that indicates the effectiveness of the investment risk (Swetwattana & Kleebbuabarn, 2019).

However, even though investors decide to invest in securities, they do not know the exact rate of return. Therefore, they choose to invest in securities with the highest rate of return. This decision is incorrect, as investors should invest in securities that offer the highest returns and the lowest risks, aligning with their expectations. Therefore, investors should seek a balance between returns and investment risks by implementing the most efficient asset allocation strategy (Markowitz, 1959). Professional investors accept Markowitz's concept (Swetwattana & Kleebbuabarn, 2019). Therefore, it can be summarized that 1) investors should make investment decisions based on expected return and risk, and 2) investors try to avoid risk by choosing to invest in low-risk securities for options with the same return and by choosing securities with higher returns if the risk is the same (Raduang, 2022).

In summary, investment decisions are related to biases, which can either enhance or hinder the performance of the investment. Additionally, potential investments require significant capital. Therefore, investments should be diversified to reduce risk. However, companies and investors hardly consider the impact of income tax expenses. It can be said that proactive tax planning affects investment decisions, and liabilities impact tax planning. This shows that if tax practices increase, investment decisions will also increase. However, investors and managers should prioritize tax savings, as it is an important factor. Furthermore, investors should seek advice from experts and consider the company's tax planning potential before making investment decisions (Adetola et al., 2023).

Empirical Evidence

The theoretical foundations of stakeholder theory, signaling theory, trade off theory, agency theory and portfolio theory are a valuable guide to develop the conceptual model of this study. To comprehend the conceptual model, all variables of this study are consistent with theoretical concepts. The proactive tax planning is the main variable and the center of this study. As described the main purpose of this study, The impact of proactive tax planning and sustainability disclosure on firm value, and the relationship between proactive tax planning on firm value, and the relationship between organizational characteristics, and capital structure on proactive tax planning.

Proactive Tax Planning

Proactive tax planning is to make the tax system fairer (Bervejillo & Schiller, 2023). However, proactive tax planning involves forecasting tax liabilities in advance and utilizing available benefits for tax deductions, excluding allowances, and total refunds. The primary objective of tax planning is to minimize tax burdens as much as possible. It is a forward-looking strategy that benefits companies in the long run (Khader, 2017). Therefore, proactive tax planning serves as a solution to past and present tax issues while also preventing future tax problems and achieving business objectives (Jansaard, 2021). In summary, proactive tax planning refers to tax-related strategies aimed at reducing tax expenses without intending to evade taxes, such as choosing business operation policies or accounting practices that result in reduced tax liabilities (Thanjunpong, 2015). Each measurement of proactive tax planning as follows:

Measurement of Proactive Tax Planning

The proactive tax planning will cover both perspectives, including:

1) Book-tax nonconforming tax planning, as described by Dyreng, Hanlon & Maydew (2008), refers to tax planning strategies that do not result in a decrease in accounting profits but rather lead to a reduction in taxable profits. This form of tax planning may either increase or leave unchanged accounting profits, while simultaneously increasing cash flows from operational activities and tax expenses.

1.1) Effective Tax Rate (ETR)

Effective tax rate is the ratio of income tax expense on pre-tax profits (Khaoula & Moez, 2019), reflecting the discrepancy between accounting and tax principles (Srihirunpunlop, 2018). The effective tax rate (ETR) serves as a fair tax collection principle. According to the concept of Hilderth & Richardson (1999), tax payment becomes fair when people with higher incomes pay a higher effective tax rate than those with lower incomes (Mongkolnchaiarunya, Verapreyagura & Buathong, 2017; Hilderth & Richardson, 1999). The current period income tax expense gathers data from both the notes and the financial statements (Chen, Hu, Wang & Tang, 2014). The calculation is as:

$$\text{ETR} = \frac{\text{Income Tax Expense}}{\text{Income before Tax}}$$

where

Income Tax Expense $_{it}$ = the total taxable income x income tax rate for firm i in year t

Income before Tax $_{it}$ = the income before tax for firm i in year t

However, following the prior study, there are several studies that investigated the proactive tax planning measured by effective tax rate (Allam, 2022; Thanjunpong, 2018; Kulsiriwanit, 2021; Sribunruang & Sutthi, 2021; Bhagiawan & Mukhlasin, 2020; Tantiyavarong, 2009; Khaoula & Moez, 2019; Christina & Alexander, 2018; Tarmidi & Murwaningsari, 2019). It reflects the inconsistency between accounting principles and tax regulations (Srihirunpunlop, 2018). The prior studies recommend that a low effective tax rate indicates that the company has proactive tax planning (Dyrenge, Hanlon, & Maydew, 2008; Krongboon & Dampitakse, 2021; Temboonprasertsuk, 2021). The effective tax rate (ETR) is a tax planning strategy that reduces tax profits but does not reduce accounting profits. Therefore, companies with proactive tax planning will have a lower effective tax rate (ETR), allowing them to show higher post-tax profits. Additionally, tax management also helps increase the cash flow for the business (Krongboon & Dampitakse, 2021).

2) Book-tax conforming tax planning is tax planning that reduces both accounting profit and taxable profit. However, this method has a drawback in that it lowers accounting profits. Family businesses, which can recognize the true profits within the company, commonly use this method.

2.1) Tax on CFO

Proactive tax planning was measured by using the ratio of income tax expense to cash flow from operations (TAX/CFO) (Temboonprasertsuk, 2021; Kulsiriwanit, 2021; Sribunruang & Sutthi, 2021; Tantiyavarong, 2009; Zimmerman, 1983). This method measures cash flow from operating activities that are not affected by creative accounting (Tantiyavarong, 2009). This is the resulting formula:

$$\text{Proactive Tax Planning} = \frac{\text{Income Tax Expense}}{\text{Cash Flow from Operations}}$$

where

Income Tax Expense $_{it}$ = the total taxable income x income tax rate for firm i in year t

Cash Flow from Operations $_{it}$ = the cash flow from operations for firm i in year t

2.2) Tax on Asset

Proactive tax planning was measured by using the ratio of income tax expense to total assets (TAX/ASSET) (Thanjunpong, 2018). The efficiency of using assets to generate income and expenses should be related, with the assumption that companies with the same total assets should have the same ability to generate profit and the same corporate income tax expenses. Therefore, a company that invests in high total assets but has low corporate income tax expenses reflects tax planning. Financial statements, which continuously show the company's performance, disclose this information, reflecting proactive tax planning more consistently than other variables like the effective tax rate and TAX/CFO. Additionally, asset manipulation in financial statements is less frequent than earnings management in income statements (Tantiyavarong, 2009; Thanjunpong, 2018). Furthermore, we can analyze the ability to generate real income using the value of assets. Therefore, total assets are likely to correlate with tax expenses. (Tantiyavarong, 2009). This is the resulting formula:

$$\text{Proactive Tax Planning} = \frac{\text{Income Tax Expense}}{\text{Total Asset}}$$

where

Income Tax Expense $_{it}$ = the total taxable income x income tax rate for firm i in year t

Total Asset $_{it}$ = the total asset for firm i in year t

Many studies measure proactive tax planning from the ratio of income tax expense to total assets (TAX/ASSET) (Thanjunpong, 2018; Sribunruang & Sutthi, 2021; Tantiyavarong, 2009; Thanjunpong, 2015). This method can explain that if the ratio is low, it indicates a high level of proactive tax planning, and point out the amount of income tax the company pays, which arises from tax profits in the financial report, and total assets as a factor to mitigate the impact of scale effects. (Thanjunpong, 2015).

2.3) Tax on NPM

Proactive tax planning was measured by the ratio of measured by the ratio of corporate income tax to net profit margin (TAX/NPM) (Kulsiriwanit, 2021). This is the resulting formula:

$$\text{Proactive Tax Planning} = \frac{\text{Income Tax Expense}}{\text{Net Profit Margin}}$$

where

Income Tax Expense $_{it}$ = the total taxable income x income tax rate for firm i in year t

Net Profit Margin $_{it}$ = the net profit margin for firm i in year t

Net Profit Margin = Net Profit/Total Revenue x 100

In summary, previous studies have reviewed how proactive tax planning has been measured through various methods. However, the effective tax rate is a commonly used variable to measure proactive tax planning (Allam, 2022; Thanjunpong, 2018; Kulsiriwanit, 2021; Sribunruang & Sutthi, 2021; Bhagiawan & Mukhlisin, 2020; Tantiyavarong, 2009; Khaoula & Moez, 2019; Christina & Alexander, 2018; Tarmidi & Murwaningsari, 2019). According to Allam (2022), the effective tax rate is considered a variable for measuring corporate tax burden as it reveals the level of taxation relative to a company's profits. It serves as an indicator of efficient tax planning and can reflect the disparity between accounting and tax principles effectively (Srihirunpunlop, 2018).

Moreover, corporate income tax is related to the management of the company's investment assets. Therefore, this research therefore incorporates the Equity Multiplier, which is used to measure how the company's assets compare to its shareholders' equity. It shows that the company has increased its capital for operational management. If the ratio is high, it indicates that the company uses less capital from shareholders to build the business, making it riskier than other companies. This is because there is a risk of debt repayment, as less capital from shareholders is used, indicating that most of the investment comes from borrowed funds. This results in interest expenses that reduce profits and cash flow. Additionally, it suggests that the company may not be self-sustaining and may require continuous capital infusion to grow. Financing increases the equity multiplier, indicating that tax expenses have increased (Monacelli & Perotti, 2011).

Additionally, the equity multiplier is a debt capacity indicator that reflects the return on profit and operational efficiency, measured by the return on assets in large companies with substantial assets. Therefore, there is the ability to borrow money, indicating profit growth, which may impact the increase in assets or borrowing

capacity (Abraham, Harris, & Auerbach, 2017). Therefore, this study includes the equity multiplier as part of the variables to measure proactive tax planning. The resulting formula is as follows:

$$\text{Equity Multiplier (EMULT)} = \frac{\text{Total Asset}}{\text{Equity}}$$

where

Total Asset_{it} = the total asset for firm i in year t

Equity_{it} = the difference between liabilities and assets for firm i in year t

From the above information, the shareholders' equity should be lower compared to the assets, indicating that the company should use debt financing more than equity financing to generate profits from borrowed funds. However, a company that focuses too much on profit may face risks related to debt obligations, both principal and interest, and if the performance does not meet expectations, the firm value will decrease (Kamolsri, 2018).

However, there is still a lack of research that measures proactive tax planning using the effective tax rate on the equity multiplier. Therefore, this study aims to assess proactive tax planning differently from past research. It explains that the equity multiplier, derived from total assets and equity, can be analyzed to understand the capacity to generate real income from assets and equity. While the effective tax rate indicates tax management to increase cash flow for the business (Krongboon & Dampitakse, 2021). The resulting formula is as follows:

$$\text{Proactive Tax Planning} = \frac{\text{Effective tax rate (ETR)}}{\text{Equity Multiplier}}$$

$$= \frac{\text{Income Tax Expense/Income before Tax}}{\text{Total Asset/Equity}}$$

where

$\text{Effective tax rate}_{it}$ = Income Tax Expense on Income before Tax for firm i in year t

Equity_{it} = the difference between liabilities and assets for firm i in year t

Sustainability Disclosure

Sustainability disclosure refers to the practice of revealing data related to the economic, social, environmental, and governance aspects of a company's operations. Companies can choose appropriate approaches and channels for disclosing this

information (Tanglamlert et al., 2023). Sustainability information encompasses policies, impacts, and performance related to environmental and social aspects of business operations under a good corporate governance framework, also known as ESG (Environmental, Social, and Governance) data. This type of data allows investors and stakeholders to understand the broader dimensions of a company's operations beyond financial data, instilling confidence in the organization's ability to efficiently manage its business, transparency, competitiveness, and long-term returns. Therefore, companies should consistently disclose sustainability information, particularly regarding ESG performance, through various channels such as annual reports, sustainability reports, or websites. This practice not only benefits investment decision-making, similar to financial data, but also provides other advantages (The Stock Exchange of Thailand, 2017b).

In Thailand, the ranking of companies for excellence in environmental, social, and governance (ESG) aspects began in 2008. Subsequently, in 2014, there was the inception of ESG rating to enhance business sustainability data. The Thai Institute of Directors (IOD) is the organizer of the sustainability development ranking, which compiles data on 100 listed companies that excel in environmental, social, and governance (ESG) aspects, known as ESG100, to meet the needs of investors seeking sustainable investments (Yothachan, Meeampol, & Pajongwong, 2020). Thaipat ESG Index is the first index in Thailand calculated using an equal-weighted index, meaning it gives equal importance to all securities to reflect price changes without considering the size of the securities. This allows the index to equally reflect the price movements of the securities and gives smaller quality securities the opportunity to impact the index value as much as larger securities (MGR Online, 2020).

In the first year, the evaluation criteria considered only ESG issues, leading to a limitation where investors might have to make a trade-off between investing in companies with good ESG but unsatisfactory performance. Next year, the criteria for analyzing ESG data in conjunction with financial data, called integrated ESG assessment, will be adjusted to reflect investment returns or performance figures related to ESG operations. This involves analyzing ESG operational data in connection with performance to meet the needs of investors focused on sustainable investment. A company with good environmental, social, and governance (ESG) practices will be able to generate good investment returns (Thaipat Institute, 2023b; MGR Online, 2020). Later, in the year 2018, after gathering three years of evaluation data, it expanded into the Thaipat ESG Index for comparison with the benchmark index and investable index. S&P Dow Jones calculates and disseminates information through Bloomberg and Reuters to investors worldwide (Sook-aram, 2022; MGR Online, 2020).

ESG100 Index uses information disclosed by companies in the one report (56-1), sustainability report, and others without using a questionnaire (Thaipat Institute, 2023b). This index is comprehensively evaluated for the companies listed

on the Stock Exchange of Thailand. The benefit the company receives from the ESG100 assessment is knowing the current status of its ESG operations. This index is evaluated using ESG indicators, which are internationally recognized, and the evaluation is conducted independently by an external agency (MGR Online, 2020).

Initial evaluation criteria (Thaipat Institute, 2023b)

- 1) The company's performance has been profitable for two consecutive fiscal years.
- 2) The company, board of directors, or senior executives are exempt from wrongdoing, as the Securities and Exchange Commission (SEC) has never imposed punishment in the annual evaluation.
- 3) Retail shareholders distribute their shares according to the criteria set by the Stock Exchange of Thailand.

Main evaluation criteria (Thaipat Institute, 2023b)

- 1) Considering ESG that impacts the growth of the industry.
- 2) Consideration of the methods the company uses to identify and manage ESG-related opportunities and risks.
- 3) Considering ESG that impacts performance

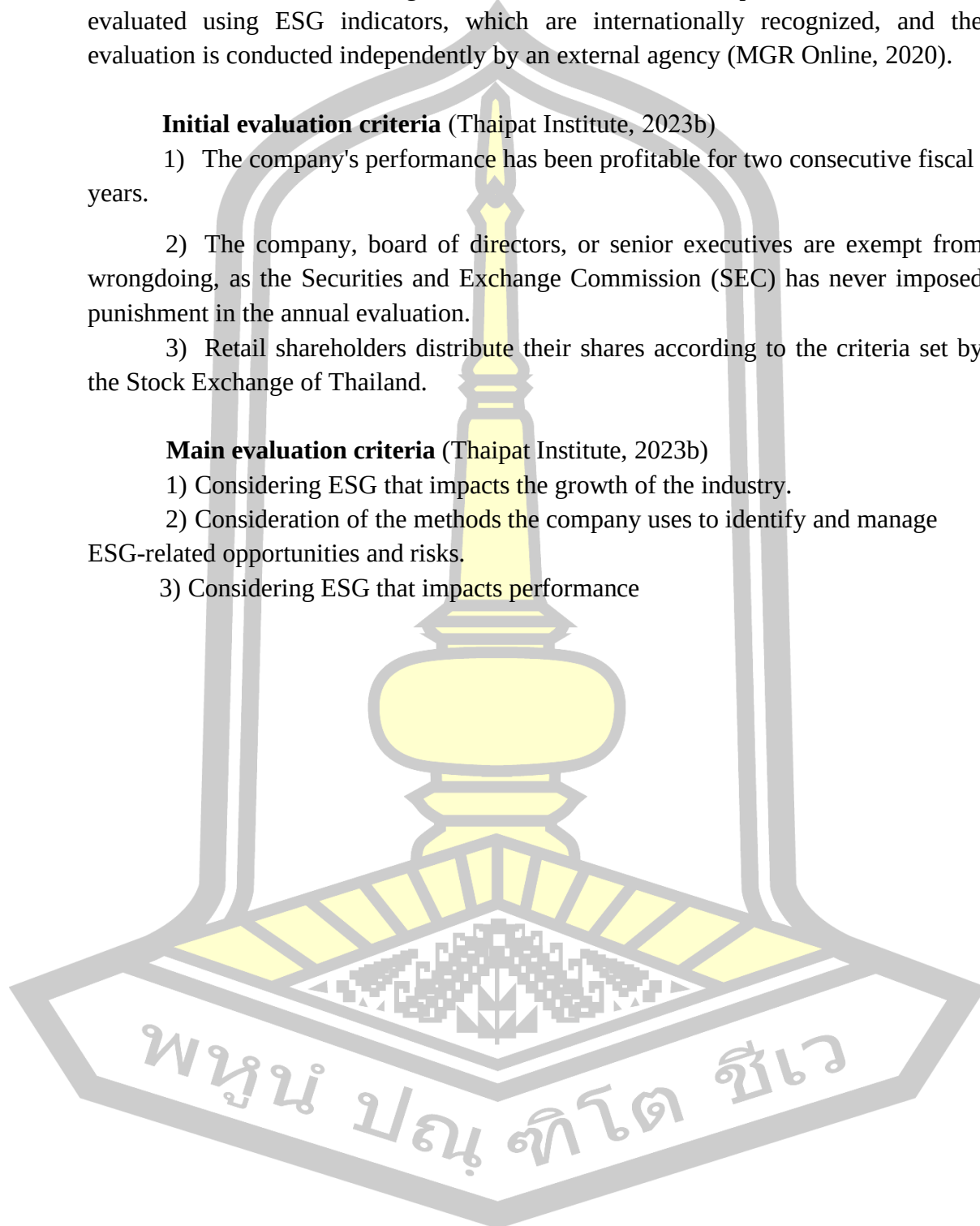


Table 1 Data Analysis will vary across different Industry Groups

(Thaipat Institute, 2023b), including

Industry	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Agro & Food Industry	√	√		√		√	√																				
Consumer Products	√								√			√	√	√													
Financials															√	√	√	√	√								
Industrials	√	√										√								√					√		
Property & Construction	√				√			√			√											√					
Resources	√	√					√											√			√						
Services	√		√												√								√	√			
Technology										√					√										√	√	√

- Note:**
- 1 Management of energy, water, air pollution, and waste
 - 2 Greenhouse gas emissions
 - 3 Safety and accident management
 - 4 Food safety, nutrition, and health
 - 5 Safety, occupational health, and working environment
 - 6 Product labeling and marketing communication
 - 7 Social and environmental impacts
 - 8 Environmental impact on project development
 - 9 Environmental impact throughout the product life cycle
 - 10 Environmental footprint
 - 11 Land use and ecological impact
 - 12 Product safety
 - 13 Limiting the use of hazardous chemicals in the product
 - 14 Innovation and sourcing raw materials for production
 - 15 Personal data protection and data security
 - 16 Providing transparent information and fair advice to customers
 - 17 Systemic risk management
 - 18 Management of the legal and regulatory environment involved
 - 19 Integrating environmental, social, and governance factors into product and service development
 - 20 Management of health, safety, and emergency situations
 - 21 Preparedness and emergency/disaster response plans
 - 22 Ethics and transparency in service provision
 - 23 Anti-corruption and anti-bribery
 - 24 Quality management in the supply chain
 - 25 Material sourcing, supply chain management, and product waste
 - 26 Development of skills and workforce expertise
 - 27 Competition behavior and intellectual property protection

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In summary, this research measures sustainability disclosure using ESG score to encompass the context of sustainability scores. The ESG data used in this research are collected from the Bloomberg database, which is available at <https://www.bloomberg.com>, because of the comprehensive disclosure of ESG scores in the aforementioned database (Aydoğmuş, Gülay & Ergun, 2022).

Firm Value

The firm value is determined by the buyers' willingness to make significant sacrifices in exchange for the owner's expectation of receiving substantial gains based on the company's size (Husnan & Pudjastuti, 2015).

Measurement of Firm Value

Measuring the value of a business is an important component that indicates the efficiency and effectiveness of an organization, demonstrating the managerial capabilities of executives. Business valuation comprises two formats (Thanjunpong, 2015), including:

1) Return on Assets (ROA)

Return on equity, from an accounting perspective, refers to return on assets (ROA) as the proportion between net income and total assets, which is measured as a percentage, indicating how much profit the company makes compared to its total assets. This is the resulting formula:

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

2) Return on Equity (ROE)

Return on equity, from an accounting perspective, refers to returns from the owner's equity that are employed to measure the firm value. This is the resulting formula:

$$\text{ROE} = \frac{\text{Net Income}}{\text{Average Shareholders' Equity}}$$

Return on equity is expressed as a percentage and can be calculated for any company if net income and equity are both positive numbers. Net income is calculated before dividends paid to common shareholders and after dividends to preferred shareholders and interest to lenders.

3) Tobin's Q

Tobin's Q, from an economic perspective, refers to returns from the owner's equity that are employed to measure the firm value. Tobin's Q, equals the market value of a company divided by its assets' replacement cost. Thus, equilibrium is when market value equals replacement cost. This is the resulting formula:

$$\text{Tobin's Q} = \frac{\text{Property Market Value}}{\text{Replacement cost}}$$

4) Tobin's Q

Tobin's Q, as conceptualized by Chung & Pruitt (1994), This is the resulting formula:

$$\text{Tobin's Q} = \frac{\text{Property Market Value} + \text{Book value of debt}}{\text{Book value of debt asset}}$$

Tobin's Q from a marketing perspective by adding property market value and a book value of debt on the book value of debt asset. Professor Tobin believes that Tobin's Q is a positive measure that reflects an organization's value. Tobin's Q calculates book value as a proxy for market value information for certain variables, enabling it to predict future investment decisions (Sribunruang & Sutthi, 2021). Previous studies have found that Tobin's Q (Tobin & Brainard, 1976) can measure firm value and reflect accounting performance by using numerical data from financial statements and economic firm value using market value. There is a substantial body of research that applies Tobin's Q to measure firm value (Jitkham & Yarana, 2022).

5) Stock Price

Stock Price is the market price of common stock. It is the closing price of common shares at the end of the year because the closing price is the price at which both the buyer and the seller agree that this is an appropriate price and represents the price of each value (Kulsiriwanit, 2021; Ocharatporn, 2008). If the demand for an IPO outweighs the IPO, for example, it is expected that the company's operating prospects will be favorable and can produce the desired return on the shareholders. But if the demand for the offering outweighs the demand for the offering, it will result in a lower market price of the stock. Ordinary stock market prices collect data from market prices each year.

Summary of Key Literature Reviews

Proactive Tax Planning and Sustainability Disclosure

Corporate income tax is a significant cost for organizations and the greater the tax bill, the greater the loss of corporate value. Hence, firms usually resort to various means of tax avoidance. Business operators, over half of entrepreneurs have long considered the tax burden the most significant difficulty in running a business today (Meng, & Zhang, 2023). However, business operations have significant impacts on society and the environment, leading to issues such as water pollution, air pollution, noise pollution, and the extensive dispersal of waste into the environment. These issues have wide-ranging impacts on communities, society, and the nation as a whole. Consequently, many countries around the world, including Thailand, have become increasingly aware of these issues and have shown a growing interest in environmental conservation (Tunming, 2022).

Currently, many countries around the world are placing greater importance on the disclosure of environmental, social, and governance (ESG) information. Companies are being encouraged to disclose information through the development of sustainability reports (Saengpao, Jarupathirun, & Tongkong, 2023). Because disclosing ESG alleviates information asymmetry (Kim & Koo, 2023). In conclusion, the improvement of corporate ESG performance is of great significance to the high quality and sustainable development of the economy. Governments in various countries have introduced many proactive tax planning to motivate companies to actively fulfill their ESG responsibilities (Zhu, et, al., 2023).

There are several prior studies which have investigate the proactive tax planning effect on the sustainability disclosure (e.g. Zhu et al., 2023; Aribaba et al., 2019; Prempanichnukul, 2018). The study in China of Huang et al. (2024), Zhu et al. (2023) and Li & Li (2022) investigated the impact of proactive tax planning on sustainability disclosure in Chinese companies. The study found that proactive tax planning has a positive effect on sustainability disclosure, indicating that companies engaging in proactive tax planning tend to increase their sustainability disclosure. Because the funds saved from the proactive tax planning are channeled to ESG performance improvement activities. These companies are more likely to take advantage of proactive tax planning to increase their investment in ESG compliance and are more likely to reap the extrusion benefits of improved ESG performance (Zhu et, al., 2023). In China, which imposes a tax on the pollution emissions of enterprises, this helps enterprises improve their ESG performance and raise their environmental awareness, thus effectively promoting their green technological innovation to achieve sustainable development (Li & Li, 2022).

Moreover, Internal control, as an important internal governance mechanism, can effectively ensure that the proactive tax planning and direct financial subsidies received by enterprises can be dedicated to ESG performance, effectively regulating

the process of ESG performance and playing an important role in the control of ESG performance risks of enterprises. (Zhu et al., 2023). In summary, paying a fair share of taxes or providing transparent CSR disclosure could be an alternative or substitute means for companies to establish legitimacy, promote ethics, and reflect the organization's values (Xu et al., 2022)

In Nigeria, the study of Aribaba et al. (2019) investigated that proactive tax planning has a positive relationship on entrepreneurship sustainability. Based on these findings, government to imperative that a favorable tax regime be provided which will encourage entrepreneurship sustainability and reduces social vices. This will not only enliven existing ones but also inspire the emergence of new ones. Friendly tax regime would engender voluntary compliance amongst the entrepreneurs in the long run with resultant tax yield (Aribaba, et al., 2019). Moreover, the study In Thailand of Premanichkul (2018) investigated that proactive tax planning positively impacts the organization's image in terms of social responsibility, reputation, and management style. Therefore, Thailand should pay attention to and comply with tax laws, regulations, and tax advisory services, which will help enhance the organization's image. Compliance with tax laws reflects a commitment to social responsibility, serving as a model for proper tax contribution to the nation. This practice enhances credibility and fosters public trust and acceptance.

On the other hand, some studies suggested that proactive tax planning has a negative impact on sustainability disclosure. When a company increases its sustainability disclosure in the economic domain, it can lead to a reduction in tax planning activities. Economic disclosures provide clear and quantifiable data, allowing for the assessment of their impact on tax planning. Companies with high levels of sustainability disclosure exhibit a strong awareness of their tax payment obligations. Furthermore, to meet societal expectations, the company conducts its business with a focus on its responsibilities toward both the government and society as a whole. Therefore, as a company increases its disclosures, proactive tax planning may become more difficult to execute (Thanjunpong, Chaiwong, & Dechsiri, 2018). However, companies and investors increasingly recognize that proactive tax planning is not aligned with their ESG strategies. Companies might have a hard time saying that they support the communities in which they do business while simultaneously seeking state proactive tax planning for investments they perhaps would have made anyway. However, the decision to take state proactive tax planning is not always a clear yes or no. However, many companies will likely conclude that it is in their best interests to cooperate with governments in crafting ones that will also benefit the community (Cowan & Cutler, 2023).

There are some studies that found that proactive tax planning has no impact on sustainability disclosure; this may be due to the descriptive nature of the information provided, which lacks financial metrics. Therefore, we cannot effectively measure the impact on tax planning (Thanjunpong, Chaiwong, & Dechsiri, 2018).

While the theories mentioned above may discuss different approaches to how companies should disclose their sustainability, leading to confusion, several factors further complicate the issue. One such factor is tax planning. Tax planning is an optimization tool to decrease corporate taxes. There are various possibilities for tax deductions, which serve as incentives for firms to increase sustainability disclosure while simultaneously maximizing profits. In other words, tax mitigation tax deductions could be an incentive for firms to invest in sustainability. Hence, arguably, the states acknowledge the value stemming from an increase in sustainability disclosure work made by firms and accept the tradeoff in the form of a decrease in taxes. However, studies that investigate the relationship between proactive tax planning and sustainability disclosure are limited (Harnesk & Myhrberg, 2019).

Most research studies predominantly investigate proactive tax planning in developed countries such as China (Huang et al., 2024; Zhu et al., 2023; Li & Li, 2022). There is relatively little research on developing countries, such as Nigeria (Aribaba et al., 2019) and Thailand (Prempanichnukul, 2018). There are few studies on the impact of environmental protection tax on corporate ESG performance (Li & Li, 2022). Furthermore, the prior studies have explored the various relationships between proactive tax planning and the ESG score; it is an interesting topic to study. Previous research has not provided a clear understanding of this relationship, as the results have varied (Harnesk & Myhrberg, 2019). Therefore, this study investigates the potential impact of proactive tax planning on sustainability disclosure. Thus, leading to the following hypothesis:

H1: The proactive tax planning has a positive effect on the sustainability disclosure.

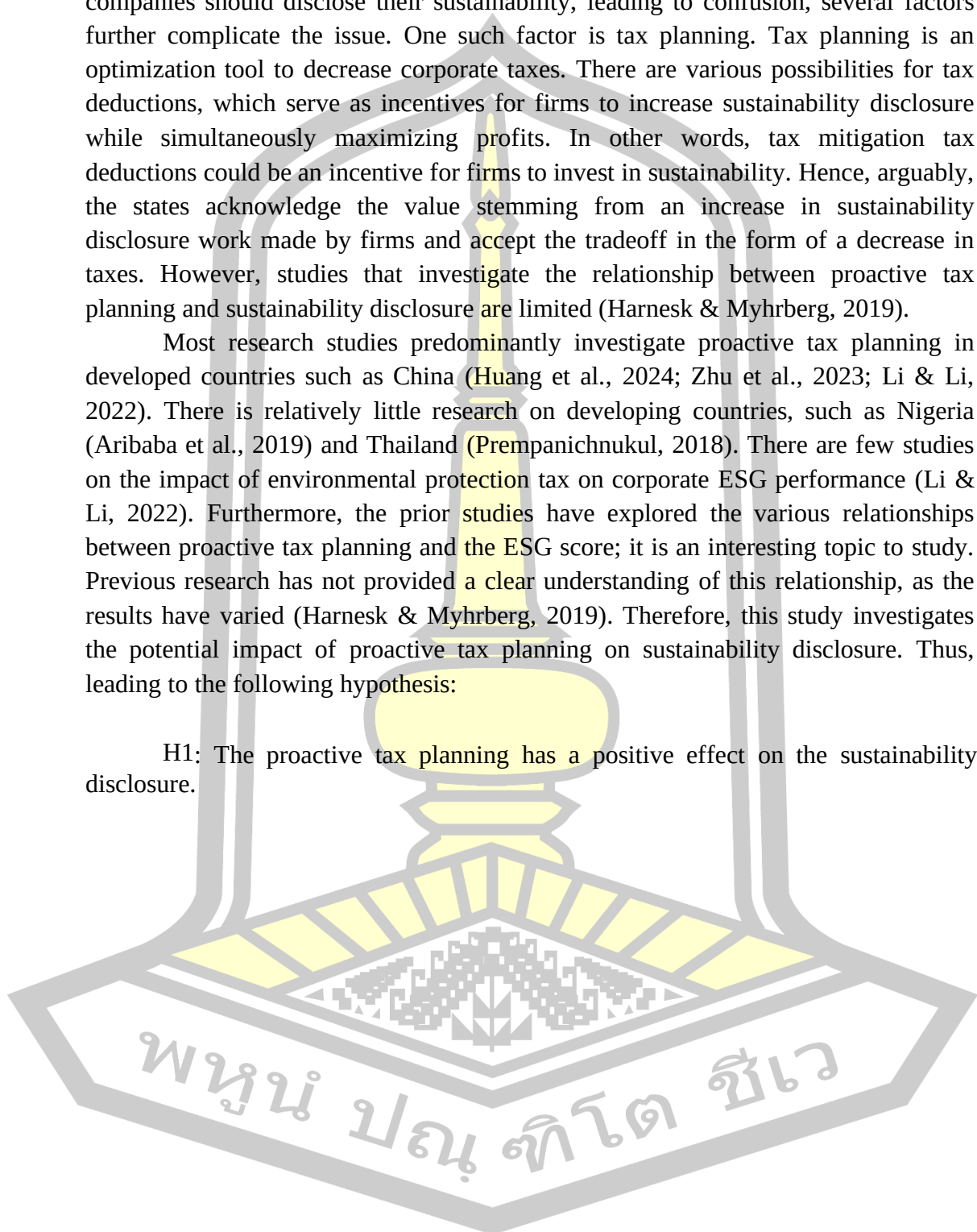


Table 2 Summary of Key Literature Reviews on Proactive Tax Planning

Authors	Country	Proactive Tax Planning (X)			Sustainability Disclosure (Y)	
		ETR	Tax/Asset	Tax Incentives	ESG	CSR (questionnaire)
Huang et al. (2024)	China			+	√	
Zhu et, al. (2023)	China	+			√	
Li & Li (2022)	China			+	√	
Aribaba et al., (2019)	Nigeria			+		√
Premanichnukul (2018)	Thailand			+		√
Thanjunpong, Chaiwong, & Dechsiri (2018)	Thailand		√		-	
Zhang et al. (2024)	China			+	√	

Note: created by Pichaya Adthajak.

: Symbols represent the result as + positive significant, - negative significant, N/A not significant, and √ dependent.

Sustainability Disclosure and Firm Value

The sustainability of the business is the business's mission is to contribute to sustainable economic development, working with employees and families. local community and society as a whole in order to improve the quality of life, businesses should be responsible and disclose the impacts of their operations on society and the environment. The concept of sustainability reporting is therefore an important issue (Tunming & Channgam, 2023). However, corporate sustainability is another concern for modern companies, leading to a few decades of debate on whether a company's activities impact the external environment and thereby necessitate broader accountability to stakeholders beyond just shareholders (Mahmood et al., 2018).

The study by Aydoğmuş, Gülay & Ergun (2022) found that investors are increasingly interested and globally aware of non-financial information, particularly environmental risks such as social responsibility and appropriate governance. This pressure compels companies to exert more effort and focus on non-financial aspects. Investors, employees, suppliers, customers, and governments are all expected to urge companies to diligently prepare efficient sustainability disclosure reports, encompassing three categories: environmental, social, and governance (ESG) (Aydoğmuş, Gülay & Ergun, 2022). Therefore, Sustainability disclosure also increases support from external parties, namely consumers, creditors, and investors, to

generate profits and capital in the company's operations (Rahma & Firmansyah, 2022). Consistent with Signal Theory, it is concluded that when financial markets receive information uniformly, it impacts changes in firm value. This is evident in the way publicly traded companies produce corporate social and environmental responsibility reports to demonstrate their activities concerning society and the environment. The publication of sustainability disclosures serves as a signal to the market, thereby influencing changes in firm value (Waentongkom, 2020).

Previous studies have reviewed that sustainability disclosure has a negative impact on firm value (e.g. Siminica et al., 2019; Waentongkom, 2020; Abdi, Li & Càmara-Turull, 2020; Kim & Koo, 2023; Wang, Shen & Li, 2023; Friske, Hoelscher, & Nikolov, 2023). This suggests that companies engaging in social activities may experience a decrease in firm value. This could be attributed to the high costs associated with investing in social image, which may lead to financial difficulties (Abdi, Li & Càmara-Turull, 2020). The development of organizational sustainability requires significant investment, including initiatives such as transitioning operations to be more environmentally friendly, fostering social and community development, employee training, organizing various activities, and making charitable contributions (Al Abri, Bi, & Hodges, 2016).

In South Korea, evidence shows that ESG ratings undermine corporate value and higher ESG disparities are related to increased volatility and decreased future stock price (Kim & Koo, 2023). Moreover, in Thailand, engaging with the community and society, such as through charitable donations and community activities, may be perceived by investors as an expenditure of resources that does not generate immediate revenue. Since the community is not a direct customer base, these activities may not yield short-term returns. However, they could have positive long-term effects. As a result, investing in such activities often leads to increased costs rather than immediate benefits, thereby reducing short-term profits. Consequently, investors may be less inclined to invest in companies that engage in community and social activities (Waentongkom, 2020).

On the other hand, there are many studies show that sustainability disclosure has a positive effect on firm value (e.g. Thanjunpong, Dechsiri & Awirothananon, 2018; Rukphanichmanee, Thammasiri & Duangchaiyoosook, 2018; Siminica et al., 2019; Abdi, Li & Càmara-Turull, 2020; Tasnia, AlHabshi, & Rosman, 2020; Aydoğmuş, Gülay & Ergun, 2022; Tran & Tran, 2022; Nguyen, Hoan & Tran, 2022; Wu et al., 2022; Lertsabanant & Maglin, 2022). This is because companies with strong social responsibility performance are typically large enterprises with higher profitability compared to those with lower levels of social responsibility performance (Aydoğmuş, Gülay & Ergun, 2022).

Additionally, shareholders, investors, creditors, the government, and other stakeholders expect companies to provide further sustainability disclosure (Aydoğmuş, Gülay & Ergun, 2022). Analysts also predict that companies with greater

sustainability disclosure tend to experience fewer conflicts (Kim & Koo, 2023). Sustainability disclosure helps to reduce information asymmetry and enhances investor trust, thereby leading to decreased stock volatility. However, shareholders in the USA do not place excessive emphasis on sustainability disclosure, as it incurs additional costs related to sustainability initiatives, which may negatively impact firm value (Tasnia, AlHabshi, & Rosman, 2020). In Thailand, there are several prior studies in which Sook-aram (2022) found that sustainability disclosure has a positive effect on firm value. Companies with robust sustainability disclosure are perceived as socially and environmentally responsible, which enhances their image and attracts investors. Furthermore, sustainability disclosure reduces risk, which in turn enhances the company's credit rating. This improvement can lead to a decrease in financial costs or an increase in firm value.

Aligned with the growing demand for socially responsible investments by investors, companies in the USA often engage in ESG activities. This involvement secures strong commitments from stakeholders and generates long-term value for the company (Nguyen, Hoan & Tran, 2022). Stocks with better ESG performance can be an important investment choice for risk-averse investors. Fund managers can increase their holdings in stocks with better ESG performance to reduce fund risks caused by investors' large redemptions. Furthermore, promoting ESG investment strategies can also serve as one of the risk management measures to maintain financial market stability and prevent systemic financial risk (Wang, Shen & Li, 2023).

Moreover, Waentongkom (2020) found sustainability disclosure has no significant relationship with the firm value. This is because investors do not utilize such information in their investment decision-making process. Consequently, stock prices remain unaffected following the disclosure of this information. However, the study also revealed that social responsibility and environmental disclosures cannot predict future stock profitability. This is because these disclosures merely describe the quality of information disclosure and legal compliance, which does not indicate future profitability. When investors do not incorporate social responsibility and environmental information into their investment decisions, stock prices remain unchanged (Waentongkom, 2020). Consistent with Atsawabunjongphon (2021), publicly listed companies on the Stock Exchange of Thailand are generally reluctant to engage in sustainability disclosure, possibly due to the high costs associated with evaluating operations to meet established standards. Additionally, investors have yet to fully incorporate sustainability disclosure into their investment decisions, despite the Stock Exchange of Thailand's emphasis on its importance and the requirement to include such disclosures in annual reports. However, sustainability disclosure has only recently been mandated in Thailand. Therefore, companies must undertake further study and development.

In addition, companies that publish the sustainability report do not guarantee that their company performance will improve, and this may be due to investors being

more interested in buying legitimate companies that generate the expected profit and do not care about the disclosure of the sustainability report (Andayani & Yanti, 2021). However, previous studies have reviewed that studies using samples from the ESG100 are limited because Thailand only announced its ESG rating in 2014 and a review of the literature found that only a few studies measure company value by stock price, for example, Tasnia, AlHabshi, & Rosman (2020), Waentongkom (2020), Kim & Koo (2023) and Wang, Shen, & Li (2023). Thus, leading to the following hypothesis:

H2: The sustainability disclosure has a positive effect on the firm value.

Table 3 Summary of Key Literature Reviews on Sustainability Disclosure

Authors	Country	Sustainability Disclosure (X)				Firm Value (Y)			
		E Score	S Score	G Score	ESG Score	Stock Price	ROA	ROE	Tobin Q
Thanjunpong, Dechsiri & Awirothananon (2018)	Thailand				+				√
Rukphanichmanee, Thammasiri & Duangchaiyoosook (2018)	Thailand				+		√		
Siminica et al. (2019)	European Economic Area	+	-	-			√		
		+	+	-				√	
Abdi, Li & Càmarà-Turull (2020)	Spain	+	-	N/A					√
Waentongkom (2020)	Thailand		-		N/A	√			
Tasnia, AlHabshi, & Rosman (2020)	USA				+	√			
Vacca et al. (2020)	Italy				√		N/A		
Aydoğmuş, Gülay & Ergun (2022)	Turkey	+	+	+	+	√			
		N/A	+	+	+				√

Note: created by Pichaya Adthajak.

: Symbols represent the result as + positive significant, - negative significant, N/A not significant, and √ dependent.

Table 3 Summary of Key Literature Reviews on Sustainability Disclosure (Continue)

Authors	Country	Sustainability Disclosure (X)				Firm Value (Y)			
		E Score	S Score	G Score	ESG Score	Stock Price	ROA	ROE	Tobin Q
Tran & Tran (2022)	Vietnam				+		√	√	
Nguyen, Hoan & Tran (2022)	USA				+		√	√	√
Wu et al. (2022)	China				+				√
Lertsabanant & Maglin (2022)	Thailand	+		+			√	√	√
Wang, Shen & Li (2023)	China				-	√			
Friske, Hoelscher, & Nikolov (2023)	America				-				√
Kim & Koo (2023)	South Korea				-	√			

Note: created by Pichaya Adthajak.

: Symbols represent the result as + positive significant, - negative significant, N/A not significant, and √ dependent.

Proactive Tax Planning and Firm Value

Proactive tax planning involves preparing to pay taxes accurately and fully, as responsible citizens, while utilizing legally prescribed tax benefits and deductions to reduce annual income tax liabilities. The goal is to minimize tax expenses, avoid overpayment, and prevent additional tax liabilities or penalties. Effective tax planning can lead to significant cost savings (The Stock Exchange of Thailand, 2022). It is a concrete practice that ensures a company's tax activities comply with tax laws, without engaging in fraud or tax evasion (Wutthimahanon, 2019). So, proactive tax planning is considered an important investment for shareholders because of the reduction in the tax burden on companies and shareholders. However, shareholders may not wish to pursue the activities involved in tax planning because of the potential costs (Khaoula & Moez, 2019).

There are several researchers show that proactive tax planning has a positive impact on firm value (e.g. Lestari & Wardhani, 2015; Thanjunpong, 2017; Khaoula & Moez, 2019; Bhagiawan & Mukhlisin, 2020; Jitkham & Yarana, 2022; Sribunruang & Sutthi, 2021; Promaksorn et al., 2024). When a company engages in robust tax planning, maximizing tax benefits while fully complying with tax laws, it results in a

reduction in tax expenses (Jitkham & Yarana, 2022). Consistent with the Trade-off Theory (Jitkham & Yarana, 2022; Thanjunpong, 2018), management's consideration of the costs and benefits of tax planning, and their selection of the most advantageous approach, positively impacts firm value (Jitkham & Yarana, 2022).

Tax planning is an integral component of profitability, if a company engages in tax planning, it will result in reduced tax expenses. Consequently, the company will experience an increase in net profit and cash flow (Thanjunpong, 2015). Tax planning leads to an increase in a company's accounting net profit and shareholder returns. Therefore, corporate income tax expenses are a crucial factor that must be considered in management decision-making (Kulsiriwanit, 2021). In addition, tax planning activities are expected to reduce the obligation to pay corporate taxes so cash can be diverted for investment (Bhagiawan & Mukhlisin, 2020).

On the other hand, it is explained that if a company increases its tax planning, it will result in lower tax payments, which may lead to a decrease in stock price. Conversely, if a company reduces its tax planning and pays higher taxes, it may lead to an increase in stock price (Chotsuwan & Thongkong, 2019). This may be because investors or shareholders do not necessarily prioritize tax planning (Promaksorn et al., 2024; Chotsuwan & Thongkong, 2019). Because even if a company engages in effective tax planning, it does not necessarily lead to an increase in stock price (Chotsuwan & Thongkong, 2019). Investors may perceive that a company is engaging in excessive tax planning. If a company engages in extensive tax planning, it may raise concerns with state agency, potentially leading to additional tax assessments (Promaksorn et al., 2024). This may also lead investors to perceive that the company is engaging in tax avoidance, thereby increasing the risk of reputational damage and undermining its social responsibility (Chotsuwan & Thongkong, 2019). This is detrimental to long-term business operations as it undermines investor confidence (Promaksorn et al., 2024). Therefore, tax planning may not be the optimal policy for every company (Chotsuwan & Thongkong, 2019). The effectiveness of tax planning depends on whether the benefits outweigh the costs, which is consistent with Trade-off Theory (Jitkham & Yarana, 2022).

In addition, prior literature shows that proactive tax planning has a negative impact on the firm value (e.g., Thanjunpong, 2018; Thanjunpong, 2017; Thanjunpong, 2015; Christina & Alexander, 2018; Sribunruang & Sutthi, 2021; Promaksorn et al., 2024). Although reduced tax expenses can increase a company's net profit, proactive tax planning to minimize expenses involves associated costs, such as bankruptcy costs and legal expenses, which may arise if government official detect violations related to tax planning (Thanjunpong, 2015). However, proactive tax planning involves additional costs, such as fees for tax advisors and potential penalties. Furthermore, it may lead to increased agency costs if executives engage in tax planning to secure higher commission. This can lead investors to question executive behavior, potentially resulting in a decrease in firm value (Thanjunpong,

2018). According to prior studies, tax planning activities have the potential to incur large costs (Bhagiawan & Mukhlisin, 2020). Therefore, if the costs outweigh the benefits gained from tax planning, it may negatively impact the firm's value (Thanjunpong, 2015; Thanjunpong, 2018).

Moreover, there are many studies show that proactive tax planning does not affect firm value (e.g., Tantiyavarong, 2009; Wahab, Shaipah & Holland, 2012; Thanjunpong, 2017; Kulsiriwanit, 2021; Sribunruang & Sutthi, 2021; Christina & Alexander, 2018; Tarmidi & Murwaningsari, 2019). Since tax accounting is conducted to comply with tax laws and does not aim to reflect a company's performance, investors may not place significant importance on tax expenses (Thanjunpong, 2015). According to prior studies, proactive tax planning aimed at reducing expenses is not related to the core operations of the company (Kulsiriwanit, 2021; Thanjunpong, 2018). So, in the capital markets, tax expenses are not given significant consideration (Kulsiriwanit, 2021; Thanjunpong, 2018).

Proactive tax planning aimed at reducing expenses is considered a transitory item and less persistent (Tantiyavarong, 2009; Thanjunpong, 2018). This results in stakeholders or investors not considering tax planning prior to making investment decisions (Thanjunpong, 2018; Promaksorn et al., 2024). The profits resulting from tax savings do not stem from the company's core operations. Proactive tax planning's impact cannot be precisely quantified, leading investors to place less emphasis on such information compared to accounting profits in the income statement. Nevertheless, the absence of a relationship between proactive tax planning and firm value in empirical tests may be attributed to measurement errors in assessing proactive tax planning or insufficient power of the test. Consequently, this may result in the failure to identify a relationship (Tantiyavarong, 2009).

However, the relationship between tax planning and firm value has yet to reveal a clear trend or direction (Jitkham & Yarana, 2022). There is a limited amount of research examining how tax planning affects stock prices (Li et al., 2016). Based on the literature review, investors' assessment of a company's potential success, as reflected in stock prices, is interpreted as an indicator of firm value (Wardani et al., 2022). Therefore, this research measures firm value from stock prices. Thus, leading to the following hypothesis:

H3.1: The proactive tax planning has a negative effect on the firm value.

Table 4 Summary of Key Literature Reviews on Firm Value

Authors	Country	Proactive Tax Planning (X)				Firm Value (Y)					
		ETR	CTR	Tax-Asset	Tax -CFO	Stock price	ROA	ROE	ROS	EPS	Tobin Q
Tantiyavarong (2009)	Thailand	N/A		N/A	N/A						√
Wahab, Shaipah & Holland (2012)	UK	N/A				√					
Lestari & Wardhani (2015)	Indonesia	+				√					
Thanjunpong (2015)	Thailand			-				√			
Thanjunpong (2017)	Thailand	-									√
		+						√	√	√	
			N/A								√
			+					√	√	√	
Christina & Alexander (2018)	Indonesia	N/A	-				√				
Tarmidi & Murwaningsari (2019)	Indonesia	N/A									√
Thanjunpong (2018)	Thailand	-		-							√
Akintoye, Adegbie & Iheme-Onyeka (2020)	Nigeria	N/A					√				
Timothy, Izilin & Ndifereke (2020)	Nigeria		+				√				

Note: created by Pichaya Adthajak.

: Symbols represent the result as + positive significant, - negative significant, N/A not significant, and √ dependent.

Table 4 Summary of Key Literature Reviews on Firm Value (Continue)

Authors	Country	Proactive Tax Planning (X)						Firm Value (Y)			
		ETR	CTR	Tax-Asser	Tax -CFO	BTD	Tax - NPM	Stock price	ROE	Tobin Q	PBV
Khaoula & Moez (2019)	Saudi Arabia	+								√	
Chotsuwan & Thongkong, 2019)	Thailand			+				√			
Bhagiawan & Mukhlasin (2020)	Indonesia	+								√	
Sribunruang & Sutthi (2021)	Thailand	N/A		+	N/A					√	
		N/A		-	N/A				√		
Kulsiriwanit (2021)	Thailand	N/A			N/A		N/A			√	
		N/A			N/A		N/A	√			
Jitkham & Yarana (2022)	Thailand			+						√	
Agustina et al. (2023)	Indonesia	N/A									√
Promaksorn et al. (2024)	Thailand	-		+	-			√			

Note: created by Pichaya Adthajak.

: Symbols represent the result as + positive significant, - negative significant, N/A not significant, and √ dependent.

The Mediating Effect of Sustainability Disclosure on the impact of Proactive Tax Planning on Firm Value

Previous studies have reviewed that proactive tax planning affects sustainability disclosure in a positive direction (Huang et al., 2024; Zhu et al., 2023; Li & Li, 2022; Aribaba et al., 2019; Prempanichnukul, 2018; Zhang et al., 2024). Because of voluntary sustainability reporting can reduce information asymmetry about sustainability information and signal to shareholders that tax saving is used to finance sustainability-related activities (Elamer, Boulhaga, & Ibrahim, 2024). The proactive tax planning and firm value show a significant positive association, which implies that there is a higher possibility of an increase in firm value if the proactive tax planning increases. Generally, shareholders are not interested in paying more taxes (Tasnia, AlHabshi & Rosman, 2020). Moreover, the research by Tasnia, AlHabshi & Rosman (2020) found a significant and positive relationship between sustainability disclosure and firm value. This is because firm value is an indication of the company's ability to gain profit, becomes a guide for creditors and investors in making decisions whether to lend or invest their funds or not (Andayani & Yanti, 2021).

Additionally, the impact of proactive tax planning on the relationship between sustainability disclosure and firm value of banks in the USA was found to be insignificant, which indicates that shareholders of the US banks may not prefer excess concentration on sustainability disclosure because of the additional cost of investment associated with implementing sustainability disclosure (Tasnia, AlHabshi & Rosman, 2020). On the other hand, China study of Harnesk & Myhrberg (2019), who found that the effect of the sustainability report on firm value is proven not to be strengthened by the sustainability disclosure variable as a mediating variable only. Moreover, sustainability disclosure does strengthen the effect of proactive tax planning on firm value. The research in China, it explains that enhancing ESG performance has become a new way to improve firm value, and positive internal and external interaction is an important way for sustainable enterprise development (Meng, & Wang, 2024).

The study of economic consequences shows that tax incentives can further promote the role of ESG performance on firm value enhancement. Additionally, empirical studies indicate that proactive tax planning significantly promotes ESG efficiency, the enhancement effect of tax incentives on ESG performance is stronger when capital market regulation is higher or the financial redundancy of enterprises is greater. Further research shows that tax incentive policies have a more pronounced impact on the green transformation of manufacturing enterprises (Meng & Wang, 2024).

In UK, the results suggest that investors reward firms for good ESG performance, perceiving such companies as more valuable. However, when these

firms engage in higher tax liabilities, the positive effect of ESG on firm value is slightly reduced. This nuanced insight highlights the importance of considering how tax strategies interact with ESG initiatives in shaping overall firm value. This study, thus, provides theoretical and practical consequences that will encourage businesses to promote sustainable development (Elamer, Boulhaga, & Ibrahim, 2024).

One of these factors is tax planning. Tax planning is an optimization tool to decrease corporate taxes. There are various possibilities for tax deductions which serves as incentives for firms to increase sustainability disclosure, while simultaneously maximizing profits. However, it is argued that to exploit these options contradicts the socially sustainable work done by a firm. It is thus a sensitive issue that can be viewed from different angles (Harnesk & Myhrberg, 2019). However, some activities that demonstrate social responsibility have high costs. While the direct monetary benefits may not be clearly visible, that is, the company receives indirect benefits or benefits arising from sustainability disclosure activities that are not as high as the expenses incurred by the business in carrying out the activities, and the benefits from the activity will not occur in the near future (Rukphanichmanee, Thammasiri & Duangchaiyoosook, 2018). Therefore, each company must determine a competitive strategy by reducing costs through tax planning methods. in order to achieve higher operating results (The Stock Exchange of Thailand, 2015).

At present, investors, regulatory agencies, and society are placing more importance on sustainability disclosure. However, it has been found that research on sustainability disclosure on the financial performance of listed companies in Thailand is still small. Therefore, the factors that influence in this study focus on proactive tax planning, as an independent variable and sustainability disclosure as a mediating variable. However, the researcher did not find any research that studied the mediating effect of sustainability disclosure on the proactive tax planning has an effect on firm value in Thailand and citing results from research abroad to compare with companies in Thailand should be done with caution. Because the business and social environment of Thailand is different from other countries (Rukphanichmanee, Thammasiri & Duangchaiyoosook, 2018). Thus, leading to the following hypothesis:

H3.2: The sustainability disclosure mediates the relationship between proactive tax planning and firm value.

Table 5 Summary of Key Literature Reviews on Sustainability Disclosure and Proactive Tax Planning

Authors	Country	Moderating		Independent		Dependent	
		ETR	ESG	ESG	ETR	ROA	Tobin's Q
Khaoula & Moez (2019)	Europeans firm	-			√		√
Tasnia, AlHabshi & Rosman (2020)	US	N/A		√		√	
Elamer, Boulhaga, & Ibrahim (2024)	UK		-		√		√

Note: created by Pichaya Adthajak.

1) Moderating Variables; + Positive, - Negative, N/A not significant

2) √ Independent Variables and Dependent Variables

Organizational Characteristics and Proactive Tax Planning

Many studies use organizational characteristics to explain corporate governance (e.g., Thanjunpong, 2014; Thanjunpong, 2015; Khumtonwong, 2015; Samaputra et al., 2021). The Stock Exchange of Thailand (SET) has adopted the principles of good corporate governance to oversee and monitor the performance of its executives. This implementation aims to ensure that executives operate in alignment with policies with integrity and prudence. Additionally, the SET enforces a management framework that adheres to international standards in both strategy and operational management. This approach is designed to build investor confidence by ensuring transparency and mitigating the risks associated with executive self-interest (Thanjunpong, 2015).

So, this research explains organizational characteristics from two perspectives, namely: 1) board independence and 2) CEO duality. Because the presence of board independence is a balance force in the board, and the presence of board independence reinforces the elements of good corporate governance in the company (Aburajab et. al., 2019). Furthermore, a significant number of companies listed on the Stock Exchange of Thailand exhibit a family-owned shareholding structure. These family-owned entities often possess substantial control and vested interests in the companies (Thanjunpong, 2015). Therefore, based on the aforementioned components of corporate governance, they can be considered representative of organizational characteristics that may impact proactive tax planning.

Overall, this study uses organizational characteristics as an antecedent variable because a previous study found that the stock market should build better internal monitoring mechanisms to reduce the impacts of proactive tax planning on future stock price crash risk. Investors can recognize the characteristics of corporate governance (Thai et al., 2023).

1) Board Independent and Proactive Tax Planning

The independent directors play a crucial role in corporate governance, with their primary function being to oversee the operations of the company. They are part of the board of directors responsible for scrutinizing the management's activities. Independent directors can voice support for policies beneficial to shareholders or oppose decisions deemed unfair, which may impact shareholders' interests and stakeholders adversely. Therefore, independent directors must operate independently from the control of management, major shareholders, and have no financial or managerial involvement in the company's affairs (The Stock Exchange of Thailand, 2021). In other words, the independent board is a member of the board of commissioners who has no relationship with the company (Christina & Alexander, 2018).

In addition, the independent directors are parties who act as governance organs that function as operational supervision according to company goals. The independent directors are organs that oversee the running of a company so as not to cause agency conflicts between the principal and the agent. An effective board of commissioners can improve management performance standards in the company (Wardhani et al., 2021). Hence, the independence of the board is considered the most critical characteristic of corporate governance (Adams, Hermalin & Weisbach, 2010). If a company has a sufficient number of independent directors, it can help to balance the decision-making power of the entire board, fostering transparency and benefiting shareholders as a whole rather than any specific group of shareholders. Many countries now require companies to have at least half of their board comprised of independent directors to ensure effective power balance. In Thailand, the Securities and Exchange Commission (SEC) mandates that companies have at least one-third of their board members be independent directors, with a minimum of three individuals (The Stock Exchange of Thailand, 2021).

The prior studies recommend that board independence has a positive effect on proactive tax planning (e.g., Temboonprasertsuk, 2021; Aburajab et. al., 2019; Khumtonwong, 2015; Richardson, Taylor & Lanis, 2013). This is because the independence and expertise of external board members enable efficient decision-making. An increase in the independence of the board within a company can enhance operational efficiency and significantly reduce tax expenses (Wangweang, 2019).

Consistent with previous studies reviewed, an increase in the number of independent directors is associated with a reduction in tax expenses (Temboonprasertsuk, 2021).

Independent directors can provide valuable guidance on policy matters to the management team, particularly concerning the benefits and costs associated with proactive tax planning within the organization (Lanis & Richardson, 2018). The existence of an independent board of commissioners will make management careful in making decisions related to company policy. The independent board of commissioners will supervise the performance of the board of commissioners and directors in carrying out supervision over management in managing the company's operational activities. The increasingly stringent supervision can encourage management to comply with applicable taxation regulations in preparing high-quality financial reports and making financial reports more objective. This means that the existence of an independent board of commissioners is effective in preventing tax planning actions (Asvariwangi, Salman & Masruri, 2023).

It can be argued that unlike inside directors, outside directors are independent of the company's management, so it is expected that they perform their supervisory role more effectively and it is also expected that independent boards be in a better position to propel the resources of companies towards tax management. As independent boards contribute to monitor managers, it is also expected that they contribute to lower proactive tax planning due to a more efficient management of tax burden (Peter, Hamid & Ibrahim, 2020).

In addition, the independence of the external directors allows them to make objective decisions (Khaoula & Ali, 2012). Therefore, the increase in the independence of board members leads to a reduction in the actual tax rate and has shown that good corporate governance elements lead to a strict tax policy (Aburajab et. al., 2019). Consistent with previous studies reviewed, most of the time, management intends to pay lower tax obligations as it will significantly reduce corporate net income-usually a primary indicator of corporate performance. Earnings management is usually applied to minimize corporate tax obligations. At the same time, the government wants to levy taxes as high as possible; as it is one of the primary income sources for the country. This is the conflicting situation that exists in a corporation (Mulyadi & Anwar, 2015).

On the other hand, found a board independence has a negative effect on proactive tax planning (e.g., Peter, Hamid, & Ibrahim, 2020; Chaichuen et.al., 2022; Asvariwangi, Salman, & Masruri, 2023). This indicates that increasing the number of independent directors in a company can help reduce the level of proactive tax planning, aligning with principles of good corporate governance, as independent directors play a crucial role in overseeing management activities. (The Stock Exchange of Thailand, 2021). Thus, if scrutiny is intensified, it may lead to a reduction in proactive tax planning. In summary, effective corporate governance is

likely to lead to a reduction in proactive tax planning (Temboonprasertsuk, 2021; Khumtonwong, 2015).

However, board independence has a negative effect on proactive tax planning. This effect is anticipated to stem from certain research limitations, as some studies focus only on specific sample groups, such as the top 100 companies, which restricts the ability to clearly elucidate the relationship (Temboonprasertsuk, 2021). In addition, less tax planning by independent directors could arise due to a lack of supervision and presence in deciding independent considerations in tax planning (Razali et al., 2023).

There are several prior studies that have found that board independence does not affect proactive tax planning (e.g., Temboonprasertsuk, 2021; Khumtonwong, 2015; Thanjunpong & Bangmek, 2017; Srihirunpunlop, 2018; Wangweang, 2019; Chaichuen et al., 2022; Arunruangsirilert, Srihirunpunlop & Boonyawat, 2022; Chernviriyakul & Srijunpetch, 2022; Iazzi, et, al. 2023; Eguavoen, Ukarin & Enewerome, 2023). These studies indicate that regardless of the number of independent directors a company has, it does not impact proactive tax planning because independent directors already function to support policies beneficial to shareholders. Therefore, whether the number of independent director changes or not, it does not affect tax planning. Consistent with the study of Kurniasih & Suranta (2017), which found that independent directors make decisions or plan actions solely to comply with laws or regulations, thus may not achieve the true objectives of governance. According to the regulations set by the Stock Exchange of Thailand, every listed company is required to have at least one-third of its board comprised of independent directors, with a minimum of three independent directors. If the minimum of three independent directors is applied as a baseline, the maximum number of directors on the board can be nine. Consequently, many companies have opted to reduce the size of their boards (Wangweang, 2019). As a result, the number of independent directors does not significantly impact proactive tax planning. In addition, there may be additional factors influencing proactive tax planning in the present context, such as tax planning within corporate groups. This can result in certain companies receiving full exemptions from income tax (Chernviriyakul & Srijunpetch, 2022).

In Thailand, particularly for large companies, there are tax regulations that grant tax benefits to companies meeting specific criteria as defined by the law (Arunruangsirilert, Srihirunpunlop & Boonyawat, 2022). For example, companies may receive corporate income tax exemptions as a result of investment promotion granted by the Board of Investment of Thailand (Arunruangsirilert, Srihirunpunlop & Boonyawat, 2022; Srihirunpunlop, 2018). Alternatively, tax benefits may be granted to companies with resources deemed critical to the national economy, among other considerations. Consequently, this may lead to boards of directors placing less emphasis on tax planning strategies that exploit the differences between accounting

standards and tax regulations under the Revenue Code (Arunruangsirilert, Srihirunpunlop & Boonyawat, 2022).

Thus, the information presented aligns with prior research indicating that a lower corporate income tax rate in a company may not necessarily result from the characteristics of the board or the differences between accounting standards and tax principles chosen by management. Instead, it may be attributed to corporate income tax exemptions or the payment of taxes at rates lower than those established by the government (Srihirunpunlop, 2018). Finally, it can be concluded that current provisions for tax rate reductions, tax exemptions, or increased deductible expenses result in actual income tax payments being lower than the income tax calculated based on net profit according to accounting principles. This discrepancy may not necessarily be attributable to proactive tax planning (Srisakonkit, 2015). Thus, leading to the following hypothesis:

H4.1: The board independent has a positive effect on the proactive tax planning.

Table 6 Summary of Key Literature Reviews on Board Independent

Authors	Country	Organizational Characteristics (X)	Proactive Tax Planning (Y)			
		BI	ETR	TAX-ASSET	TAX-CFO	TAXP
Khumtonwong (2015)	Thailand	N/A	√	√	√	
		-		√		
Peter, Hamid, & Ibrahim (2020)	Nigeria	+	√			
Wangweang (2019)	Thailand	N/A	√			
Thanjunpong & Bangmek (2017)	Thailand	N/A	√	√		
Srihirunpunlop (2018)	Thailand	N/A	√			
Temboonprasertsuk (2021)	Thailand	-	√			
		N/A		√	√	

Note: created by Pichaya Adthajak.

: Symbols represent the result as + positive significant, - negative significant, N/A not significant, and √ dependent

: TAXP = Profit before tax over tax payable

: BI = Board independent

Table 6 Summary of Key Literature Reviews on Board Independent (Continue)

Authors	Country	Organizational Characteristics (X)	Proactive Tax Planning (Y)			
		BI	ETR	TAX- ASSET	TAX- CFO	TAXP
Chaichuen et.al. (2022)	Thailand	+	√			
		N/A		√		
Arunruangsirilert, Srihirunpunlop & Boonyawat (2022)	Thailand	N/A	√			
Chernviriyakul & Srijunpetch (2022)	Thailand	N/A	√	√	√	
Iazzi et al. (2023)	Italy	N/A	√			
Martins & Omoye (2024)	Nigeria	+	√			
Asvariwangi, Salman, & Masruri (2023)	Indonesia	+	√			
Eguavoen, Ukarin & Enewerome (2023)	Nigerian	N/A				√
Chytis, Tasios, & Filos (2020)	Greece	+	√			
Putri et al. (2018)	Indonesia	N/A	√			
Inua (2018)	Nigeria	-	√			

Note: created by Pichaya Adthajak.

: Symbols represent the result as + positive significant, - negative significant, N/A not significant, and √ dependent.

: TAXP = Profit before tax over tax payable

: BI = Board independent

2) Board Duality and Proactive Tax Planning

Board duality is a situation in which the chairman of the board at a company who also a chief executive officer at the same time (Sabsombat et al., 2020; Khaoula & Moez, 2019). Such a characteristic would give the chief executive officer greater power to control affairs and more authority to make administrative decisions. Thus, limiting the freedom to make decisions. This gives the chief executive officer the absolute authority to make administrative decisions in his own interests, which may lead to wrong decisions and increase the risk of inefficient operations that will cause damage to the company (Sabsombat et al., 2020).

However, to ensure transparent management, the Stock Exchange of Thailand promotes adherence to good corporate governance principles by clearly separating the powers and duties related to policy formulation and company management. This is to ensure a division of roles and a balance of power in operations. Therefore, the company stipulates that the chairman of the board of directors and the chief executive officer must not be the same person (Thanjunpong, 2015). Consistent with recent studies, it is explained that the separation of administrative decision-making will create checks and balances of power and help reduce agency problems (Arunruangsirilert, Srihirunpunlop & Boonyawat, 2022). This means that if the company has an effective internal control system, it will help reduce operational risks (Simunic, 1980).

Furthermore, companies that operate transparently through tax planning may have fewer agency problems than companies that evade taxes. Therefore, investors prioritize proactive tax planning. A company that operates transparently will enable the tracking of management actions and alleviate investors' concerns regarding the hidden agency costs in tax planning. Because companies that plan their taxes legally will avoid ambiguous management, as it might cause problems for the company in the future (Wang, 2010).

Prior studies have found that board duality positively affects proactive tax planning (Iazzi et al., 2023). Investors should exercise caution, however, because opportunistic managers may employ tax planning to enhance their own interests rather than those of shareholders. This could be detrimental to corporate value because of the potential emergence of long-term tax planning risks, resulting in agency problems. As a result, the effectiveness of the corporate board and auditors' monitoring of managers' actions should be evaluated, with appropriate incentives provided to members of these bodies to encourage their supervision in order to ensure the company's survival and a secure competitive edge. Es discovered that board duality promotes proactive tax preparation (Iazzi et al., 2023).

Additionally, if the chief executive officer and the chairman of the board are the same person, it will render the checks and balances mechanism ineffective and negatively impact the company's performance. Evidence has previously shown that board duality leads to high-level tax planning, which is not beneficial for the

company (Arunruangsirilert, Srihirunpunlop & Boonyawat, 2022). Moreover, companies with a family-owned shareholding structure engage in more tax planning. The government may need to pay attention to businesses in this group because they pay a lower effective corporate income tax rate and it may communicate the legitimacy of tax planning and tax avoidance (Krongboon & Dampitakse, 2021).

However, there are several researchers shows that board duality has a negative effect on proactive tax planning (Chytis, Tasios, & Filos, 2020; Khaoula & Ali, 2012). These studies indicate that the consolidation of the roles of the board chair and CEO negatively impacts tax planning efforts. Most publicly listed companies on the Thailand Stock Exchange exhibit concentrated ownership structures and are family-owned businesses. They typically possess controlling interests and have significant stakes in their operations. As a result, these companies place considerable importance on good corporate governance to preserve the family reputation and ensure the continuity of the business across generations. Furthermore, increased disclosure of tax expenses by a company helps reduce information asymmetry between internal stakeholders, external parties, and government officials. Consequently, adherence to corporate governance principles is enhanced, and tax planning activities are reduced (Thanjunpong, 2015).

This suggests that board duality facilitates tax planning and influences the tendency to reduce the effective tax rate. The increasing role of the CEO/chairman; he has already all relevant information on important issues of companies, due to his full – time status and insider knowledge. The most influential members of the board are the inside directors, as they possess valuable, specific information regarding the organization's activities. Such information enables the board to make informed decisions and exercise effective control (Khaoula & Ali, 2012).

Although the Stock Exchange of Thailand encourages adherence to good corporate governance principles. However, government officials have found that tax evasion persists, often through the claiming of fictitious expenses, such as consultancy fees, bonuses, and director remuneration. Therefore, it can be concluded that even with good corporate governance practices in place, proactive tax planning is not necessarily impacted (Thanjunpong, 2015). Some studies indicate that various other factors may currently influence proactive tax planning. For instance, certain companies may receive investment incentives from the Board of Investment of Thailand. Additionally, tax planning strategies implemented within corporate groups can enable some entities within these groups to obtain complete income tax exemptions (Chernviriyakul & Srijunpetch, 2022). Additionally, current regulations regarding tax rate reductions, income exemptions, and increased deductible expenses have resulted in the actual income tax paid being lower than the tax calculated based on net profit according to accounting principles. This indicates that board duality is not a contributing factor to proactive tax planning (Srisakonkit, 2015). However, although proactive tax planning is considered an important investment for

shareholders as it reduces tax expenses for both the company and its shareholders, they may be reluctant to engage in activities related to proactive tax planning due to the potential associated costs (Khaoula & Moez, 2019). Thus, leading to the following hypothesis:

H4.2: The board duality has a positive effect on the proactive tax planning.

Table 7 Summary of Key Literature Reviews on Board Duality

Authors	Country	Organizational Characteristics (X)	Proactive Tax Planning (Y)			
		CEO Duality	ETR	BTD	TAX-CFO	TAX-ASSET
Khaoula & Ali (2012)	Tunisia	-	√			
Chytis, Tasios & Filos (2020)	Greece	-	√			
Iazzi et al. (2023)	Italy	+	√		√	
Khumtonwong (2015)	Thailand	N/A	√		√	√
Srihirunpunlop (2018)	Thailand	N/A	√			
Wangweang (2019)	Thailand	N/A	√			
Arunruangsirilert, Srihirunpunlop & Boonyawat (2022)	Thailand	N/A	√			
Chernviriyakul & Srijunpetch (2022)	Thailand	N/A	√		√	√
Aburajab et al. (2019)	Jordan	+	√			

Note: created by Pichaya Adthajak

: Symbols represent the result as + positive significant, - negative significant, N/A not significant, and √ dependent

Capital Structure and Proactive Tax Planning

Capital structure refers to the arrangement of long-term financing, encompassing both debt with interest obligations and equity. It involves setting goals and planning for future financing in order to achieve an optimal capital structure, characterized by low borrowing costs and maximized returns for the company (Kannika & Banchuenvijit, 2019). Therefore, this study measures capital structure using two variables; the debt-to-equity ratio and the current ratio, which respectively reflect the company's liabilities and its ability to meet short-term obligations.

1) Current Ratio and Proactive Tax Planning

The current ratio is a measure of a company's ability to meet its short-term liabilities (Putri, Mudzakir, & Suhendi, 2024). Current ratio is the ability of the corporation to reimburse its short- and long-term requirements. The current ratio of the firm shows the present assets compared with its existing liabilities. Liquidity ratio is characterized as current because it explains the current assets and current liabilities of the firm. Current ratio of firm is an indicator of well-functioning of specific firm (Ahmad et al., 2023).

The prior studies suggest that the current ratio negatively affects proactive tax planning, explaining that companies with high operational efficiency and profitability tend to pay lower taxes (Ann & Manurung, 2019). Some companies may wish to maintain a certain level of liquidity, which appears to result in a negative effect of the current ratio on proactive tax planning, as these companies are able to meet their obligations as they come due. In summary, this negative relationship suggests that companies with higher liquidity are likely to engage in a lower level of proactive tax planning (Putri, Mudzakir & Suhendi (2024).

A very high current ratio is considered less productive because it is not used as capital. However, if liquidity is very low, it will have a negative impact, namely, the level of creditor trust in the company decreases and can result in decreased capital loans by creditors. Therefore, the company maintains a certain level of liquidity, so that liquidity is not used as an effort to carry out proactive tax planning (Afrizal, 2023). An increase in the current ratio will lead to a corresponding decrease in proactive tax planning. This suggests that more current ratios do not engage in tax planning, since they have current assets that are available and can be converted to cash to settle tax liabilities. Also, firms that can convert their liquid assets within a short period are more likely to engage in tax planning than firms that cannot convert their liquid assets in a short period of time. When firms can convert their current assets to settle tax liabilities, they can enjoy some incentives provided by company income tax (Maigoshi & Tanko, 2023).

However, empirical studies show that the current ratio has a positive effect on proactive tax planning (e.g., Wutthimahanon, 2019; Krongboon & Dampitakse,

2021; Nwaobia & Jayeoba, 2016). The prior study explains that the current ratio is used to measure the company's ability to pay off current liabilities. Short-term liabilities can be met if the company's liquidity is high; then it can be described that the company's cash flow is running well. With good cash turnover, the company is not reluctant to pay all its obligations, including paying taxes in accordance with applicable rules or laws (Suyanto & Supromono, 2012). The current ratio affects a higher corporate income tax rate, indicating that proactive tax planning is likely to be lower. This is because the relationship between current assets and liabilities affects the company's ability to meet its obligations when tax-shielded (Petteewang & Seangkhiew, 2023).

There are several researchers that show that the current ratio does not affect proactive tax planning (Chytis, Tasios & Filos, 2020; Putri, Mudzakir & Suhendi, 2024; Onyeka-Iheme, 2021). Many companies experiencing current ratio difficulties are likely to not comply with tax regulations, and companies are more interested in maintaining cash flow than paying high taxes so that, when short-term debts become difficult to pay off, companies can take action to proactive tax planning (Putri, Mudzakir, & Suhendi, 2024). Thus, leading to the following hypothesis:

H5.1: The current ratio has a positive effect on the proactive tax planning.

Table 8 Summary of Key Literature Reviews on Current Ratio

Authors	Country	Antecedent Variables	Proactive Tax Planning			
		Current Ratio	ETR	CTR	Tax/ Asset	Tax/ NPM
Chytis, Tasios, & Filos (2020)	Greece	N/A	√			
Putri, Mudzakir, & Suhendi (2024)	Nigeria	N/A		√		
Ann & Manurung (2019)	Indonesia	-	√			
Nwaobia & Jayeoba (2016)	Nigeria	+	√			
Petteewang & Seangkhiew (2023)	Thailand	N/A	√	√	√	√
Krongboon & Dampitakse (2021)	Thailand	+	√			
Wutthimahanon (2019)	Thailand	+	√		√	

Note: created by Pichaya Adthajak.

: Symbols represent the result as + positive significant, - negative significant, N/A not significant, and √ dependent

2) Debt to Equity Ratio and Proactive Tax Planning

The debt-to-equity ratio is one type of leverage ratio, which is used to measure how much the company's capital is financed by debt. The debt-to-equity ratio can be used as a reflection of the company's capital structure. The higher the value of the debt-to-equity ratio of a company, the greater the company uses debt for capital in running a business. Vice versa, the smaller the debt-to-equity ratio value, the smaller the use of debt by the company (Allam, 2022).

The debt-to-equity ratio reflects a company's ability to finance its business through borrowed funds provided by shareholders. This ratio is used to assess the leverage by comparing total liabilities on shareholders' equity. It is useful in determining the amount of capital provided by lenders to the company's owners. Additionally, the debt-to-equity ratio reflects the company's capital-raising efforts and its ability to meet obligations. An increase in this ratio indicates that the majority of the company's funding is sourced from creditors, which represents a particularly risky trend (Indrati & Magfiroh, 2023). Investment decisions are influenced by various factors, such as returns, cost of capital, and tax rates. Furthermore, the objective of corporate investment decisions is to achieve an optimal level of capital by maximizing future cash flows (Prášilová, 2012).

There are several researchers shows that the debt-to-equity ratio has a positive effect on the proactive tax planning (e.g., Krongboon & Dampitakse, 2021; Allam (2022; Maigoshi & Tanko, 2023; Putri et al., 2018; Chamnong, Pajongwong & Svetalekth, 2021). The capital structure of a company, when primarily financed through borrowing, has a positive influence on proactive tax planning. This indicates that the debt-to-equity ratio is positively correlated with proactive tax planning, but it has an inverse relationship with the corporate income tax rate, resulting in a decrease in the corporate tax rate (Krongboon & Dampitakse, 2021).

Companies with higher financial risk tend to engage in more extensive tax planning, possibly driven by management's desire to maximize shareholder interests, as suggested by agency theory. Consequently, tax planning activities increase to reduce expenses, which in turn enhances net profit (Khumtonwong, 2015). Companies with high levels of debt often result from tax planning strategies, as debt allows interest expenses to be deducted for tax purposes (Chamnong, Pajongwong & Svetalekth, 2021).

Financing through external sources or project finance provides companies with tax benefits, as interest expenses can be claimed as tax deductions. This, in turn, impacts the profits used for calculating corporate income tax. However, if the debt from external funding sources is low, it will result in a higher corporate income tax rate. This insight is beneficial for business management in making investment decisions and supports government tax collection policies (Krongboon & Dampitakse,

2021).

Additionally, liabilities have an impact on tax planning, indicating that an increase in investment decisions will lead to an enhancement in tax practices as well. However, investors and executives should prioritize tax savings, as it is a significant factor in financial decision-making. Therefore, investors should seek guidance from experts and consider the company's potential for tax planning before making investment decisions (Adetola, et al, 2023).

On the other hand, some studies found that debt to equity has a negative effect on proactive tax planning (Namachote, Mahoran & Masarat, 2024; Inua, 2018). More leveraged firms are less likely to engage in tax planning because of the tax benefits of debt financing (Kolias & Koumanakos, 2022). Companies with a high capital structure incur significant interest expenses that can be deducted for tax purposes. Consequently, this results in a lower effective corporate income tax rate (Tantiyavarong, 2009). Consistent with the study of Inua (2018) the variable of firm leverage revealed a significant negative effect on effective tax rate. This indicates that as the firm leverage ratio increases, the value of effective tax rate declines. This is likely because interest is tax deductible.

Moreover, there are many studies show that the debt-to-equity ratio has a no effect on the proactive tax planning. This indicates that the liabilities of a business do not exert a significant influence on proactive tax planning (Wutthimahanon, 2019; Khumtonwong, 2015; Aminah, Chairina & Sari, 2017; Chytis, Tasios, & Filos, 2020; Petteewang & Seangkhiew, 2023; Dampitakse et al., 2021). Investment decisions are often influenced by biases, which may either enhance or hinder the performance outcomes of the investments. Potential investments typically require substantial capital; therefore, diversification of investments is essential to mitigate risk. However, companies and investors frequently overlook the tax implications associated with these decisions (Adetola, et al, 2023). This is because debt management is not influenced by profit management that employs the accrual basis of accounting (Petteewang & Seangkhiew, 2023). Thus, leading to the following hypothesis:

H5.2: The debt-to-equity ratio has a positive effect on the proactive tax planning.

Table 9 Summary of Key Literature Reviews on Debt-to-Equity Ratio

Authors	Country	Capital Structure (X)	Proactive Tax Planning (Y)				
		DE	ETR	CTR	Tax/ CFO	Tax/ Asset	Tax/ NPM
Khumtonwong (2015)	Thailand	N/A	√		√	√	
Allam (2022)	Indonesia	+	√				
Aminah, Chairina & Sari (2017)	Indonesia	N/A		√			
Chytis, Tasios, & Filos (2020)	Greece	N/A	√				
Maigoshi & Tanko (2023)	Nigeria	+	√				
Krongboon & Dampitakse (2021)	Thailand	+	√				
Petteewang & Seangkhiew (2023)	Thailand	N/A	√	√		√	√
Putri et al. (2018)	Indonesia	+	√				
Inua (2018)	Nigeria	-	√				
Chamnong, Pajongwong & Svetalekth (2021)	Thailand	+	√	√			
Dampitakse et al. (2021)	Thailand	N/A	√				
Wutthimahanon (2019)	Thailand	N/A	√		√	√	

Note: created by Pichaya Adthajak.

: Symbols represent the result as + positive significant, - negative significant, N/A not significant, and √ dependent.

Control Variable and Firm Value

This study includes two control variables: firm size and firm age, which can be explained as follows.

1) Firm Size and Firm Value

Firm size is a measurement of a company's scale, determined by the total assets disclosed in its financial statements (Promaksorn et al., 2024; Wardani et al., 2022; Thanjunpong (2015). There are several researchers shows that the firm size has a positive effect on the firm value (Timothy, Izilin & Ndifereke, 2020; Tarmidi & Murwaningsari, 2019; Wardani et al., 2022; Promaksorn et al., 2024; Christina & Alexander, 2018). Firm size showed a positive effect which implies that an increase in the size of the firm leads to an increase in firm value (Timothy, Izilin & Ndifereke, 2020).

This indicates that economies of scale enhance firm value (Timothy, Izilin, & Ndifereke, 2020). Large companies tend to have a substantial number of knowledgeable and skilled professionals, as well as extensive sources of capital. Therefore, they may benefit from economies of scale (Jitkham & Yarana, 2022). Firm size indicates a measure of the effectiveness of a company. A large firm size shows the company's commitment to continuously improve its performance, as a result the market is willing to pay a high price to acquire its shares. The scale of the firm will affect its business activities. So, it is expected that the profit generated will follow the increase (Wardani et al., 2022).

In addition, firm size contributes to increasing firm value, because the wider the scope of the company, the easier it will be to obtain financing from the capital market. The total assets and capital used by the company to finance its operational activities are the benchmarks for assessing the scale of the company. Firm value will be influenced by the size of the company, because both are directly proportional to the management of intellectual capital (Wardani et al., 2022). In summary, firm value is an important factor for stock prices because the size of the company is an area of competitive advantage. Large companies tend to have better management and more resources. Additionally, large companies have more diverse and sophisticated tax strategies compared to smaller companies, as well as riskier policies (Promaksorn et al., 2024).

On the other hand, the prior studies recommend that the firm size has a negative effect on the firm value (Jitkham & Yarana, 2022; Khaoula & Moez, 2019; Thanjunpong, Dechsiri & Awirothananon, 2018; Sribunruang & Sutthi, 2021; Thanjunpong, 2017). This indicates that the ground that big size creates additional costs arising from diseconomies of scale (Timothy, Izilin & Ndifereke, 2020) . Therefore, large companies with high profitability potential have resulted in a decrease in performance (Jitkham & Yarana, 2022). Because large companies create additional costs due to economies of scale (Timothy, Izilin & Ndifereke, 2020).

Some research explains that when large companies expand their operations, it leads to improved performance but has the effect of reducing firm value (Thanjunpong, Dechsiri & Awirothananon, 2018; Thanjunpong, 2017). This finding can be explained as follows: a lack of communication and decision-making problems hinder efficiency at large companies. In other words, companies sometimes suffer agency problems. This suggests that they are controlled by managers who are pursuing opportunistic goals (Khaoula & Moez, 2019). Moreover, there are some studies show that the firm size has a no effect on the firm value (Kaewmuang & Pongsupatt, 2023).

Table 10 Summary of Key Literature Reviews on Firm Size

Authors	Country	Firm Size (Control V.)	Firm Value (Y)			
		Total Asset	SP	ROA	P/BV	Tobin's Q
Kaewmuang & Pongsupatt (2023)	Thailand	N/A	√			
Timothy, Izilin & Ndifereke (2020)	Nigeria	+		√		
Tarmidi & Murwaningsari (2019)	Indonesia	+				√
Jitkham & Yarana (2022)	Thailand	-				√
Khaoula & Moez (2019)	Saudi Arabia	-				√
Wardani et al. (2022)	Indonesia	+			√	
Thanjunpong (2015)	Thailand	-				√
Thanjunpong, (2017)	Thailand	-				√
Thanjunpong, Dechsiri & Awirothananon (2018)	Thailand	-				√
Sribunruang & Sutthi (2021)	Thailand	-				√
Promaksorn et al. (2024)	Thailand	+	√			
Christina & Alexander (2018)	Indonesia	+		√		
Putri & Rachmawati (2017)	Indonesia	N/A				√

Note: created by Pichaya Adthajak.

: Symbols represent the result as + positive significant, - negative significant, N/A not significant, and √ dependent.

: P/BV = Price to book value

: SP = Stock price

: ROA = Return on asset

2) Firm Age and Firm Value

Firm age refers to the age of the business, counted from the date of company registration (Luu, 2021). The firm's age determines its ability to endure and compete in the field of business (Harsono & Susanto, 2023).

There are several researchers shows that the firm age has a positive effect on the firm value (Tarmidi & Murwaningsari, 2019; Razali et al., 2018). The age of a corporation is a factor evaluated by prospective investors when deciding where to allocate their cash. The age of a firm indicates its experience and proficiency in commercial operations. Signaling theory elucidates the transmission of information from management to investors, reflecting the company's future prospects. An extended lifespan of a corporation may signify its ability to endure and compete in the evolving commercial landscape. It is undoubtedly advantageous, since it can attract investors and enhance the company's value (Putri & Rachmawati, 2017).

In addition, the company's longevity exemplifies its capacity to surmount many hurdles to sustainability and illustrates how it may leverage its surroundings for advantage. And its resources for firm development Established companies demonstrate their longevity and expertise to compete with rivals. Signaling theory posits that a company's age serves as an indicator that fosters more investor confidence in existing enterprises compared to newly launched ones, hence enhancing the firm value (Harsono & Susanto, 2023).

On the other hand, the prior studies recommend that the firm age has a negative effect on the firm value (Putri & Rachmawati, 2017; Luu, 2021; Harsono & Susanto, 2023). This indicates that the older companies considered rigid, did not follow the development of the era, lacked knowledge, and brought the decline in profitability of the organization. This stated that the companies that are older have a lower margin, higher costs, outdated assets, and slow growth, so investors are not interested in investing and make the value of the company continuously decline (Putri & Rachmawati, 2017). This is consistent with existing studies that found that the age of a firm denotes its capacity to endure and compete in the commercial landscape. As an organization ages, it becomes increasingly unable to update its prior expertise, rendering it less capable of keeping pace with contemporary advancements. Investors acknowledge that nascent companies exhibit greater innovation in their operations compared to established firms. This will enhance investor confidence in investing in freshly established companies, as it is perceived that these organizations have the potential to generate greater profits than those that have been operational for an extended period. Consequently, the greater the firm age, the diminished its value. The company's age adversely affects investors in relation to signal theory. As a corporation grows over time, investor mistrust tends to increase (Harsono & Susanto, 2023). Moreover, there are some studies show that the firm age has a no effect on the firm value (Kaewmuang & Pongsupatt, 2023).

Table 11 Summary of Key Literature Reviews on Firm Age

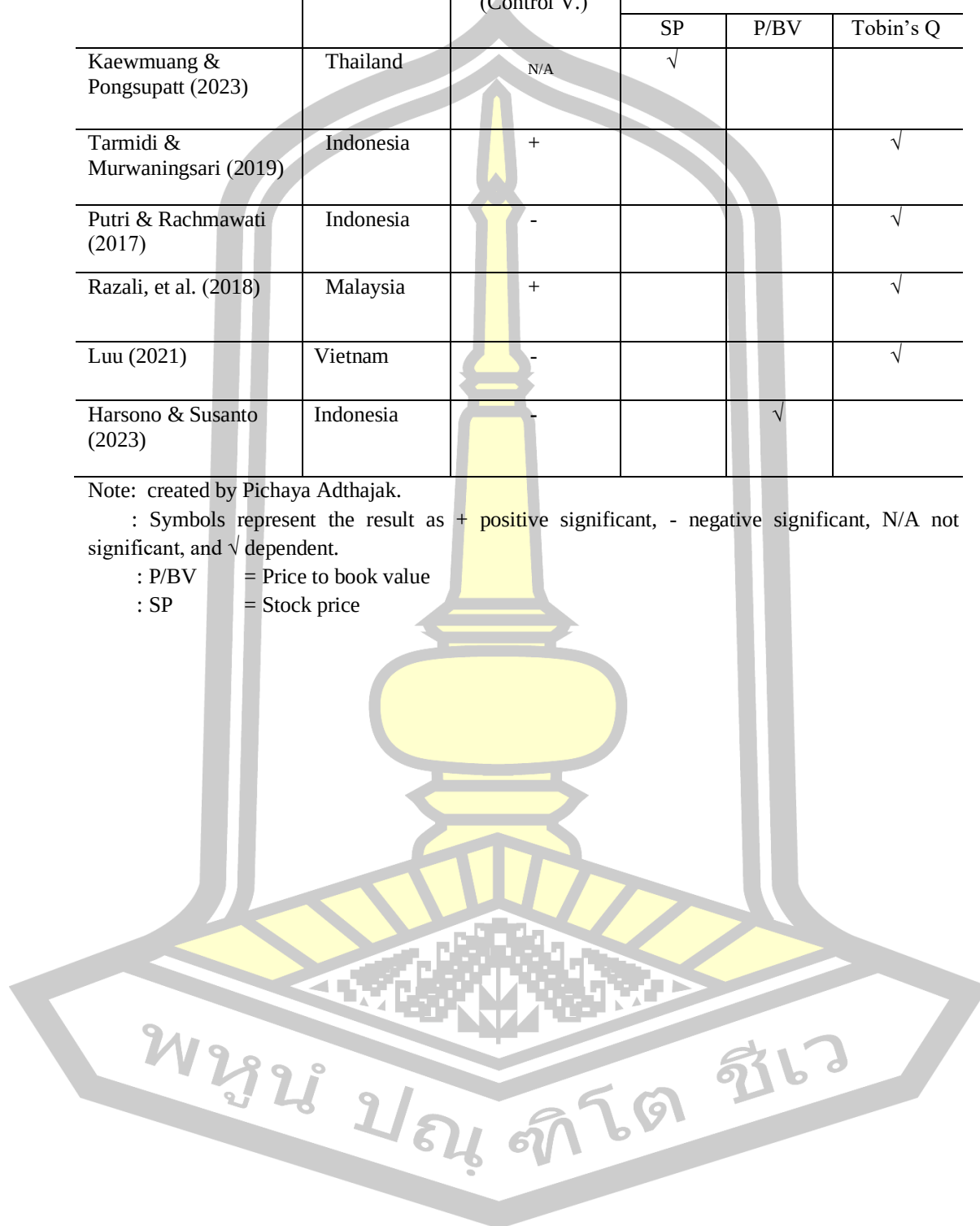
Authors	Country	Firm Age (Control V.)	Firm Value (Y)		
			SP	P/BV	Tobin's Q
Kaewmuang & Pongsupatt (2023)	Thailand	N/A	√		
Tarmidi & Murwaningsari (2019)	Indonesia	+			√
Putri & Rachmawati (2017)	Indonesia	-			√
Razali, et al. (2018)	Malaysia	+			√
Luu (2021)	Vietnam	-			√
Harsono & Susanto (2023)	Indonesia	-		√	

Note: created by Pichaya Adthajak.

: Symbols represent the result as + positive significant, - negative significant, N/A not significant, and √ dependent.

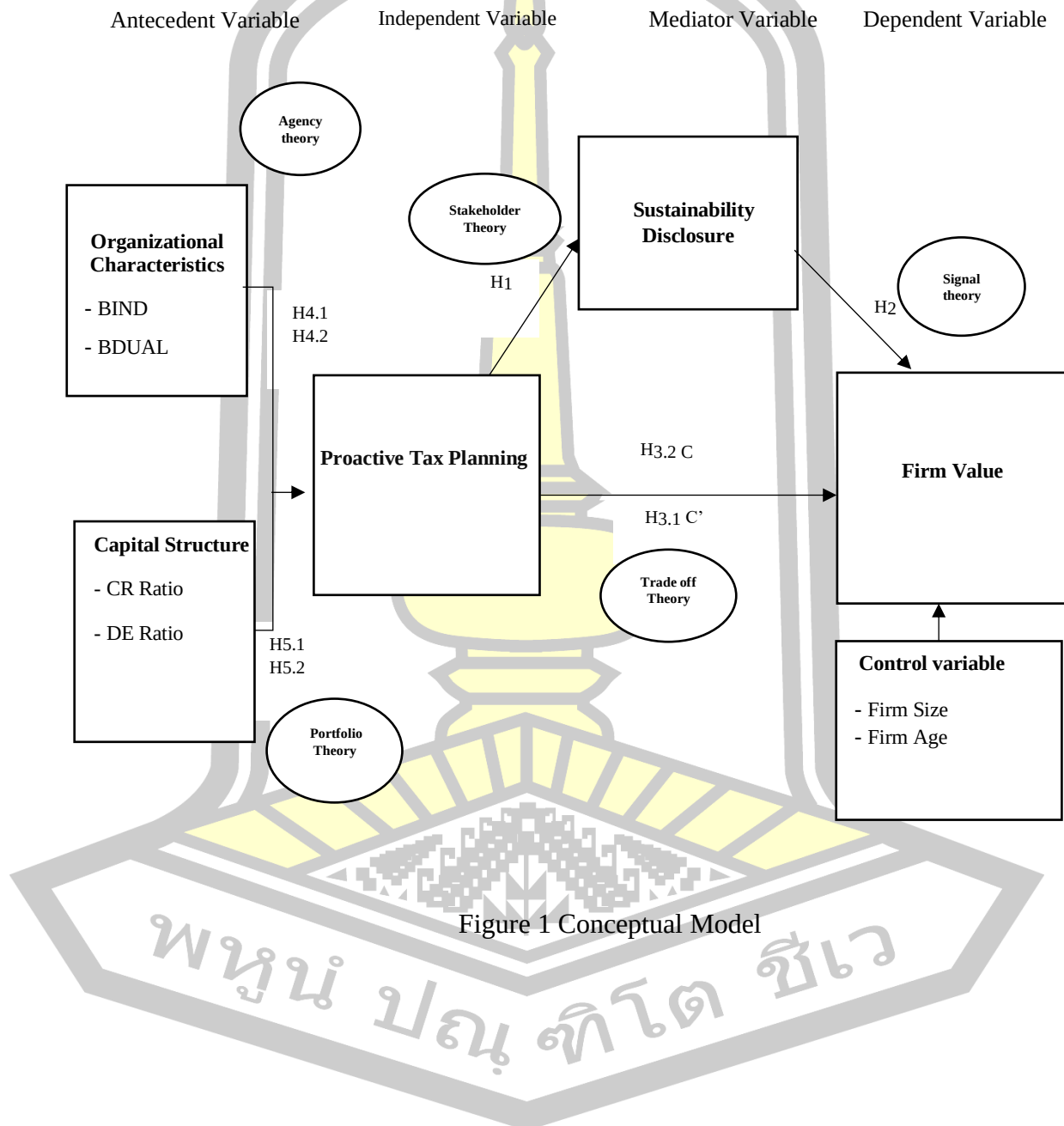
: P/BV = Price to book value

: SP = Stock price



Conceptual Model

The relationships among tax planning, mediator, antecedent, and consequences variables are shown in Figure 1.



CHAPTER III

RESEARCH METHODS

The previous chapter's descriptions of the firm value, theoretical underpinnings, literature study, conceptual framework, and hypothesis construction are highly recommended for comprehension. Therefore, research techniques aid in providing concise answers with testable hypotheses. The research methodologies are organized as follows and are discussed in this chapter. The population and population are displayed in the first section. The development of the variable measures is seen in the second part. The technique, including statistical analysis, is displayed in the final part.

Population and Data Collection

Population

An empirical research method based on secondary data was applied in this study. The objectives described of this study were to proactive tax planning and firm value of ESG100 during the periods from 2020 to 2022 for a total of three years, it has a population total of 100 companies, total population 300 firm, to examine whether proactive tax planning has effect on firm value. The population of this study comprised all in the ESG 100 index. ESG100 is a rating by the Thaipat Institute, which established ESG100 to develop business sustainability data by collecting data on listed securities with outstanding performance in environmental, social, and governance (ESG) for 100 companies per year, also known as ESG100 (Yothachan, Meeampol, & Pajongwong, 2020). ESG100 collected the data from https://esg100.thaipat.org/2022/Issuer_search.php, on October 19, 2023 (Thaipat Institute, 2022a).

The sample includes a wide range of industries; agro & food, consumer products, industrials, property & construction, resources, services, and technology. In addition, table 7, panel a, presents the sample by industry is 300 firm observations as follows: observation in services is the highest number 64 firm observations, the next, industrial 54 firm observations, agro & food 39 firm observations, property & construction 38 firm observations, technology 30 firm observations. Finally, observation in resources and consumers is the least number 21 firm observations, representing and incomplete data for analysis and outlier data for the primary variable, were excluded from the study's population.

However, the sample of this study did not include companies that

1) Firms were registered in financial services, insurance industries, and leasehold property funds. Because their total asset base and financial structure

non-compares with other companies (Arunruangsirilert, Srihirunpunlop & Boonyawat, 2022; Sook-aram, 2022). Moreover, this study excludes the banking, capital investment, and insurance sectors. Three groups have distinct operational characteristics and regulatory frameworks compared to other sectors. This divergence may result in differences in corporate income tax reporting compared to other groups (Pratomsrimek et al., 2016).

2) Companies are under rehabilitation because they are subject to different financial reporting requirements and business conditions.

3) There are no fiscal year-ends other than 31 December to ensure that the samples are subject to similar market conditions and withdrawn from the ESG Index between 2020 and 2022.

4) Firms have incomplete data for analysis.

5) Firms have outlier data for the main variable.

Table 12 Population composition by Industry Group

Industry Group	2020	2021	2022	Total
Panel A: Number of Sample classify by industry				
Agro & Food	12	14	13	39
Consumer Products	7	7	7	21
Industrials	17	20	17	54
Property and Construction	14	12	12	38
Resources	6	8	7	21
Services	21	18	25	64
Technology	10	10	10	30
Financial	13	11	9	33
Total	100	100	100	300
Panel B: Sample Selection Process				
Initial sample from ESG100	100	100	100	300
<u>Less</u> Financial service and insurance industries	(13)	(11)	(9)	(33)
Leasehold property fund	(8)	(6)	(4)	(18)
Withdrawn from ESG100 Index	(40)	(44)	(48)	(132)
Fiscal year are not 31 December	-	-	-	-
Incomplete data for analysis	-	-	-	-
Outlier	(1)	(1)	(1)	(3)
Final population	38	38	38	114

Table 11, Panel A, presents the total population of 300 firm observations selected during periods from 2020 to 2022. The research collects population data from ESG100 and selects only those companies ranked in the ESG100 with complete data for a period of 3 years, because examining a period of 5 years would result in a reduced sample population. the reason for studying in the period is according to temporarily reduce the impact of the transaction and to reduce the impact of temporary differences on tax (Thanjunpong, 2018). Consistent with prior research, which tax research should be collected over several years, to prevent the potential impact of time discrepancies (Suwangerd, 2014).

After applying the conditions that the population of this study did not include 33 firm were registered in financial service and insurance industries, and 18 firm were registered in leasehold property funds, 132 firm were withdrawn from listing by the ESG100 Index, and 3 firm observations have outlier data of the main variable with a value below the 5th and above the 95th percentile was deleted (Gonzalez, et.al, 2021; Detthamrong, Chancharat & Vithessonthi, 2017). Therefore, the totaling final sample is 114 firm observations.

The sample size in this research is sufficient for statistical analysis because the majority of statisticians agree that a sample size of 100 is necessary to obtain any kind of significant results (Akman, 2023). In accordance with Hair et al. (2010) points out that the appropriate sample size for statistical analysis should not be less than 100 samples because a sample size that is too small will be insufficient for statistical analysis. Additionally, choosing a sample size for a correlational study aims to investigate the effect between two or more variables and the effects of those variables in quantitative research (Akman, 2023). The minimum acceptable sample size for correlational research is at least 30 samples. Additionally, they also specify that data from samples smaller than 30 may not reflect the level of correlation (Fraenkel & Wallen, 2009). However, the determination of sample size is a common task for many organizational researchers. Inappropriate, inadequate, or excessive sample sizes continue to influence the quality and accuracy of research (Bartlett, Kotrilk & Higgins, 2001).



Summary of Sample Size

This study has collected data from ESG100 index during the periods from 2020 to 2022. The final samples by industry of this study are 114 firm-year observations which met the study's criteria, are given below:

Table 13 Number of Companies Classify by Industry

Industry	Firms	n	%
Agro & Food	9	27	23.68
Consumers	3	9	7.89
Industrials	6	18	15.79
Property& Construction	3	9	7.89
Resources	1	3	2.63
Services	10	30	26.32
Technology	6	18	15.79
Total	38	114	100.00

Table 12 demonstrates a summary of the number of ESG100 index classified by industry is 38 firms or 114 firm-year observations as follows: observation in services is the highest number 10 companies or 30 firm-year observations, representing 26.32 percent, the next, agro & food 9 companies or 27 firm-year observations, Industrials 6 companies or 18 firm-year observations, technology 6 companies or 18 firm-year observations, consumers 3 companies or 9 firm-year observations, property& construction 3 companies or 9 firm-year observations, representing 23.68, 15.79, 15.79, 7.89, and 7.89 percent, respectively. Finally, observation in resources is the least number 1 company or 3 firm-year observations, representing 2.63 percent.

Data Collection

After receiving the sample group which focuses on listed companies from ESG100 Index. The independent variable of this study is proactive tax planning. Therefore, proactive tax planning is manually collected from SETSMART. The mediator variable of this study is sustainability disclosure, consist of ESG score. Therefore, the ESG score is manually collected from Bloomberg's websites. On the other hand, firm value was used as the dependent variable of this study. It is the

closing price of common shares at the end of the year because the closing price is the price at which both the buyer and the seller agree (Kulsiriwanit, 2021; Ocharatporn, 2008), which is collected from SETSMART. For the data of organizational characteristics consist of board independent, and board duality are manually collected from one report (56-1), which is publicly available information that appears in the database of the SEC Office (www.sec.or.th). While the capital structure, including financial accounting data for the control variables are collected from SETSMART and the Stock Exchange of Thailand's website (www.set.or.th).

Measurements

This study explains to measure variables that consist of the dependent variable, independent variable, mediator variables, antecedent variables, and control variables. The dependent variable is firm value. The independent variable is proactive tax planning. The antecedent variables are organizational characteristics and capital structure. The mediator variable is sustainability disclosure. Moreover, the control variables are consisting of firm size and firm age. Each type of variable is defined as the definition and method of measurement for this study as follows. Table 8 show summaries of the variables used in this study is including variable name, variable code, variable measurement, and information source.

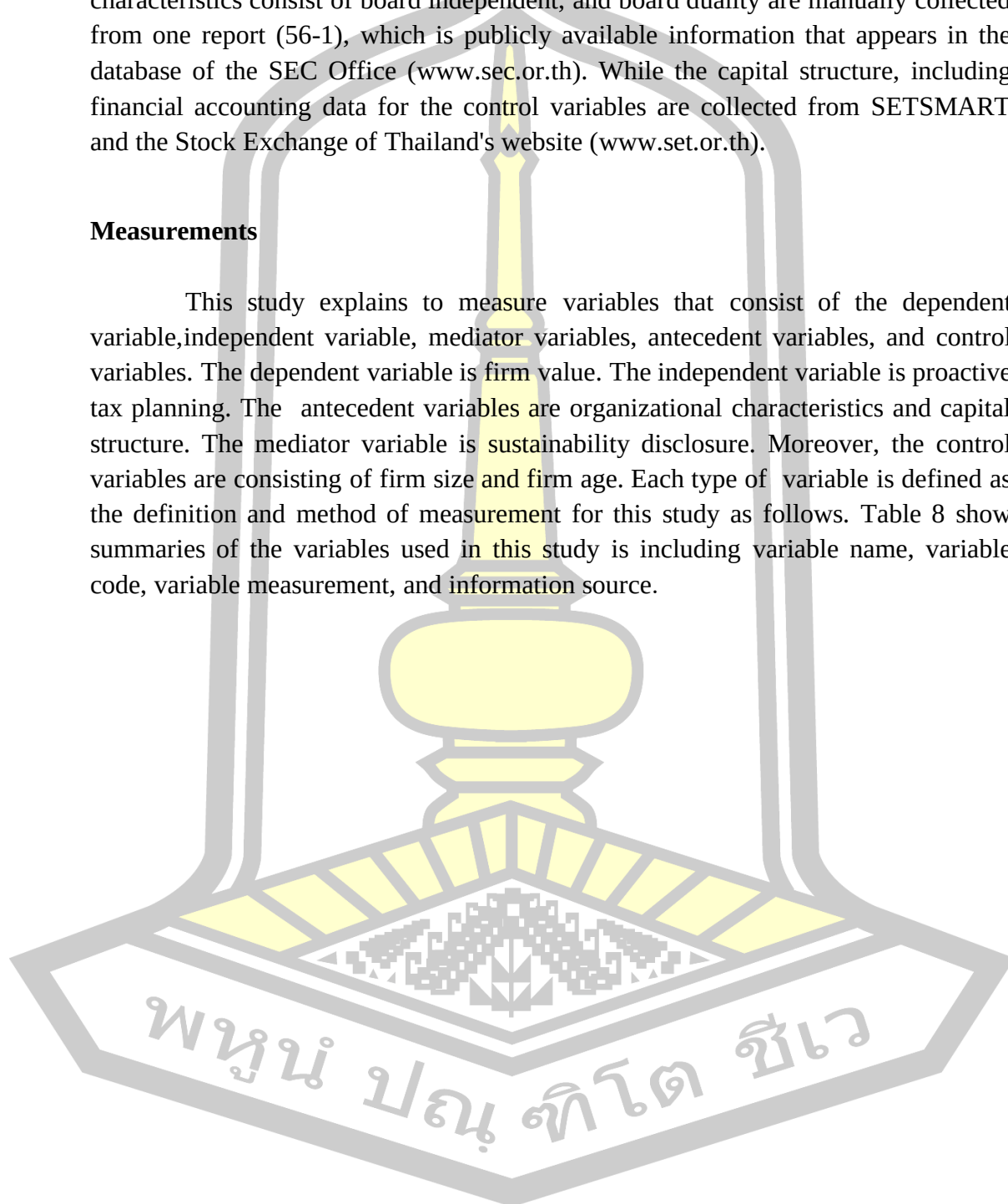


Table 14 The Variables used in This Study

Variables	Measurement	Source	Authors
Dependent Variables			
Firm Value (FV)	Stock Price (SP) market price of common stock	SETSMART (https://www.setsmart.com/ssm/historicalTrading;symbol=ADVANC;tradingMethod=all)	Wahab, Shaipah & Holland (2012), Lestari & Wardhani (2015), Li et al. (2016), Waentongkom (2020), Kulsiriwanit (2021)
Independent Variables			
Proactive Tax Planning (PT)	The ratio of Effective tax rate (ETR) on Equity Multiplier	SETSMART (https://www.setsmart.com/ssm/login)	Wutthimahanon (2019), Kunthini (2016), Temboonprasertsuk (2021), Chaichuen et.al. (2022), Khumtonwong (2015), Thanjunpong (2014), Thanjunpong (2015), Thanjunpong (2018), Sribunruang & Sutthi (2021), Tantiyavarong (2009), Samaputra, et al. (2021), Jitkham & Yarana (2022)
Effective Tax Rate (ETR)	The ratio of Income Tax Expense on Income before Tax	SETSMART - One Report (56-1) (https://www.setsmart.com/ssm/login)	Krongboon & Dampitakse (2021), Wahab, Shaipah & Holland (2012), Chen, Hu & Wang (2013), Lestari & Wardhani (2015), Thanjunpong (2017), Christina & Alexanderr (2018), Soepriyanto (2018), Tarmidi & Murwaningsari (2019), Thanjunpong (2018), Khaoula & Moez (2019), Widyanto, Kristanto & Sucahyo (2019)

Table 13 The Variables used in This Study (Continue)

Variables	Measurement	Source	Authors
Mediator Variables			
Sustainability Disclosure Report (ESG)	ESG Score (Three topics are covered: initial evaluation criteria, main evaluation criteria, and material topics (Thaipat Institute, 2023b))	Boomberg data (https://www.bloomberg.com .)	Abdi, Li & Càmara-Turull (2020), Waentongkom (2020), Andayani & Yanti (2021), Aydoğmuş, Gülay & Ergun (2022), Tunming & Channgam (2023), (Arunruangsirilert, Srihirunpunlop & Boonyawat, 2022)
Antecedent Variables			
Board Independent (BI)	The percentage of independent directors on the board	One Report (56-1) (https://market.sec.or.th/public/isc/th/FinancialReport/ALL-0000006621)	Iazzi, et al. (2023), Chaichuen et.al. (2022), Lawati & Hussainey (2021), Temboonprasertsuk (2021), Khaoula & Moez (2019), Khumtonwong (2015)
Board Duality (BD)	1 = Duality, 0 = Other	56-1 One Report (https://market.sec.or.th/public/isc/th/FinancialReport/ALL-0000006621)	Iazzi, et al. (2023), Kolias & Koumanakos (2022), Khaoula & Moez (2019), Khumtonwong (2015)
Debt to Equity Ratio (DE)	Debt to Equity Ratio = Total debt / Capital	SETSMART (https://www.setsmart.com/ssm/login)	Allam (2022), Krongboon & Dampitakse (2021)
Current Ratio (CR)	The percentage of total current assets on total current liabilities.	SETSMART (https://www.setsmart.com/ssm/login)	Ann & Manurung (2019), Ahmad et al. (2023)

Table 13 The Variables used in This Study (Continue)

Variables	Measurement	Source	Authors
Control Variables			
Firm Size (FS)	The natural logarithm of total assets	SETSMART (https://www.setsmart.com/ssm/login)	Tantiyavarong (2009), Chen, Hu & Wang (2013), Wahab, Shaipah & Holland (2012), Thanjunpong (2018), Soepriyanto (2018), Christina & Alexander (2018), Tarmidi & Murwaningsari (2019), Khaoula & Moez (2019), Abdi, Li & Càmara-Turull (2020), Bhagiawan & Mukhlisin (2020), Aca, Musa & Garba (2020), Hasan, Lobo & Qiu (2021), Jitkham & Yarana (2022), Aydoğmuş, Gülay & Ergun (2022), Wu et al. (2022), Chotsuwan (2018)
Firm Age (FA)	Number of Age for firm	https://www.set.or.th (https://www.set.or.th/th/market/product/stock/quote/ADVANC/factsheet)	Tarmidi & Murwaningsari (2019), Abdi, Li & Càmara-Turull (2020), Aca, Musa & Garba (2020)

Research Method

This study analyzes data using Gretl. It is a functional cross-platform software package for the econometrics and statistical data analysis developed by A. Cottrell and R. It was chosen in this research as a useful software for statistical data analysis. Gretl statistical libraries enables to perform data analysis using various algorithms, modules and functions (Lemenkova, 2019).

Data Analysis Method

This study used several statistical techniques consist of:

1. Initial data analysis using descriptive statistics

Descriptive statistics is a statistical method used to describe the characteristics of a particular group of data, such as the distribution of data, including maximum, minimum, frequency and percentage. Statistics measuring central tendency include mean, mode, and median. Statistics measure the distribution of data, including standard deviation (S.D.), skewness, and kurtosis (Mishra, et al., 2019).

2. Inferential statistics analysis

Inference statistics are used in the analysis to test the research hypothesis, the effect of independent variables and dependent variables, the effect of antecedent variables and independent variables, and to investigate the effect of mediating on

independent variables and dependent variables.

For this study, the balanced panel data regression tool will be used because this is an analysis using a combination of cross-sectional data and time series data (Arunruangsirilert, Srihirunpunlop & Boonyawat, 2022). This study is the data collected for a period of three years, from 2020 to 2022. That is data used as a variable from 114 firm-year observations.

Statistical Techniques

This study employs panel data analysis, utilizing both cross-sectional data and time series data. The cross-sectional data consist of repeated measurements collected from the same units over multiple time periods (Arunruangsirilert, Srihirunpunlop & Boonyawat, 2022). From the above mentioned, the data were used in this study is the balanced panel data regression model which contain a total sample of 114 firm observations selected during periods from 2020 to 2022.

In cases that data were collected in cross section and time series mixed, we need some special algorithm differ from OLS. In that context, controlling for time-invariant variables that correlate to independent variables the fixed effect regression model (FEM) is needed otherwise random effect regression model (REM) should be employed (Piriyakul, 2016).

Therefore, this study conducts a statistical analysis and employs models relevant to the research, including panel data regression analysis using both fixed effect and random effect regression models. The research equation incorporates independent variables, dependent variables, antecedent variables, and additional control variables (Arunruangsirilert, Srihirunpunlop & Boonyawat, 2022). This study uses a two-way model that considers one sets of dummy variables. There are three types of panel analytic models (Piriyakul, 2016) were used in this study as follows.

1) Pooled regression model

The pooled regression model is a method of analyzing data using ordinary least squares (OLS) that does not account for potential external factors or individual-specific effects that may influence the variables (Thongdee & Rangkhakunnuwat, 2019). The pooled regression model can be applied to time series data recorded over varying durations. The data may be collected at consistent intervals or at irregular intervals, depending on the nature of the dataset. This method analyzes the data directly as if it were a single unified dataset, with a consolidated regression coefficient. The assumption of regression analysis is that there is no measurement error in the variables, which allows for the application of ordinary least squares (OLS) methodology directly for data analysis (Piriyakul, 2016).

However, Pooled regression model may lead to bias due to the omission of certain variables in the equation. Therefore, panel data offers two alternative methods for estimating the equation: the fixed effects model and the random effects model (Chaiwan, 2015).

2) Fixed Effect Model (FEM)

The fixed effects regression model (FEM) is employed to analyze data when external variables vary over time and there is a correlation between the independent variables. The fixed effects regression model incorporates data that is surveyed but not explicitly analyzed (α_i). The variables representing unobserved effects, which influence the dependent variable, are considered unique characteristics of each dependent variable. This approach enhances the appropriateness and accuracy of the estimator. If the variable α_i is correlated with one or more independent variables in the equation, the fixed effects regression model becomes the most appropriate choice (Kaewmuang & Pongsupatt, 2023).

3) Random Effect Model (REM)

The random effects model is an analytical approach used when external variables are not correlated with the independent variables (Thongdee & Rangkhakunnuwat, 2019). The random effects model analysis assumes that α_i represents cross-sectional errors, which are combined with the time-series errors. According to grammatical principles, ε_{it} , which is assumed to be independent of the independent variables, results in a new composite error term (V_{it}). This method is highly appropriate provided that unobserved effects do not influence the independent variables at any point in time (Kaewmuang & Pongsupatt, 2023).

In summary, the data analyzed consists of panel data from multiple cross-sectional units, with each unit providing information arranged chronologically in a time series format. Therefore, it is necessary to employ an analytical technique distinct from the ordinary least squares (OLS) method, specifically one that accounts for factors external to the regression equation. If the external variables are time-invariant and correlated with the independent variables, a fixed effects regression model (FEM) should be employed. However, if the external variables are not correlated with the independent variables, a random effects model (REM) should be utilized (Piriyaikul, 2016; Kitdamrongtam & Sukphan, 2022).

Therefore, this research divides the study into three parts: estimation of the model using pooled regression model, fixed effects model and the random effects model, followed by the testing of model suitability using the Hausman test.

The null hypothesis (H_0) and the alternative hypothesis (H_1) for the Hausman test (Vanijjakul, 2017) are as follows:

H_0 : Unobserved factors (a_i) are not correlated with the independent variables (the selection of the random effects model).

H_1 : Unobserved factors (a_i) are correlated with the independent variables (the selection of the fixed effects model)

In addition, the statistical techniques in this study are used for investigation,

4) Correlation Analysis

A popular methodology for examining correlation between variables is correlation analysis, sometimes known as Pearson's connection technique. Additionally, the multi-value connection problem is not necessary for the regression hypothesis. When estimating regression coefficients, the Pearson coefficient has a range of values between -1 and +1 that lack accuracy. However, in order to meet the criteria for investigating the issue, the correlation coefficient must not be greater than 0.8 (Hair et al., 2010).

The analysis of the relationships between pairs of independent variables, with correlation values ranging from -1 to 1, can be categorized into three types of relationships (Raduang, 2022) as follows:

1. Positive correlation indicates that as one variable increases, the other variable also increases, or conversely, as one variable decreases, the other variable decreases accordingly.
2. Negative correlation indicates that as one variable increases, the other variable decreases, or as one variable decreases, the other variable increases.
3. Zero correlation indicates that the two variables do not have a linear relationship with each other.

5) Variance Inflation Factors (VIF)

One measure of the severity of multicollinearity that is easy to use and that is gaining in popularity is the variance inflation factor (Studenmund, 1992). The variance inflation factors (VIF) evaluate the variance to discover multicollinearity issues in the association between many independent variables in regression coefficients. If the VIF was less than 10 on the scales, the issue in the regression equation is not a serious one (Hair et al., 2010).

This study uses variance inflation factors (VIF) to assess each construct component and detect multicollinearity. The maximum VIFs of indicators in models 1-5 ranged from 1.018 to 2.966. All VIFs are within acceptable threshold levels ($VIF < 10$) (Hair et al., 2010). These findings indicated that multicollinearity is not a problem. In summary, the regression equation in the research has no multicollinearity issues, so there is no need to remove any variables from the model (Studenmund, 1992). The details were showed in table 17 to table 18.

6) Heteroskedasticity and Autocorrelation

This study prevents heteroskedasticity problems that lead to invalidity of the variances of FE estimators, such as underestimated standard errors and overestimated t-statistics (Baltagi, 2008).

This study identified the presence of do not exhibit heteroskedasticity in models 1-5. For model 1, white's test indicated a p-value of $P(\text{Chi-square } (17) > 23.562) = 0.131 > 0.05$. White's test for model 2 yielded a p-value of $P(\text{Chi-square } (17) > 12.400) = 0.775 > 0.05$. White's test for model 3, the p-value was $P(\text{Chi-square } (17) > 17.835) = 0.399 > 0.05$. White's test for model 4, the p-value was $P(\text{Chi-square } (40) > 52.286) = 0.092 > 0.05$; and white's test for model 5, the p-value was $P(\text{Chi-square } (24) > 30.907) = 0.156 > 0.05$.

However, if heteroskedasticity problems are found, in order to provide corrected inference, we can use the robust standard errors command to enhance the efficiency of the FE model (Cameron & Trivedi, 2005). The details were showed in table 17 - table 18.

Model

This study first examines firm value by measuring changes in the natural log of firm value from ESG 100 index. The main methods of data analysis that can potentially be applied to addressing research questions and testing hypotheses. To test hypotheses 1 to 5, which predict the proactive tax planning issue has effect on the firm value.

The Mediating Effect of Sustainability Disclosure on The Impact of Proactive Tax Planning on Firm Value

In this section, the main methods of data analysis that can potentially be applied to addressing research questions and testing hypotheses. This specifies the regression model below to examine whether the mediating effect of sustainability disclosure on the impact of proactive tax planning on firm value. This study unit analysis is the firm. To test hypotheses 3, which predict the mediating effect of sustainability disclosure on the impact of proactive tax planning on firm value., this study estimates a series of equation using the balanced panel data regression model is as follows:

Model 1

$$FV_{it} = \beta_1 + \beta_2 PT_{it} + \beta_3 FS_{it} + \beta_4 FA_{it} + \epsilon_i$$

where

PT_{it}	Proactive tax planning for firm i in year t
FV_{it}	Firm value for firm i in year t
FS_{it}	Firm size for firm i in year t
FA_{it}	Number of age for firm i in year t

Proactive Tax Planning and Sustainability Disclosure

In this section, the main methods of data analysis that can potentially be applied to addressing research questions and testing hypotheses. This specifies the regression model below to examine whether the proactive tax planning effect on the sustainability disclosure. This study unit analysis is the firm. To test hypotheses 1, which predict the proactive tax planning effect on the sustainability disclosure, this study estimates a series of equation using the balanced panel data regression model is as follows:

Model 2

$$ESG_{it} = \beta_1 + \beta_2 PT_{it} + \beta_3 FS_{it} + \beta_4 FA_{it} + \varepsilon_{it}$$

where

PT_{it}	Proactive tax planning for firm i in year t
ESG_{it}	ESG combined score for firm i in year t
FS_{it}	Firm size for firm i in year t
FA_{it}	Number of age for firm i in year t

Sustainability Disclosure and Firm Value

In this section, the main methods of data analysis that can potentially be applied to addressing research questions and testing hypotheses. This specifies the regression model below to examine whether the sustainability disclosure effect on the firm value. This study unit analysis is the firm. To test Hypotheses 2, which predict the sustainability disclosure effect on the firm value, this study estimates a series of equation using the balanced panel data regression model is as follows:

Model 3

$$FV_{it} = \beta_1 + \beta_2 ESG_{it} + \beta_3 FS_{it} + \beta_4 FA_{it} + \varepsilon_i$$

where

FV_{it}	Firm value for firm i in year t
ESG_{it}	ESG combined score for firm i in year t
FS_{it}	Firm size for firm i in year t
FA_{it}	Number of age for firm i in year t

The Organizational Characteristics, Capital Structure, and Proactive Tax Planning

In this section, the main methods of data analysis that can potentially be applied to addressing research questions and testing hypotheses. This specifies the regression model below to examine whether the organizational characteristics and capital structure have effect on proactive tax planning.

This study unit analysis is the firm. To test Hypotheses 4.1 to 4.2 and Hypotheses 5.1 to 5.2 which predict the effect of the organizational characteristics, capital structure, and proactive tax planning, this study estimates a series of equation using the balanced panel data regression model is as follows:

Model 4

$$PT_{it} = \beta_1 + \beta_2 BD_{it} + \beta_3 BI_{it} + \beta_4 CR_{it} + \beta_5 DE_{it} + \beta_6 FS_{it} + \beta_7 FA_{it} + \varepsilon_i$$

where

PT_{it}	Proactive tax planning for firm i in year t
BI_{it}	The percentage of independent directors on the board for firm i in year t
BD_{it}	Board duality for firm i in year t
DE_{it}	Debt to equity ratio for firm i in year t
CR_{it}	Current ratio for firm i in year t
FS_{it}	Firm size for firm i in year t
FA_{it}	Number of age for firm i in year t

The Sustainability Disclosure, Proactive Tax Planning and Firm Value

This section discusses the main methods of data analysis that can potentially be applied to addressing research questions and testing hypotheses. This specifies the regression model below to examine the mediating effect of sustainability disclosure on the impact of proactive tax planning on firm value. This study unit analysis is the firm. To test hypothesis 5, which predicts the mediating effect of sustainability disclosure on the impact of proactive tax planning on firm value, this study estimates a series of equations using the balanced panel data regression model as follows:

Model 5

$$FV_{it} = \beta_1 + \beta_2 PT_{it} + \beta_3 ESG_{it} + \beta_4 BD_{it} + \beta_5 BI_{it} + \beta_6 CR_{it} + \beta_7 DE_{it} + \beta_8 FS_{it} + \beta_9 FA_{it} + \varepsilon_i$$

where

FV_{it}	Firm value for firm i in year t
PT_{it}	Proactive tax planning for firm i in year t
ESG_{it}	ESG combined score for firm i in year t
BI_{it}	The percentage of independent directors on the board for firm i in year t
BD_{it}	Board duality for firm i in year t
DE_{it}	Debt to equity ratio for firm i in year t
CR_{it}	Current ratio for firm i in year t
FS_{it}	Firm size for firm i in year t
FA_{it}	Number of age for firm i in year t

CHAPTER IV

RESULTS

The previous chapter describes research methods that provide to recognize the methods used in data collection, analysis, and hypothesis testing. This chapter describes the results of hypothesis testing which are organized as follows. Firstly, the descriptive statistics are expressed for increased understanding of sample characteristics and all variables. Secondly, the results of correlation analysis. Thirdly, the hypotheses testing result of multiple regression analysis techniques. Finally, a summary of hypotheses testing is also provided

Descriptive Statistic

Summary of All Variables

The analysis of descriptive statistics describes the basic characteristics of variables in this study including mean, standard deviation, minimum, and maximum, skewness and kurtosis. The descriptive statistics of all variables are demonstrated as follow:

Table 15 Descriptive Statistics of Variables

Panel A Independent Variable, Mediator Variable, Control Variable and Dependent Variable (N = 117)							
Variables	Mean	Med.	SD.	Min.	Max.	Skewness	Kurtosis
PT	7.851	7.533	5.161	0.017	36.294	1.427	6.299
ESG	53.373	53.496	12.648	20.078	80.807	0.004	-0.613
FV	46.831	18.750	72.437	0.880	386.000	2.897	8.856
BI	0.424	0.4000	0.106	0.333	0.800	1.319	1.243
CR	2.513	1.910	1.887	0.360	12.740	2.046	6.313
DE	0.886	0.580	0.788	0.080	3.690	1.414	1.846
FS	3.049e+008	2.785e+007	4.955e+008	2.204e+006	2.097e+009	1.549	1.278
FA	20.769	18.000	12.715	1.000	48.000	0.550	-0.666
Panel B - Dummy Variable							
Variables	Dummy Variables	Frequency		Percentage			
BD	Duality	9.00		7.60			
	Non-Duality	108.00		90.80			

Table 15 shows the descriptive statistics including the means, median, minimum, standard deviation, minimum, maximum, skewness, kurtosis, frequency and percentage of variables used in model. The researcher tested the normal distribution of data comprising a total of 117 firm-year observations to ensure compliance with the preliminary conditions for statistical analysis. The data were then analyzed using statistical software to ensure that the results were accurate and reliable.

The test results indicated that most variables, including board Independence, DE ratio, and firm age, exhibited a normal distribution, as their mean values were close to their median values. Additionally, it was found that the skewness and kurtosis values fell within the acceptable range of ± 3.00 . Therefore, it can be concluded that the variables follow a normal distribution within an acceptable range. However, proactive tax planning, firm value, ESG score, current ratio, and firm size exhibited non-normal distributions, as the mean values exceeded the median, and the skewness and kurtosis values were greater than ± 3.00 (Wheeler, 2011; Mishra, et al., 2019).

The test results revealed that firm value had a mean of 46.831, which was greater than the median of 18.750, and firm size had a mean of $3.0494e+008$, exceeding the median of $2.7853e+007$. Consequently, the distribution exhibited positive skewness, with a right-skewed graph, indicating a positive relationship and a high kurtosis. The ESG score of each company varies significantly, with the lowest score being 20.078 and the highest score being 80.807. Since the ESG index consists of companies that focus on sustainability disclosure, most companies have high ESG scores, with only a few having low ESG scores. Additionally, the kurtosis values of proactive tax planning, firm value, and current ratio indicated non-normal distributions, as all three variables had kurtosis values exceeding ± 3.00 , specifically 6.299, 8.856, and 6.313, respectively. Therefore, the researcher performed a log transformation of the data and presented it in table 16.

The researcher applied a log transformation to the five variables with non-normal distributions, namely proactive tax planning, ESG score, firm value, current ratio, and firm size. It was found that proactive tax planning (L_PT), ESG score (L_ESG), firm value (L_FV), current ratio (L_CR), and firm size (L_FS) exhibited normal distributions, as their mean values were close to their median values, and the skewness and kurtosis did not exceed ± 3.00 (Wheeler, 2011; Mishra, et al., 2019). However, proactive tax planning (L_PT) exhibited a high kurtosis value of 6.299. Therefore, the researcher reviewed the complete dataset of 117 firm-year observations and identified one outlier, specifically firm no. 13, INTUCH (appendix a list of ESG100 Index for research, because proactive tax planning for the years 2021-2022 was substantially lower compared to other firms. This study utilized balanced data; thus, the data for firm no. 13, INTUCH, was removed for all three years, namely 2020 - 2022. Therefore, this study retained a sample size of 114 firm-year

observations for analysis. The results of the descriptive statistics for the variables are presented in table 16.

Table 16 Descriptive Statistics of Variables

Panel A Independent Variable, Mediator Variable, Control Variable and Dependent Variable (N = 114)							
Variables	Mean	Med.	SD.	Min.	Max.	Skewness	Kurtosis
L_PT (PT)	1.821	2.057	0.851	-0.801	3.591	-1.197	1.032
L_ESG (ESG)	3.952	3.981	0.253	2.999	4.392	-0.671	0.493
L_FV (FV)	2.991	2.890	1.310	-0.127	5.955	0.108	-0.271
BI	0.424	0.400	0.105	0.333	0.800	1.312	1.196
L_CR (CR)	0.695	0.641	0.682	-1.021	2.544	0.075	-0.125
DE	0.905	0.620	0.790	0.080	3.690	1.389	1.776
L_FS (FS)	17.690	17.090	2.115	14.606	21.464	0.411	-1.192
FA	20.474	18.000	12.748	1.000	48.000	0.611	-0.591
Panel B - Dummy Variable							
Variables	Dummy Variables	Frequency	Percentage				
BD	Duality	9.00	7.890				
	Non-Duality	105.00	92.110				

Table 16 shows that proactive tax planning (L_PT), ESG score (L_ESG), firm value (L_FV), current ratio (L_CR), and firm size (L_FS) have mean values that are close to their respective median values. Additionally, the skewness and kurtosis values have decreased, approaching zero and falling within the acceptable range of ± 3.00 . This indicates that the log transformation has rendered the data distribution approximately normal to an acceptable degree. Upon evaluating all variables, normality has been achieved. Therefore, all variables are suitable for conducting inferential statistical analysis.

Table 16 shows the descriptive statistics including the means, median, standard deviation, minimum, maximum, skewness, and kurtosis of variables used in model. The proactive tax planning (L_PT) has mean 1.821, median 2.057, standard deviation 0.851, which are ranging from -0.801 to 3.591. The firm value (L_FV) has mean 2.991, median 2.890, standard deviation 1.310, which are ranging from -0.127 to 5.955. While the ESG score (L_ESG) has mean 3.952, median 3.981, standard deviation 0.253, which are ranging from 2.999 to 4.392.

In terms of board duality (BD), the duality 7.89 percent and non-duality 92.11 percent of the firm-year observations, which are dummy ranging from 0 to 1. The study results indicate that most of the ESG100 separate the management authority between the CEO and the chairman of the board according to good corporate

governance principles. The board independent (BI) has mean 0.424, median 0.400, standard deviation 0.105, which are dummy ranging from 0.333 to 0.800.

In terms of current ratio (L_CR) has mean 0.695, median 0.641, standard deviation 0.682, which are ranging from -1.021 to 2.544. Debt to equity ratio (DE) has mean 0.905, median 0.620, standard deviation 0.790, which are ranging from 0.080 to 3.690.

In terms of control variables are firm size (L_FS) has mean 17.690, median 17.090, standard deviation 2.115, which are ratio ranging from 14.606 to 21.464. Finally, firm age (FA) has mean 20.474, median 18.000, standard deviation 12.748, which are ratio ranging from 1.000 to 48.000 years.

The Results of Correlation Analysis

Table 17 show the results of the correlation analysis of all constructs. The bivariate correlation procedure is subject to a two- tailed test of statistical significance at two levels as $p\text{-value} < 0.01$ and $p\text{-value} < 0.05$. The correlation coefficients of all constructs which are ranging from - 0.732 to 0.247, $p\text{-value} < 0.01$ and ranging from -0.227 to 0.220, $p\text{-value} < 0.05$. The maximum correlation is 0.247, $p\text{-value} < 0.01$, which is a positive significant between current ratio (L_CR) and board independent (BD), while the least relationship is -0.732, $p\text{-value} < 0.01$, which is a negative significant between current ratio (L_CR) and debt to equity ratio (DE).

In addition, as for the correlation between organizational characteristics, capital structure and proactive tax planning. Which is significant at the 0.05 level ($p\text{-value} < 0.05$), there is a positive significant correlation between board duality (BD), current ratio (L_CR), and proactive tax planning (L_PT), with the correlation coefficients 0.187, and 0.190, respectively. Moreover, which is significant at the 0.01 level ($p\text{-value} < 0.01$), there is a negative significant correlation between board independent (BI), debt-to-equity ratio (DE), and proactive tax planning (L_PT) that have the correlation coefficients -0.252 and -0.282, respectively. The results indicate no multicollinearity problems in this study because the result is between -0.80 to 0.80 (Hair et al., 2010).

Table 17 The Correlation Analysis

Variables	L_FV	L_PT	ESG	BD	BI	DE	L_CR	FA	L_FS
L_FV	1								
L_PT	-0.227*	1							
L_ESG	0.138	-0.027	1						
BD	0.056	0.187*	-0.137	1					
BI	-0.248**	-0.252**	0.031	-0.156	1				
DE	0.158	-0.282**	0.220*	-0.205*	-0.011	1			
L_CR	-0.152	0.190*	-0.120	0.247**	0.173	-0.732**	1		
FA	0.546**	-0.085	0.063	-0.041	-0.248**	0.013	-0.299**	1	
L_FS	-0.040	0.000	0.408**	-0.219*	0.119	0.152	-0.190*	-0.068	1

Note: N = 144

Symbols mean significance at: ** p < 0.01, * p < 0.05

The Result of Multiple Regression Analysis

This study constructs a sample that initially contains all companies listed in ESG100 index over a three-year during the period from 2020 to 2022. After collected the data, this study has a balance panel sample of 114 firm observation of all listed companies. In longitudinal data was determined for analysis because there are the same sample at different points in time (Kennedy, 2008).

To test the hypotheses, the researcher tested the reliability of the data to be able to estimate the model accurately. Because the data for this study is balanced panel data which could either use the pooled OLS, the fixed effect (FE) or the random effect (RE) model. The statistical testing must be performed to confirm the selection of the appropriate model for panel data between pooled OLS, FE and RE model, as shown in Table 18.

Table 18 Statistic Model Selection Test

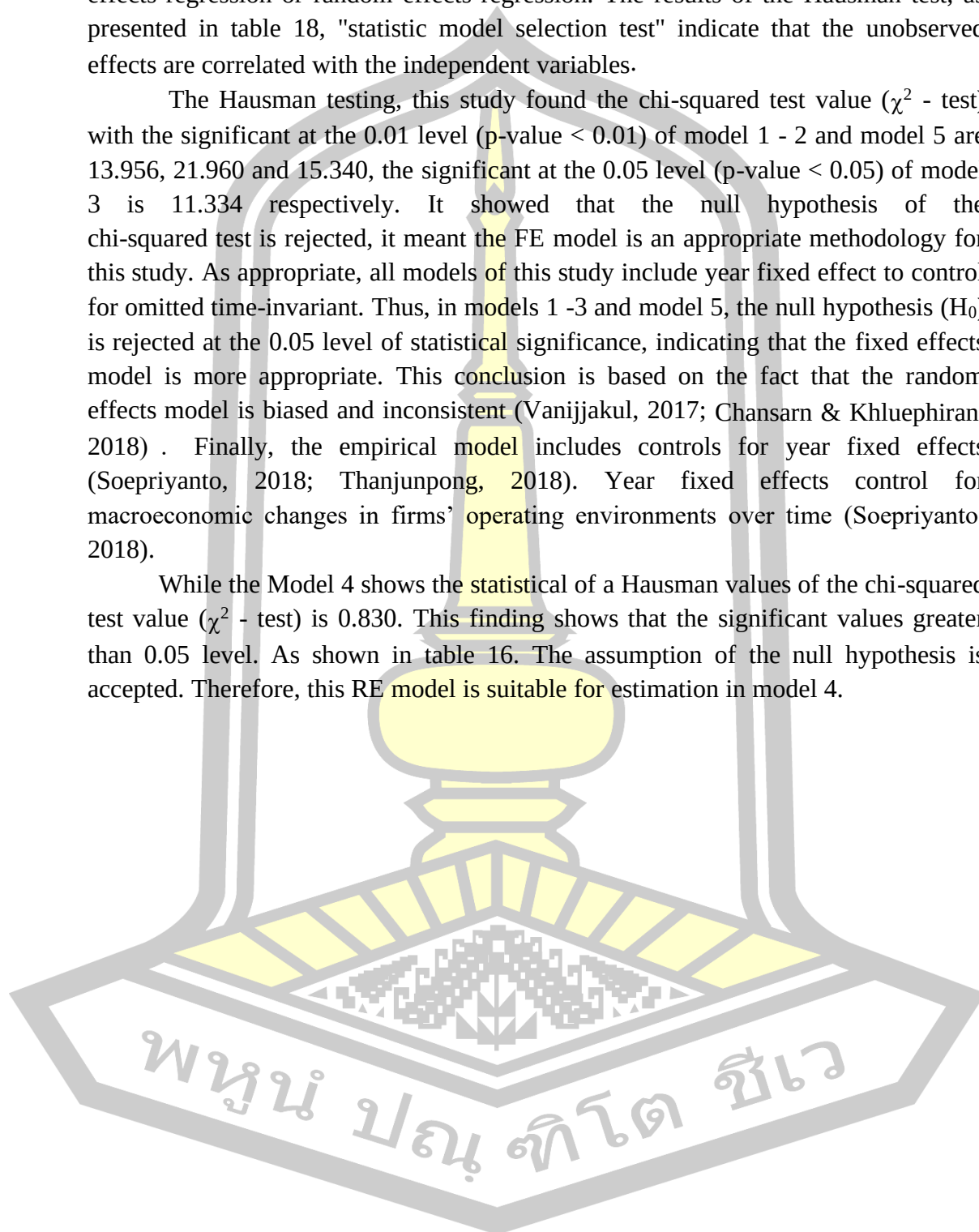
Test cross-section random effects			
Model	Fixed Effect (F-test)	Hausman Test (χ^2 - test)	Model Selection
Model 1	81.321***	13.956***	Fixed Effect
Model 2	77.566***	21.960***	Fixed Effect
Model 3	85.906***	11.334**	Fixed Effect
Model 4	1.256	0.830	Random Effect
Model 5	79.911***	15.340***	Fixed Effect

Note: χ^2 represents the value of chi-squared in the Hausman test. It shows that the fixed effect is best methodology for four models. Symbols mean significance at: *** p < 0.01, ** p < 0.05.

This study conducted a Hausman test to determine whether to employ fixed effects regression or random effects regression. The results of the Hausman test, as presented in table 18, "statistic model selection test" indicate that the unobserved effects are correlated with the independent variables.

The Hausman testing, this study found the chi-squared test value (χ^2 - test) with the significant at the 0.01 level (p-value < 0.01) of model 1 - 2 and model 5 are 13.956, 21.960 and 15.340, the significant at the 0.05 level (p-value < 0.05) of model 3 is 11.334 respectively. It showed that the null hypothesis of the chi-squared test is rejected, it meant the FE model is an appropriate methodology for this study. As appropriate, all models of this study include year fixed effect to control for omitted time-invariant. Thus, in models 1 -3 and model 5, the null hypothesis (H_0) is rejected at the 0.05 level of statistical significance, indicating that the fixed effects model is more appropriate. This conclusion is based on the fact that the random effects model is biased and inconsistent (Vanijjakul, 2017; Chansarn & Khluaphiran, 2018) . Finally, the empirical model includes controls for year fixed effects (Soepriyanto, 2018; Thanjunpong, 2018). Year fixed effects control for macroeconomic changes in firms' operating environments over time (Soepriyanto, 2018).

While the Model 4 shows the statistical of a Hausman values of the chi-squared test value (χ^2 - test) is 0.830. This finding shows that the significant values greater than 0.05 level. As shown in table 16. The assumption of the null hypothesis is accepted. Therefore, this RE model is suitable for estimation in model 4.



Hypotheses Testing and Results

Table 19 Results of the Effects on Firm Value and ESG Score

Variables	Model 1				Model 2			
	L_FV				L_ESG			
	H ₀	B	p-value	VIF	H ₀	B	p-value	VIF
(Constant)		2.526	0.007			3.018	0.000	
L_PT	H3	-0.277**	0.024	1.018	H1	-0.008	0.748	1.018
FA		0.055***	0.001	1.018		0.001	0.364	1.018
L_FS		-0.000	0.995	1.007		0.048***	0.000	1.007
Model Summary								
Year fixed-effects		Yes				Yes		
R ²		0.338				0.200		
Adj R ²		0.308				0.163		
F-Value		11.064***				5.415***		
P-Value		0.000				0.000		
Hausman test		13.956***				21.960***		
p-value		0.002				0.000		
Maximum VIF		1.018				1.018		
N		114				114		

Note: 1) This table shows the regression ordinary-least-squares with year fixed- effects.

2) Symbols mean significance at: *** Significant at the 1% level, ** Significant at 5% level, * Significant at 10% level.

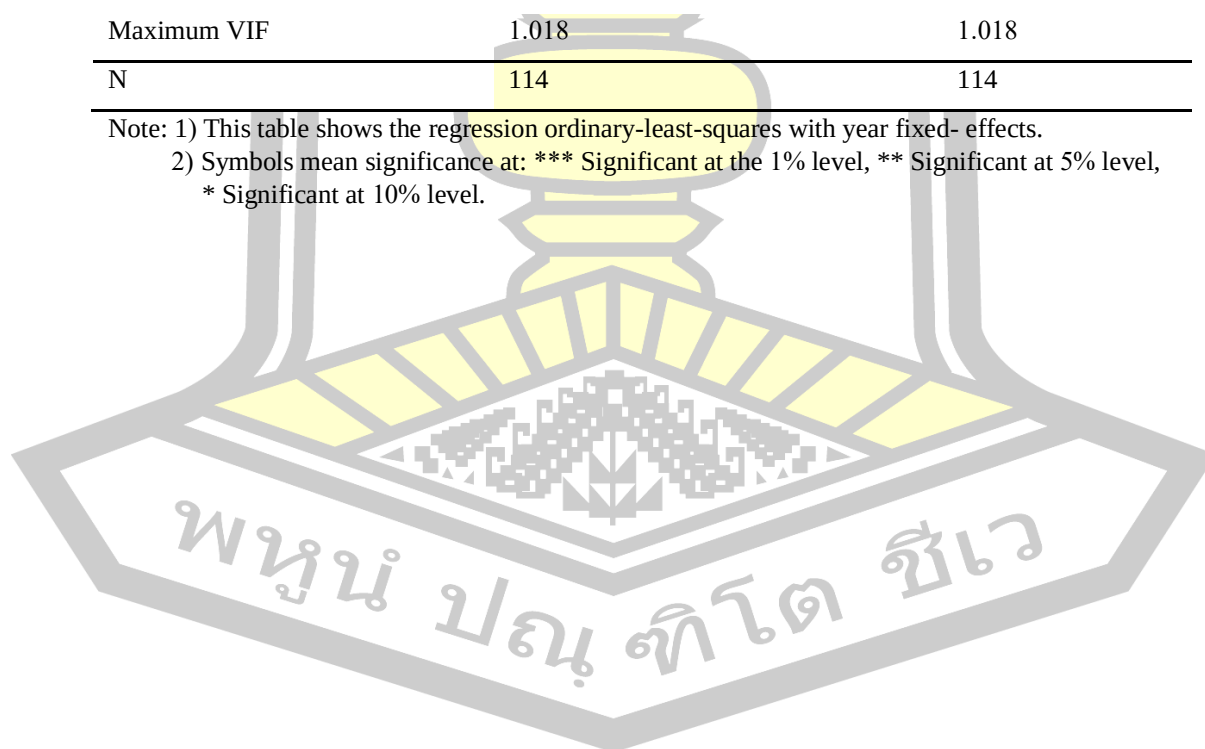


Table 20 Results of the Effects on Firm Value and Proactive Tax Planning

Variables	Model 3				Model 4		
	Ho	L_FV			L_PT		
		B	p-value	VIF	B	p-value	VIF
(Constant)		-0.324	0.900		2.550	0.000	
L_ESG	H2	0.766*	0.096	1.250			
BI	H4.1				-2.045***	0.000	1.152
BD	H4.2				0.421***	0.000	1.142
L_CR	H5.1				-0.072	0.862	2.858
DE	H5.2				-0.297	0.389	2.436
FA		0.055***	0.000	1.018	-0.009***	0.000	1.274
L_FS		-0.036	0.496	1.215	0.035**	0.041	1.104
Model Summary							
Year fixed-effects		Yes			-		
R ²		0.324			0.181		
Adj R ²		0.293			0.135		
F-Value		10.372***			3.957***		
P-Value		0.000			0.001		
Hausman test		11.334***			0.830		
p-value		0.010			0.172		
Maximum VIF		1.250			2.858		
N		114			114		

Note: 1) This table shows the regression ordinary-least-squares with year fixed- effects.

2) Symbols mean significance at: *** Significant at the 1% level, ** Significant at 5% level, * Significant at 10% level.

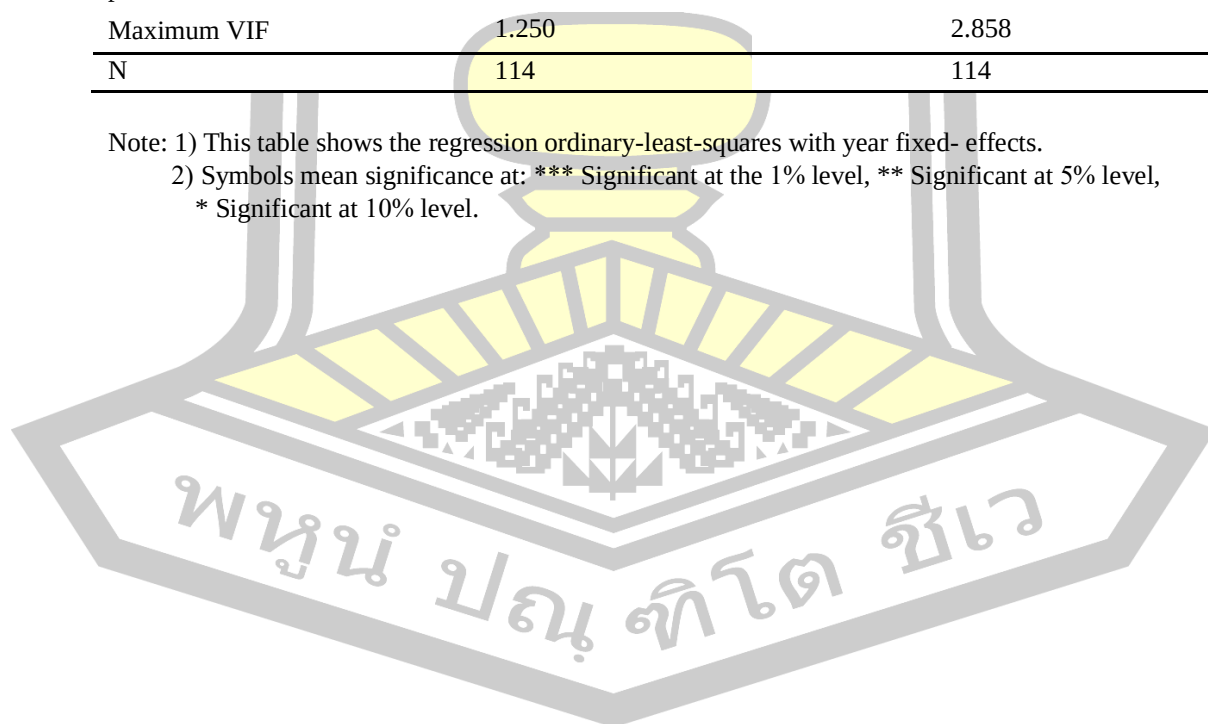
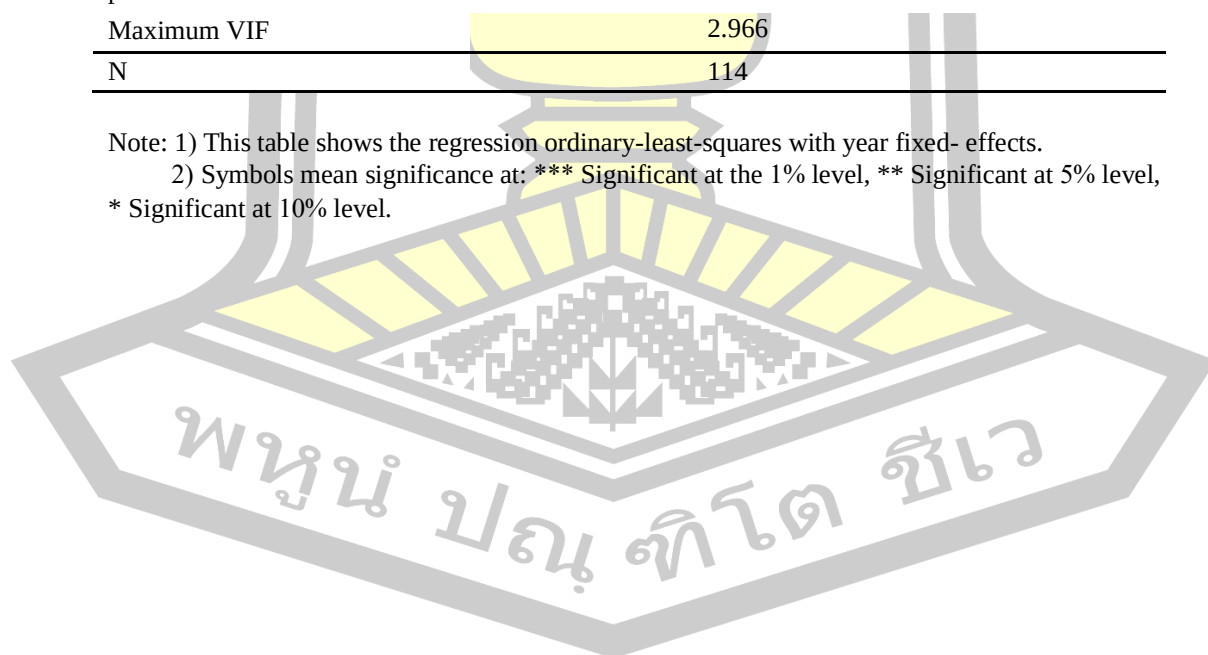


Table 21 Results of the Mediating Effect of Sustainability Disclosure on The Impact of Proactive Tax Planning on Firm Value

Variables	Model 5			
	L_FV			
	Ho	B	p-value	VIF
(Constant)		0.537	0.747	
L_PT		-0.327**	0.011	1.238
L_ESG		0.474	0.284	1.334
BD		0.443	0.251	1.157
BI		-2.488**	0.016	1.251
L_CR		0.626**	0.011	2.966
DE		0.533***	0.009	2.721
L_FS		0.014	0.787	1.333
FA		0.059***	0.000	1.347
Model Summary				
Year fixed-effects		Yes		
R ²		0.437		
Adj R ²		0.383		
F-Value		8.027***		
P-Value		0.000		
Hausman test		15.340***		
p-value		0.000		
Maximum VIF		2.966		
N		114		

Note: 1) This table shows the regression ordinary-least-squares with year fixed- effects.

2) Symbols mean significance at: *** Significant at the 1% level, ** Significant at 5% level, * Significant at 10% level.



Results of the Effects on Firm Value

The results of the mediating effect of sustainability disclosure on the impact of proactive tax planning on firm value in ESG100 index during the periods from 2020 to 2022 are showed in figure 2.

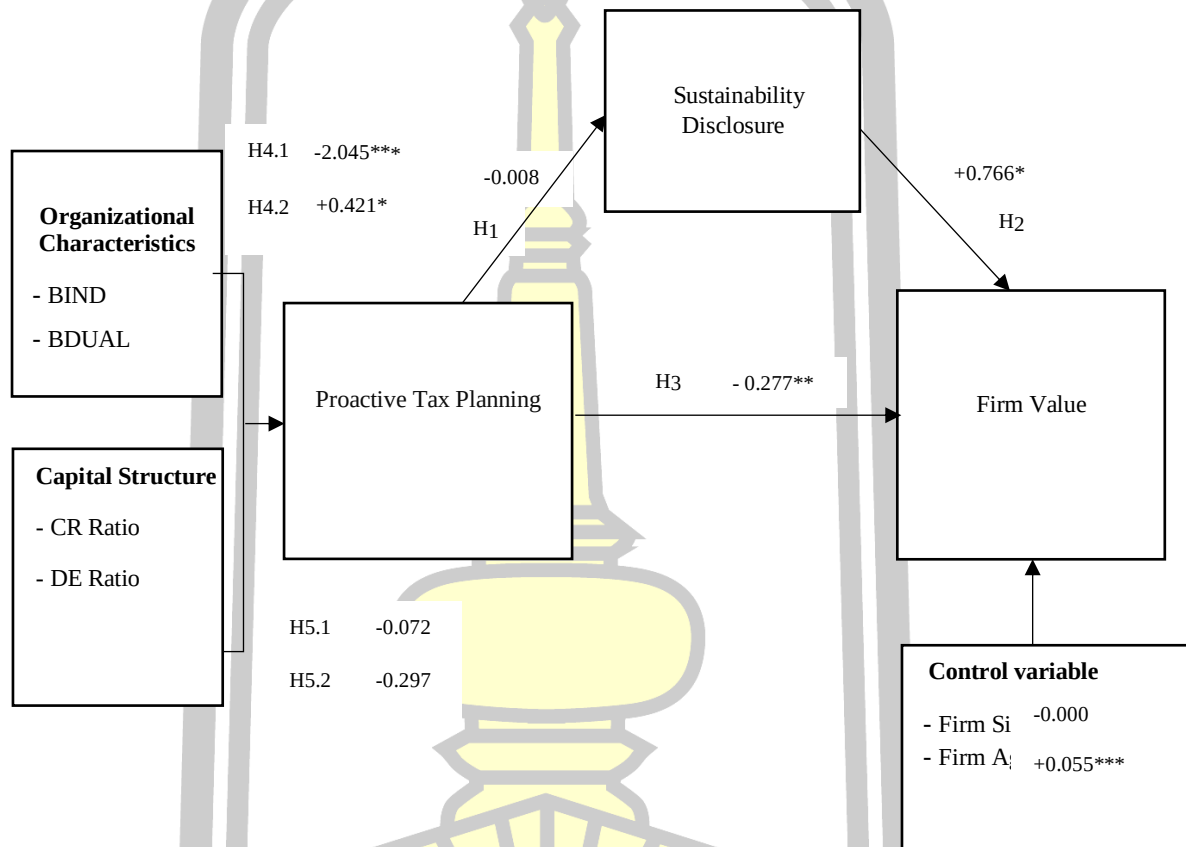


Figure 2 Results of the Effects on Firm Value

The model can predict the effects between independent variables and both dependent variables, which shows R^2 in models 1–5 as 0.338, 0.200, 0.324, 0.181, and 0.437 respectively. The F value of models 1-5 can explain the variance in the data by approximately 11.064 % ($p < 0.01$), 5.415 % ($p < 0.01$), 10.372 % ($p < 0.01$), 3.957 % ($p < 0.01$), and 8.027 % ($p < 0.01$), respectively.

The variance inflation factors (VIFs) of proactive tax planning and firm value, which are used to test multicollinearity among the four categories of proactive tax planning, together with the two control variables. In this case, the maximum VIF values of models 1-5 are 1.018, 1.018, 1.250, 2.858 and 2.966. The results are well below the cut-off value of 10 meaning each variable is not correlated with each other. Therefore, there are no significant multicollinearity problems confronted in these models (Hair et al., 2010; Husnin, Nawawi, & Salin, 2013).

Hypotheses Testing Results of Model 1

Table 19 presents the results of an FE regression analysis, which included year-fixed effects to account for the omitted time-invariant. The firm value served as the dependent variable, proactive tax planning as the independent variable, and two control variables (FA and FS). These variables were used to examine the effects of proactive tax planning, control variables, and firm value, in line with Hypothesis 3.

The first evidence in model 1 presents the regression results that proactive tax planning (L_PT) has a negative significant effect on the firm value (L_FV) (H3: $\beta_2 = -0.277$; $p < 0.05$). Additionally, the result is consistent with the research of many studies (Thanjunpong, 2018; Thanjunpong, 2017; Thanjunpong, 2015; Christina & Alexander, 2018; Sribunruang & Sutthi, 2021; Promaksorn et al., 2024), who found that proactive tax planning has a negative impact on the firm value. Hence, hypothesis 3 is accepted.

Second evidence: this study found the result of the control variables: firm age (FA) ($\beta_4 = 0.055$; $p < 0.00$) has a positive significant effect on firm value (FV). In terms of firm age, the result is consistent with the research of many studies (Tarmidi & Murwaningsari, 2019; Razali et al., 2018), which found that firm age has a positive effect on firm value.

Additionally, firm size (L_FS) ($\beta_3 = -0.000$; $P > 0.10$) has no significance with firm value; the result is consistent with the research of some studies (Kaewmuang & Pongsupatt, 2023), which found that firm size is not significant with firm value. Finally, one control variable (FA) has a positive significant effect on firm value, and one control variable (FS) is not significant with firm value. The results of the proactive tax planning effect on the firm value in ESG100 index during the periods from 2020 to 2022 are showed in figure 3.

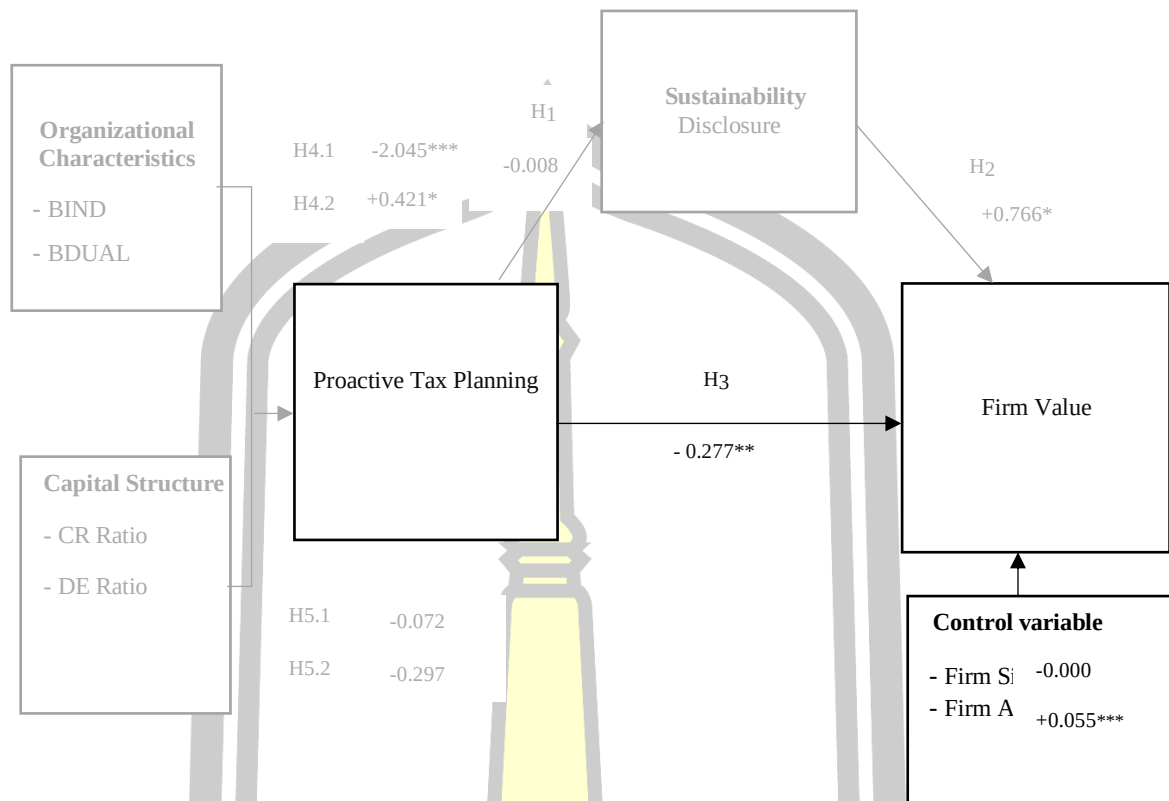


Figure 3 Results of the Proactive Tax Planning effect on the Firm Value

Hypotheses Testing Results of Model 2

Table 19 demonstrates the results of an FE regression analysis including year-fixed effects to control for omitted time-invariant with sustainability disclosure as the dependent variable and proactive tax planning as the independent variable that were used to test the effects of proactive tax planning and the sustainability disclosure, which are followed by hypothesis 1.

In addition, model 2 presents the regression results related to proactive tax planning and sustainability disclosure. The evidence shows that proactive tax planning (L_PT) has no significance with the sustainability disclosure (L_ESG) (H1: $\beta_2 = -0.008$; $p > 0.10$). This result is consistent with the research of many studies (Thanjunpong, Chaiwong, & Dechsiri, 2018; Susanti, 2017), which found that proactive tax planning does not affect sustainability disclosure. Hence, hypothesis 1 is rejected.

The results of the proactive tax planning effect on the sustainability disclosure in ESG100 index during the periods from 2020 to 2022 are showed in figure 4.

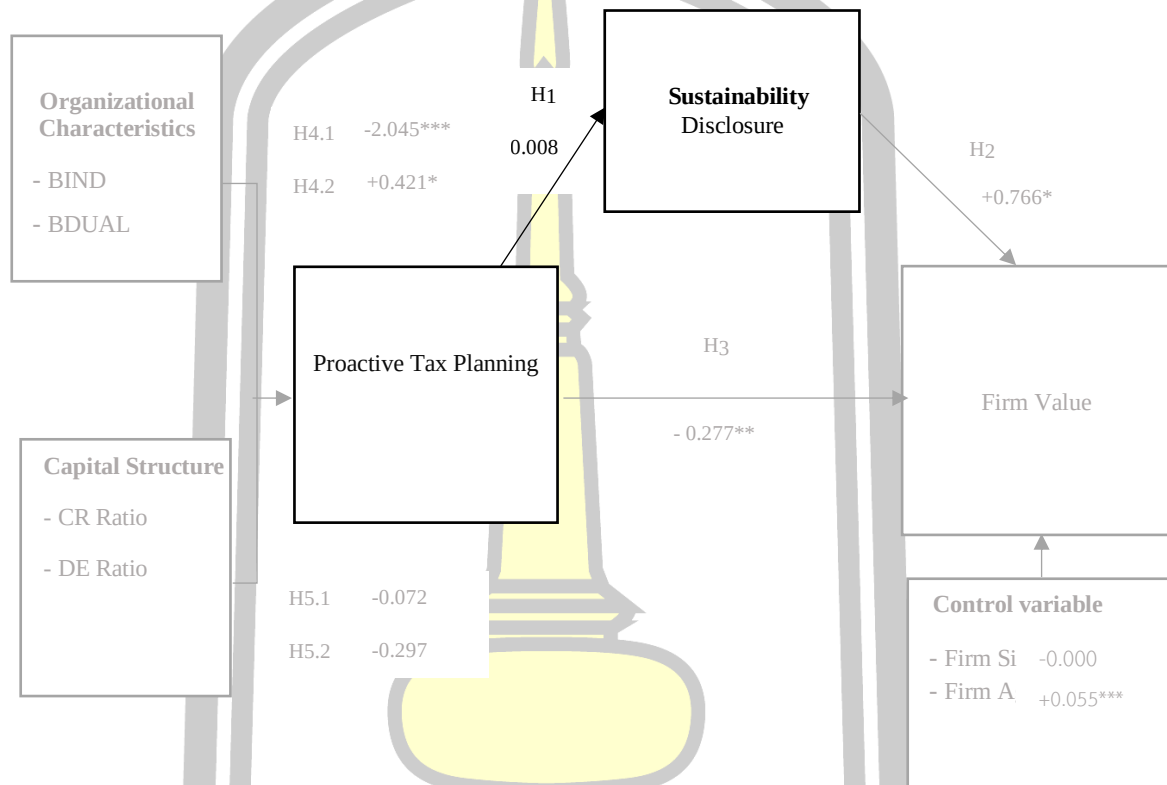


Figure 4 Results of the Proactive Tax Planning effect on the Sustainability Disclosure

Hypotheses Testing Results of Model 3

Table 20 demonstrates the results of an FE regression analysis including year-fixed effects to control for omitted time-invariant with firm value as the dependent variable and sustainability disclosure as the independent variable that were used to test the effects of sustainability disclosure and the firm value, which are followed by Hypothesis 2.

In addition, model 3 presents the regression results related to sustainability disclosure and firm value. The evidence shows that the sustainability disclosure (L_ESG) is significant with the firm value (L_FV) (H2: $\beta_2 = 0.766$; $p < 0.10$). This result is consistent with the research of many studies (Thanjunpong, Dechsiri & Awirothananon, 2018; Rukphanichmanee, Thammasiri & Duangchaiyoosook, 2018; Siminica et al., 2019; Abdi, Li & Càmarà-Turull, 2020; Tasnia, AlHabshi, & Rosman, 2020; Aydoğmuş, Gülay & Ergun, 2022; Tran & Tran, 2022; Nguyen, Hoan & Tran,

2022; Wu et al., 2022; Lertsabanant & Maglin, 2022), who found that sustainability disclosure has a positive impact on the firm value. Hence, hypothesis 2 is accepted.

The results of the sustainability disclosure effect on the firm value in ESG100 index during the periods from 2020 to 2022 are showed in figure 5.

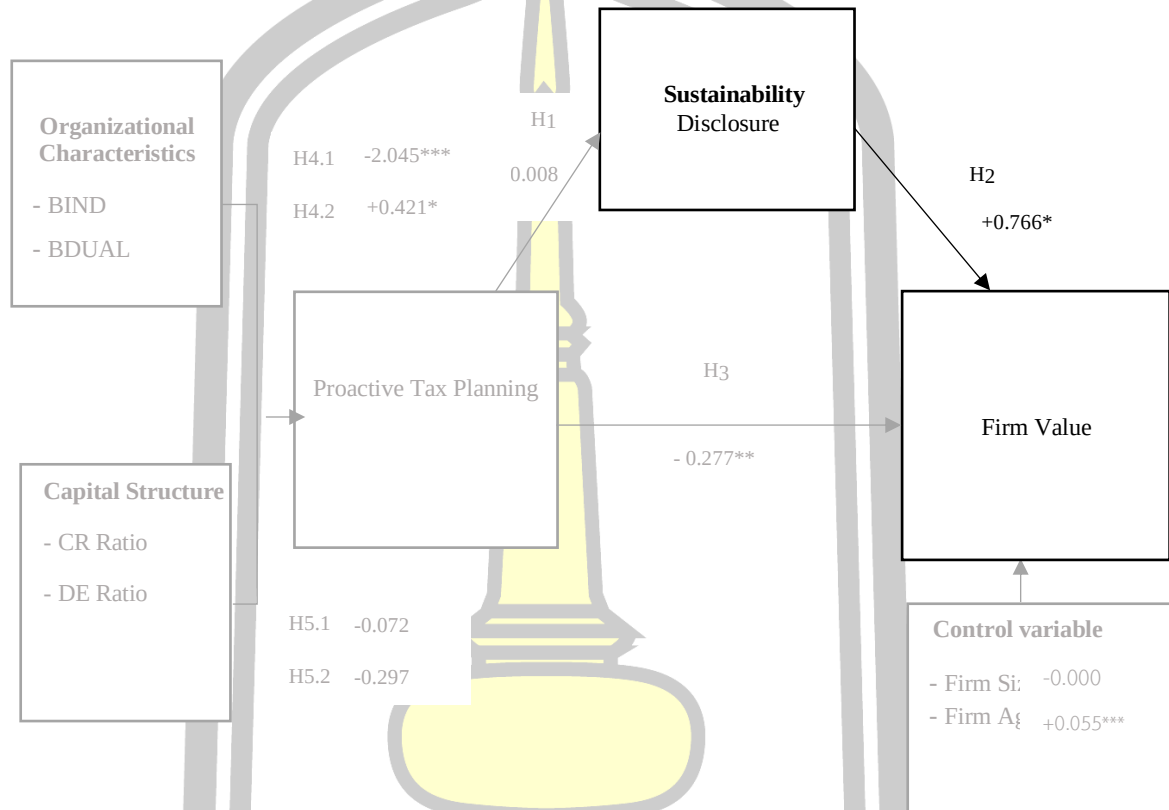


Figure 5 Results of the Sustainability Disclosure effect on the Firm Value.

Hypotheses Testing Results of Model 4

Table 20 demonstrates the results of an RE regression analysis. In this study, proactive tax planning as the dependent variable, organizational characteristics (board independent, board duality), and capital structure (current ratio, debt to equity) as the independent variables were used to test the effects of organizational characteristics, capital structure, control variables, and proactive tax planning, which are followed by Hypotheses 4.1, 4.2, 5.1 and 5.2. In addition, model 4 presents the regression results related to organizational characteristics (board duality, board independence), capital structure (current ratio, debt to equity), and proactive tax planning.

The first evidence shows that board independent (BI) has a significant effect on proactive tax planning (PT) (H4.1: $\beta_3 = -2.045$; $p < 0.05$). This result is consistent with the research of many studies (e.g., Peter, Hamid, & Ibrahim, 2020; Chaichuen et

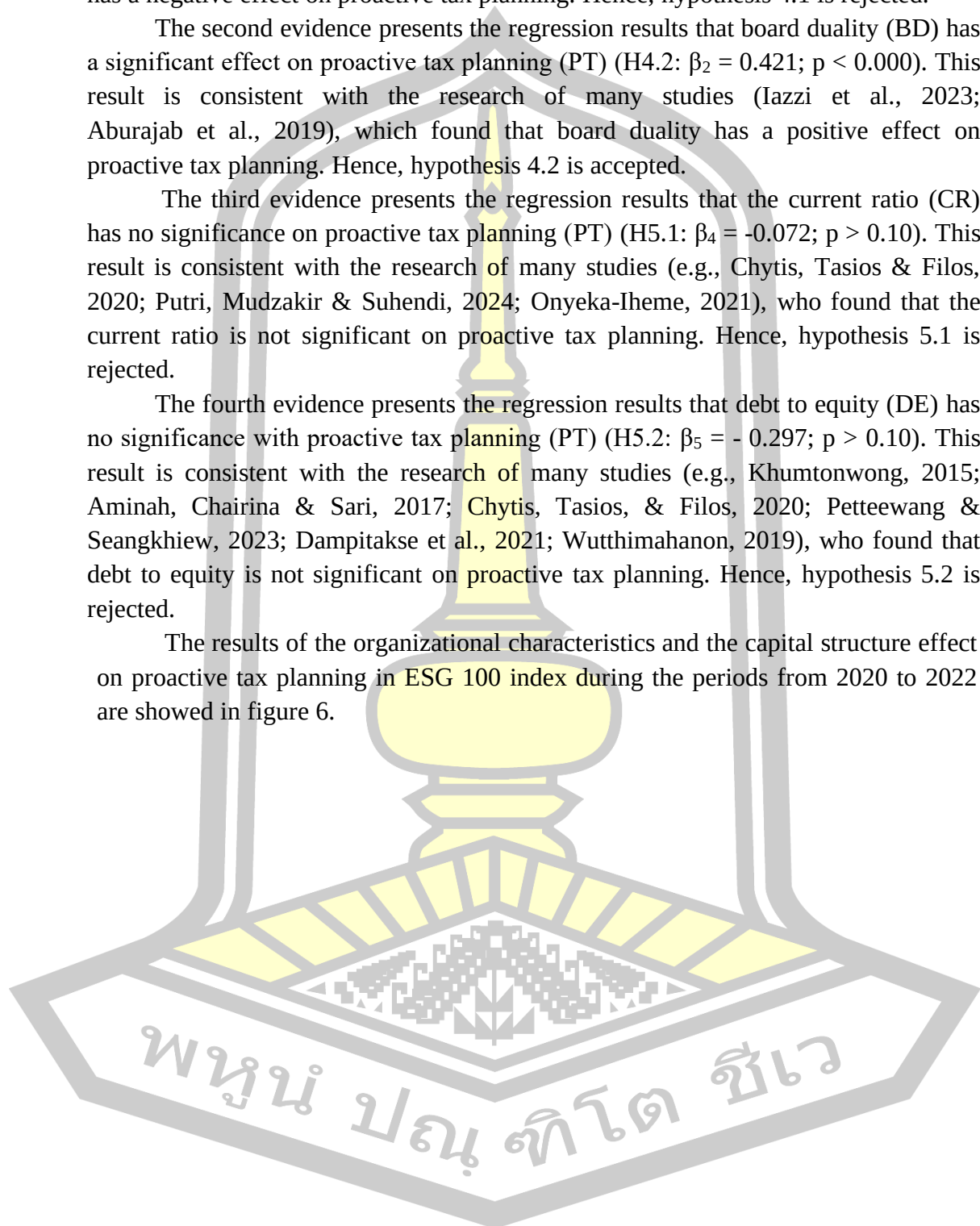
al., 2022; Asviriwangi, Salman, & Masruri, 2023), who found that board independent has a negative effect on proactive tax planning. Hence, hypothesis 4.1 is rejected.

The second evidence presents the regression results that board duality (BD) has a significant effect on proactive tax planning (PT) (H4.2: $\beta_2 = 0.421$; $p < 0.000$). This result is consistent with the research of many studies (Iazzi et al., 2023; Aburajab et al., 2019), which found that board duality has a positive effect on proactive tax planning. Hence, hypothesis 4.2 is accepted.

The third evidence presents the regression results that the current ratio (CR) has no significance on proactive tax planning (PT) (H5.1: $\beta_4 = -0.072$; $p > 0.10$). This result is consistent with the research of many studies (e.g., Chytis, Tasios & Filos, 2020; Putri, Mudzakir & Suhendi, 2024; Onyeka-Iheme, 2021), who found that the current ratio is not significant on proactive tax planning. Hence, hypothesis 5.1 is rejected.

The fourth evidence presents the regression results that debt to equity (DE) has no significance with proactive tax planning (PT) (H5.2: $\beta_5 = -0.297$; $p > 0.10$). This result is consistent with the research of many studies (e.g., Khumtonwong, 2015; Aminah, Chairina & Sari, 2017; Chytis, Tasios, & Filos, 2020; Petteewang & Seangkhiew, 2023; Dampitakse et al., 2021; Wutthimahanon, 2019), who found that debt to equity is not significant on proactive tax planning. Hence, hypothesis 5.2 is rejected.

The results of the organizational characteristics and the capital structure effect on proactive tax planning in ESG 100 index during the periods from 2020 to 2022 are showed in figure 6.



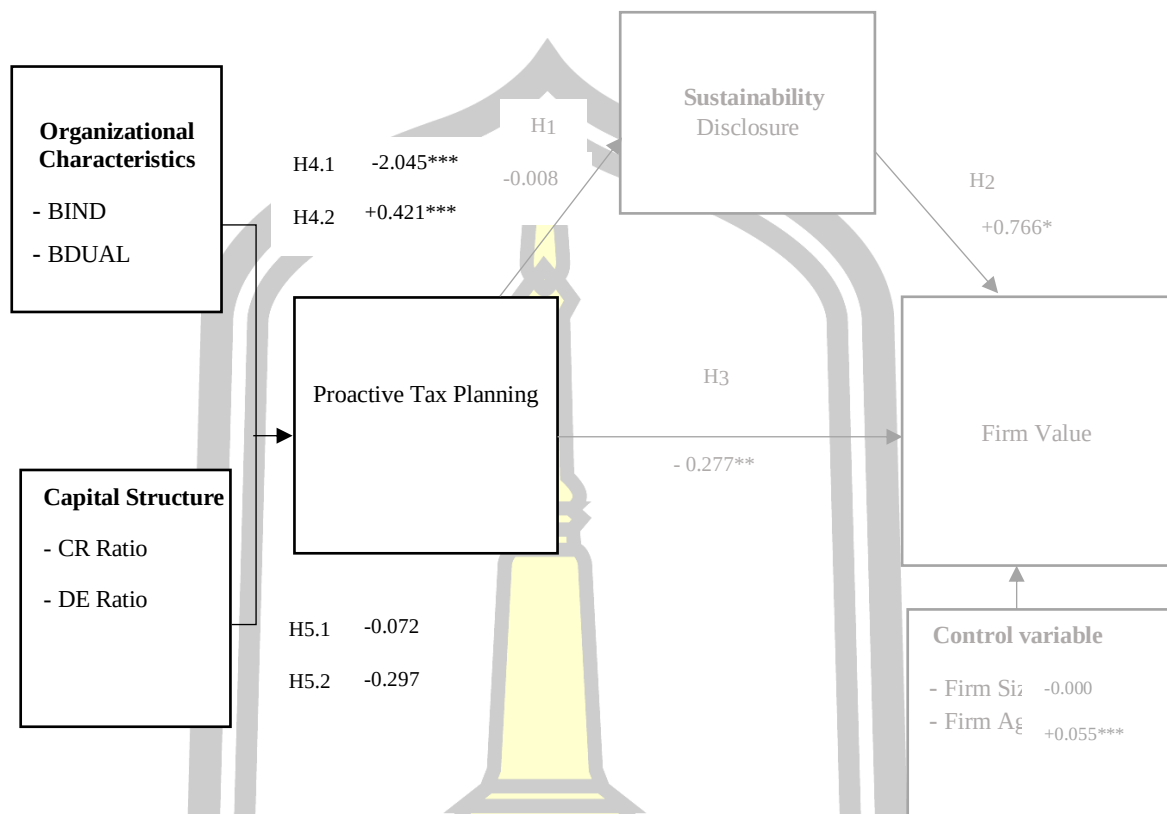


Figure 6 Results of the Organizational Characteristics and the Capital Structure effect on Proactive Tax Planning.

Hypotheses Testing Results of Model 5

This study investigates the mediating effect of sustainability disclosure on the impact of proactive tax planning on firm value in the ESG100 index from 2020 to 2022. It tests the role of a mediating variable, with sustainability disclosure serving as the mediating variable between the impact of proactive tax planning and firm value.

The mediating effect denotes an indirect influence of one variable on another, facilitated by a mediating variable. It signifies the segment of the effect that is not conveyed immediately. A mediating variable transmits the effect, in contrast to other effects like those of a moderator or confounding variable, which change or alter it (MacKinnon, 2001).

The analysis of mediating influence proposed by Baron and Kenny (1986) explains the criteria for analyzing research results as follows.

1. Path a, b, and c in a model are statistically significant.
2. Path c' must be less than path c. This is because path c decreases due to the mediating variable being introduced between the independent variable and the dependent variable. While many scholars believe that path c' does not need to be

statistically significant (Piriyakul, 2015).

The mediating effect of sustainability disclosure on the impact of proactive tax planning on firm value, this study estimates a series of equations using the balanced panel data regression model as follows:

Table 22 Results from the Mediation Analyses

Variables		B	p-value	Effect
L_PT	→ L_ESG	-0.008	0.748	Indirect effect (a)
L_ESG	→ L_FV	0.766*	0.096	Indirect effect (b)
L_PT	→ L_ESG → L_FV	-0.327**	0.011	Total effect (c)
L_PT	→ L_FV	-0.277**	0.024	Direct effect (c')

Note: a = the relation of X to M,
 b = the relation of M to Y
 c = the relation of X to Y adjusted for M
 c' = the relation of X to Y

Table 22 demonstrates the results of an FE regression analysis. In this study, proactive tax planning as the dependent variable, sustainability disclosure as the mediating variable were used to test the effects of proactive tax planning and firm value.

1. The indirect effect (a, b), the first evidence presents the regression results that proactive tax planning (L_PT) is not significant on sustainability disclosure (L_ESG) ($\beta = -0.008$; $p > 0.10$), and sustainability disclosure (L_ESG) has a positive effect on firm value (L_FV) ($\beta = 0.766$; $p < 0.10$).

2. The total effect (c), the second evidence shows that sustainability disclosure (L_ESG) has a negative effect between proactive tax planning (L_PT) on firm value (L_FV) ($\beta = -0.327$; $p < 0.01$).

3. The direct effect (c'), the third evidence presents the regression results that proactive tax planning (L_PT) has a negative effect on firm value (L_FV) ($\beta = -0.277$; $p < 0.05$).

Based on the above information, it was found that 1) the test results under the conditions of path b and path c showed statistically significant findings, but the study found that under the conditions of path a, the research results were not statistically significant. Additionally, 2) although path c' had a lower value than path c, path c showed a decrease in value, which might be due to the influence of a mediating variable introduced between the independent variable and the dependent variable. However, the results of this study do not align with the research analysis criteria of Baron and Kenny (1986). Therefore, to summarize, this model does not have the transmission of a mediating variable (Detnakarin, 2017). In summary, the results of the mediating effect of sustainability disclosure on the impact of proactive tax

planning on firm value in the ESG100 index during the periods from 2020 to 2022 are shown in Figures 7-8.

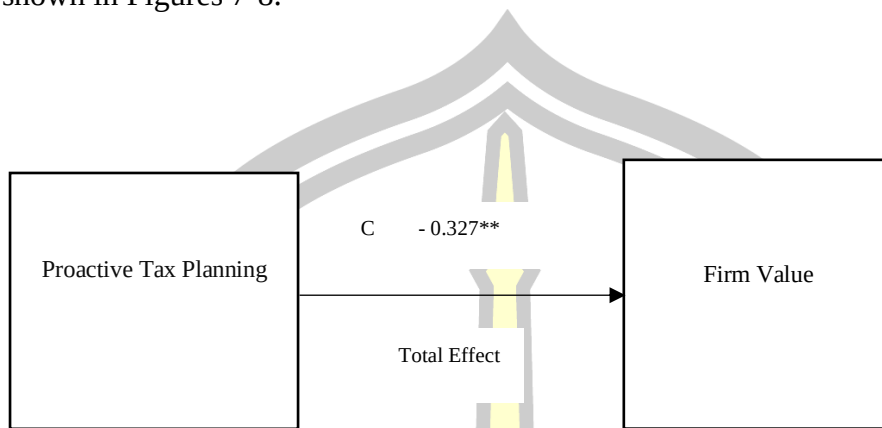


Figure 7 Results of the Total Effect

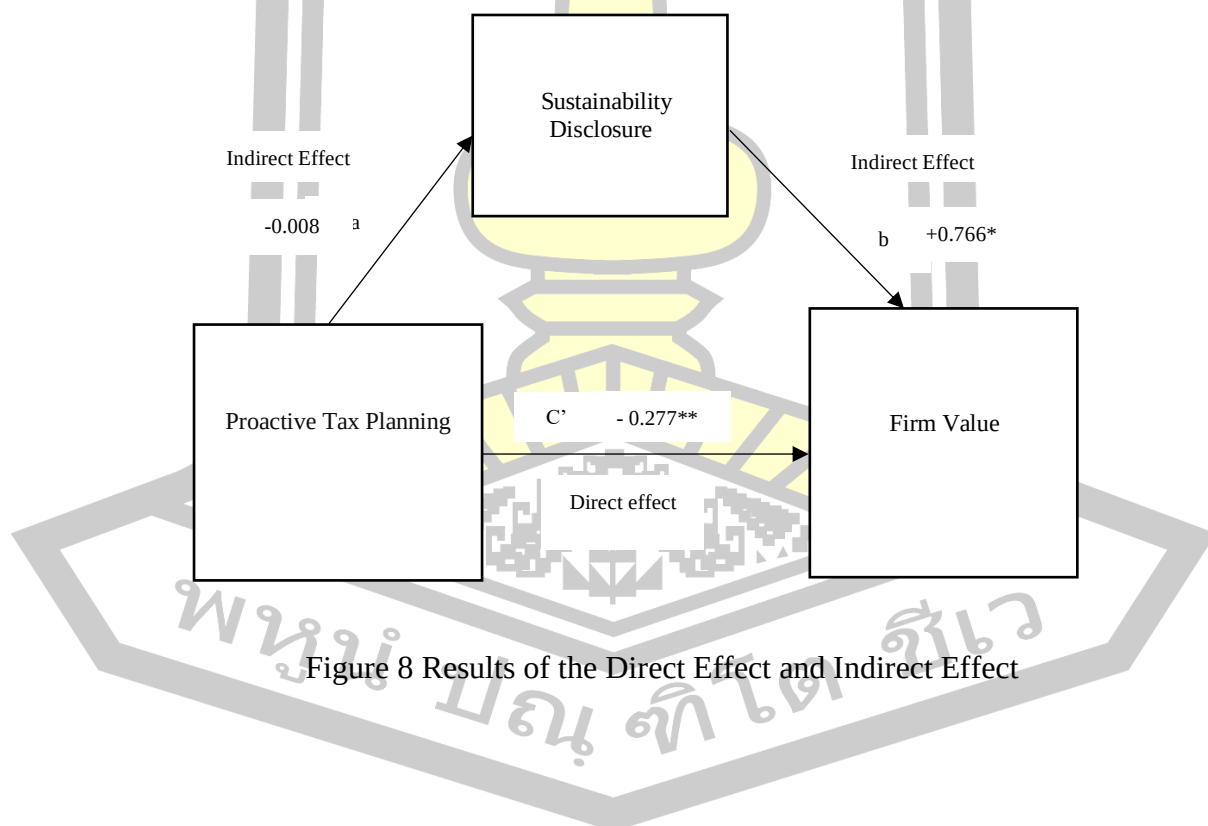


Figure 8 Results of the Direct Effect and Indirect Effect

Summary of Hypotheses Testing

In conclusion, this chapter's essence is to present multiple regression analysis results using balanced panel data with FE model and RE model results that are more suitable for estimation than other hypothesis testing methods. The above hypothesis test concluded the results of an FE regression analysis including year fixed effects to control for omitted time-invariant with firm value as dependent variable, proactive tax planning as the independent variable, sustainability disclosure as the mediating variable, organizational characteristics and capital structure as the antecedent variable and two control variables that were used to test the effect between proactive tax planning, control variables, and the firm value. In addition, the above hypothesis test concluded the results of an FE and RE regression analysis including year-fixed effects to control for omitted time-invariant with the firm value as the dependent variable and proactive tax planning as the independent variable. Finally, the summary of hypotheses testing is provided in table 20.

Table 23 Summary of Hypotheses Testing

Hypotheses	Estimated Sign	Result Sign	Hypotheses Description	Results
H1	+	N/A	The proactive tax planning has a positive effect on the sustainability disclosure.	Rejected
H2	+	+	The sustainability disclosure has a positive effect on the firm value.	Accepted
H3.1	-	-	The proactive tax planning has a negative effect on the firm value.	Accepted
H3.2	+	N/A	The sustainability disclosure has a positive effect on the relationship between proactive tax planning and firm value.	Rejected
H4.1	+	-	The board independent has a positive effect on the proactive tax planning.	Rejected
H4.2	+	+	The board duality has a positive effect on the proactive tax planning.	Accepted
H5.1	+	N/A	The current ratio has a positive effect on the proactive tax planning.	Rejected
H5.2	+	N/A	The debt-to-equity ratio has a positive Effect on the proactive tax planning.	Rejected

Note: Symbols represent the result as + positive significant, - negative significant, and N/A not significant

CHAPTER V

CONCLUSION

This study investigates the effect between mediator variable, independent variables and dependent variables in the previous chapters by showing details such as descriptive statistics and hypotheses testing with regression analysis. Thus, this chapter summarizes the overview of study for conclusion, discussion, and the theoretical and managerial contributions. In addition, research limitations and recommendations for future study will also be presented.

Conclusion

An empirical research method based on secondary data was applied in this study. The data is a longitudinal study of the proactive tax planning in ESG100 index during the periods from 2020 to 2022 for a total of 3 years. This study started in the year 2020, the year most researchers began utilizing annual proactive tax planning for a total of 3 years. This was done in order to mitigate the impact of transitory tax items and to minimize the influence of temporary differences on proactive tax planning (Thanjunpong, 2018). Similarly, the aforementioned rationale is consistent with previous research suggesting that tax-related studies should involve the continuous collection of data over several years to mitigate potential impacts arising from temporal fluctuations (Suwangerd, 2014). In addition, at the end of 2019, the Thai government announced an economic stimulus policy (The Secretariat of the Cabinet, 2019), which received significant attention from the public and was beneficial for entrepreneurs (Ministry of Finance, 2019b). Furthermore, it aimed to promote private sector investment to support economic expansion (Ministry of Finance, 2019a), which could potentially impact government tax revenue.

The sample includes a wide range of industries; agro & food, consumer, industrial, property and construction, resources, services, and technology. The conditions were that the sample of this study did not include the companies that: (1) firm were registered in financial service, insurance industries, and leasehold property funds because their total asset base and financial structure are not comparable to those of the other companies (Arunruangsirilert, Srihirunpunlop & Boonyawat, 2022; Sook-aram, 2022).

Moreover, this study excludes the banking, capital investment, and insurance sectors, as these three groups have distinct operational characteristics and regulatory frameworks compared to other sectors. This divergence may result in differences in corporate income tax reporting compared to other groups (Pratomsrimek, 2016), (2) companies are under rehabilitation because they are subject to different financial reporting requirement and business condition, (3) there are no fiscal year-ends are not

on the 31 December to ensure that the samples are subject to similar market condition, withdrawn from the ESG index between 2020 and 2022, (4) firms have been incomplete data for analysis, (5) firms have outlier data of the main variable. Therefore, the final sample group consisted of 38 firm-year, and there are 114 firm-year observations as follows; Observation in services is the highest number of 10 companies or 30 firm-year observations, representing 26.32 percent. The next, agro & food 9 companies or 27 firm-year observations, industrials 6 companies or 18 firm-year observations, technology 6 companies or 18 firm-year observations, consumers 3 companies or 9 firm-year observations, property & construction 3 companies or 9 firm-year observations. Finally, observation in resources is the least number of 1 company or 3 firm-year observations.

This study has a balanced panel data regression model. Longitudinal data was determined for analysis because they utilized both cross-sectional data and time series data. The cross-sectional data consists of repeated measurements collected from the same units over multiple time periods (Arunruangsirilert, Srihirunpunlop & Boonyawat, 2022). Statistical testing must be performed to confirm the selection of the appropriate model for panel data between pooled OLS, fixed effect (FE), and random effect (RE) models. After the testing, the FE and RE models are an appropriate methodology for all models of this study.

To answer six research questions, this study has six research objectives, including. Firstly, to answer the question, how does the mediating effect of sustainability disclosure on the impact of proactive tax planning on firm value in the ESG100 index during the periods from 2020 to 2022? The objective is to investigate the mediating effect of sustainability disclosure on the impact of proactive tax planning on firm value in the ESG 100 index during the periods from 2020 to 2022.

Secondly, to answer hypothesis 1, how does the proactive tax planning effect on the sustainability disclosure? The objective is to examine whether the proactive tax planning effect on sustainability disclosure. In addition, this objective relied on the stakeholder theory that can be used to explain the solution between the proactive tax planning issue and sustainability disclosure. All variables, which include sustainability disclosure as the dependent variable, are composed of the ESG score and proactive tax planning as the independent variable. However, when considered in proactive tax planning, the result shows that it has no significance on the sustainability disclosure.

Thirdly, to answer hypothesis 2, how does the sustainability disclosure effect on the firm value? The objective is to examine whether the sustainability disclosure effect on firm value. In addition, this objective relied on the signal theory that can be used to explain the solution between the sustainability disclosure issue and firm value. All variables, which include firm value as the dependent variable, are composed of the stock price and sustainability disclosure as the independent variable consist of ESG score. However, when considered in sustainability disclosure, the

result shows that it has a positive effect on the firm value.

Fourthly, to answer hypothesis 3.1, how does the proactive tax planning effect on the firm value? The objective is to examine whether proactive tax planning effect on firm value. In addition, this objective relied on the tradeoff theory that can be used to explain the solution between the proactive tax planning issue and firm value. All variables, which include firm value as the dependent variable, are composed of the stock price and proactive tax planning as the independent variable. However, when considered in proactive tax planning, the result shows that it has a negative effect on the firm value. Additionally, control variables consist of firm size and firm age that were used to test. The result showed that firm size has no significance on firm value. However, when considered in firm age, the result shows that firm age has positive significance on firm value. Moreover, to answer hypothesis 3.2, how does the mediating effect of sustainability disclosure on the impact of proactive tax planning on firm value. All variables, the factors that influence in this study focus on proactive tax planning, as an independent variable and sustainability disclosure as a mediating variable. the results of this study do not align with the research analysis criteria of Baron and Kenny (1986). Therefore, to summarize, this model does not have the transmission of a mediating variable (Detnakarin, 2017).

Fifthly, to answer hypothesis 4.1-4.2, how does the organizational characteristics effect on proactive tax planning? The objective is to examine whether the organizational characteristics effect on proactive tax planning. In addition, this objective relied on the agency theory that can be used to explain the solution between the organizational characteristics issue and proactive tax planning. All variables, which include proactive tax planning as the dependent variable, and organizational characteristics as the independent variable consist of board independent and board duality. However, when considered in board independent (H4.1), the result shows that it has a negative effect on the proactive tax planning, and board duality (H4.2), the result shows that it has a positive effect on the proactive tax planning.

Finally, to answer hypothesis 5.1-5.2, how does the capital structure effect on proactive tax planning? The objective is to examine whether the capital structure effect on proactive tax planning. In addition, this objective relied on the portfolio theory that can be used to explain the solution between the capital structure issue and proactive tax planning. All variables, which include proactive tax planning as the dependent variable, and capital structure as the independent variable consist of the current ratio and debt to equity ratio. However, when considered in board independent (H5.1), the result shows that it has no significance on the proactive tax planning, and board duality (H5.2), the result shows that it has no significance on the proactive tax planning.

Discussion

Proactive Tax Planning and Sustainability Disclosure

To answer the research question in hypothesis 1, how does the proactive tax planning effect on the sustainability disclosure? As the result showed that the proactive tax planning has no effect on the sustainability disclosure, hypothesis 1 is rejected.

As a result, the disclosed ESG information may be descriptive in nature without showing financial figures, thus it cannot explain the effect of proactive tax planning on sustainability disclosure (Thanjunpong, Chaiwong, & Dechsiri, 2018). The company (and investors) are well aware that proactive tax planning does not align with their ESG strategy and it's hard to say whether they support the communities they do business with, while at the same time seeking proactive state tax planning for the investments they are already making. But the decision to use proactive state tax planning is not always clear-cut; it depends on the facts (Cowan & Cutler, 2023).

Income tax expense is not policy that can drive or determine the sustainability of entrepreneurs, and there is no evidence showing significant impact. Therefore, the existence of various tax policies is an obstacle to sustainability but cannot be statistically proven. It is believed that taxes are a burden and an obstacle to business growth and sustainability. Although there is a possibility that taxes could affect sustainability, no clear research findings have been found, which could have been perhaps because the tax system has been negotiated by the business owners' association or intervened by the government. Hence, multiple tax policy demonstrates no serious threat to the sustainability of companies (Aribaba, et al., 2019).

Stakeholder theory explains that executives should not only prioritize internal stakeholders but also external stakeholders such as customers, communities, and governments. This is because all stakeholder groups are affected by business operations (Chatiwong, 2017). Therefore, companies may engage in sustainability disclosure to meet societal expectations, which could make proactive tax planning more challenging (Thanjunpong, Chaiwong & Dechsiri, 2018).

However, shareholders may not prioritize sustainability disclosure due to the additional costs associated with investing in sustainability disclosure (Tasnia, AlHabshi, & Rosman, 2020). Additionally, although tax strategies and tax collection mechanisms from various countries can be adapted for implementation in Thailand, they may not be entirely applicable due to differences in tax structures, cultural values, and traditions unique to each country. Therefore, income tax expenses and environmental conservation tax collection should be actively supported by the government (Poonpool & Plukphonngam, 2020). Based on the aforementioned reasons, this may explain why the findings of this study differ from previous research.

In the context of Thailand, it was found that proactive tax planning has no effect on the sustainability disclosure of the ESG100 Index.

Sustainability Disclosure and Firm Value

To answer the research question in hypothesis 2, how does the sustainability disclosure effect on the firm value? As the result showed that sustainability disclosure has a positive effect on the firm value, hypothesis 2 is accepted. Additionally, the signal theory explains the effect between sustainability disclosure and firm value. The signaling theory was utilized to elucidate investor behavior upon receiving pertinent information for their decision-making processes (Chirakool, Poonpool & Wangcharoendate, 2022).

There are many studies show that sustainability disclosure has a positive effect on firm value (Thanjunpong, Dechsiri & Awirothananon, 2018; Rukphanichmanee, Thammasiri & Duangchaiyoosook, 2018; Siminica et al., 2019; Abdi, Li & Càmara-Turull, 2020; Tasnia, AlHabshi, & Rosman, 2020; Aydoğmuş, Gülay & Ergun, 2022; Tran & Tran, 2022; Nguyen, Hoan & Tran, 2022; Wu et al., 2022; Lertsabanant & Maglin, 2022). As a result, the sustainability report may show that the company conducts its business ethically, reflects the organizational culture, and indicates whether the firm value should increase or decrease (Xu et al., 2022). Therefore, sustainability disclosure and firm value have garnered attention because this information is beneficial to the industry and the government (Song, 2023).

However, analysts predict that companies with increased sustainability disclosure tend to have fewer conflicts of interest (Kim & Koo, 2023). Consistent with recent research, sustainability disclosure helps reduce information asymmetry and increases investor trust. Therefore, it results in reduced stock price volatility (Tasnia, AlHabshi, & Rosman, 2020). Shareholders, investors, creditors, the government, and stakeholders expect companies to provide additional sustainability disclosures (Aydoğmuş, Gülay & Ergun, 2022). This is because companies that disclose sustainability information are considered socially and environmentally responsible, which helps enhance the company's image and attract investors. Sustainability disclosures reduce the company's risk, thereby increasing its credit rating, which in turn lowers financial costs or increases firm value (Sook-aram, 2022). This research shows that the more sustainable report disclosures are produced, the greater investor confidence increases (Sriersan, Poonpool & Bhongchirawattana, 2024).

Additionally, the pressure from investors who want to invest sustainably has led companies to engage more in ESG activities, making stakeholders feel confident and potentially creating long-term value for the company (Nguyen, Hoan & Tran, 2022). Stocks of companies with better ESG performance may be a new option for significant investments for risk-averse investors. Fund managers can increase holdings in companies with superior ESG performance to reduce the fund's risk from large-scale investor redemptions. Additionally, promoting ESG investment strategies

can serve as a risk management measure to maintain financial market stability and prevent systemic financial risks (Wang, Shen & Li, 2023).

Proactive Tax Planning and Firm Value

To answer the research question in hypothesis 3, how does proactive tax planning affect the firm value? The result showed that proactive tax planning negatively affects the firm value, hypothesis 3.1 is accepted.

There are many studies show that proactive tax planning has a negative impact on the firm value (e.g., Thanjunpong, 2018; Putri & Hudiwinarsih, 2018; Thanjunpong, 2017; Thanjunpong, 2015; Christina & Alexander, 2018; Sribunruang & Sutthi, 2021; Promaksorn et al., 2024). Indicates that the company's focus on proactive tax planning by strictly using legal tax incentives to reduce tax expenses will negatively impact the firm's value. Although reduced tax expenses may increase the company's net profit, proactive tax planning to reduce expenses involves potential costs (Thanjunpong, 2015). Because corporate tax planning activities have the potential to incur large costs (Bhagiawan & Mukhlisin, 2020), such as bankruptcy costs, legal costs that may arise if government officials detect wrongdoing in tax planning (Thanjunpong, 2015), and other costs such as tax consultancy fees, fines, etc. (Wang, 2010; Bhagiawan & Mukhlisin, 2020; Putri & Hudiwinarsih, 2018; Thanjunpong, 2018).

Additionally, it may be due to increased agency costs, as executives plan taxes to receive higher compensation. Therefore, this might lead investors to question the executives' behavior, resulting in a decrease in firm value (Thanjunpong, 2018). Therefore, if the cost exceeds the benefits gained from tax planning, it may negatively impact the firm's value (Thanjunpong, 2015; Thanjunpong, 2018). However, Thailand is a developing country, and there may be concerns about the costs and transparency of agents. Additionally, the initial phase of Sustainability Disclosure incurs relatively high costs (Friske, Hoelscher & Nikolov, 2023). The Revenue Department mandates that companies listed on the Stock Exchange of Thailand pay a maximum tax rate of 20 percent on taxable profits, which increases the costs for Thai listed companies (Thanjunpong, 2018; Temboonprasertsuk, 2021). Furthermore, the Thaipat Institute ranks listed companies in the sustainable stock category over a short period, and this research collected data from a sample group over only three years, which may have negative impacts as reflected in the research findings.

In summary, these reasons may lead to a decrease in firm value. Therefore, it could be another reason why the ESG100 index, which has high operational costs, places importance on tax incentives to reduce expenses. This will result in an increase in business value and create a competitive advantage, which is a key strategy in business management (Sribunruang & Sutthi, 2021).

The Sustainability Disclosure, Proactive Tax Planning and Firm Value

To answer the research question in hypothesis 3.2, how does the sustainability disclosure has an effect on the relationship between proactive tax planning and firm value? As a result, the sustainability disclosure has no effect on the relationship between proactive tax planning and firm value. Therefore, this model does not have the transmission of a mediating variable (Detnakarin, 2017). Hypothesis 3.2 is rejected.

This research found results that differ from past studies because there are other reasons that may cause the sustainability disclosure to have no effect on the relationship between proactive tax planning and firm value as follows. In Thailand, Thaipat Institute started ranking listed companies in the sustainable stock group not long ago, and this research collected evaluation results for only 3 years, from 2020 to 2022, because of the year in 2020, it was found that ESG issues began to attract widespread interest from investors, leading to a significant increase in the offering of ESG stock funds. As a result, the selection of ESG stocks is likely to be concentrated in companies that excel in ESG or the ESG100 Index, which only have 114 fully disclosed ESG data points. Therefore, the data used for the research analysis may not be robust enough to draw broad conclusions. Consequently, the limited data collection period and the small amount of available data might be the reasons why the sustainability disclosure has no effect on the relationship between proactive tax planning and firm value.

Secondly, sustainability disclosure involves revealing environmental and social information in a descriptive manner without presenting financial figures (Thanjunpong, Chaiwong, & Dechsiri, 2018). Therefore, it may not be appropriate to use it to measure the impact in hypothesis 3.2. Thirdly, a review of past literature reveals that most research tends to measure the dependent variable, which is firm value, using Tobin's Q. This is because Tobin's Q (Tobin & Brainard, 1976) can measure firm value and reflect accounting performance using figures from financial statements, as well as economic value using market value (Jitkham & Yarana, 2022). Therefore, there are many studies that apply Tobin's Q to measure firm value. Consistent with past literature reviews, most studies measure the dependent variable, which is firm value, according to accounting value, which is Tobin's Q (e.g., Khaoula & Moez, 2019; Widyanto, Kristanto & Sucahyo, 2019; Bhagiawan & Mukhlisin, 2020; Andayani & Yanti, 2021; Hasan, Lobo & Qiu, 2021; Sribunruang & Sutthi, 2021; Kulsiriwanit, 2021; Jitkham & Yarana, 2022; Puspitaningrum & Soetardjo, 2022).

However, the research measures the dependent variable differently using the stock price variable because previous studies measuring firm value from stock prices are limited (e.g., Tasnia, AlHabshi, & Rosman, 2020; Wahab, Shaipah & Holland, 2012; Lestari & Wardhani, 2015; Li et al., 2016; Kulsiriwanit, 2021). Since the closing price of the stock is the price agreed upon by both buyers and sellers, it is considered a fair price (Kulsiriwanit, 2021; Ocharatporn, 2008). Using different

variables may be the reason why the sustainability disclosure has no effect on the relationship between proactive tax planning and firm value.

Fourthly, most research studies proactive tax planning in developed countries such as China (Huang et al. 2024; Zhu et al., 2023; Li & Li, 2022), there are few studies in developing countries such as Nigeria (Aribaba et al., 2019) and Thailand (Prempanichnukul, 2018) due to the differences in operational environments.

This study found that investors in foreign stock markets prioritize sustainability issues. However, the initial cost of preparing sustainability reports is quite high, and stakeholders are concerned about social and environmental impacts, especially large companies that need to respond to individuals interested in investing in the business. Therefore, at the beginning of their operations, large companies prepare sustainability reports to communicate with stakeholders because they need investment capital to start their business (Almashhadani & Almashhadani, 2023).

Therefore, it can be concluded that in Thailand, sustainability disclosure has only recently begun, so the cost of preparing sustainability reports is still relatively high, which is an obstacle preventing many companies from fully disclosing sustainability information. Therefore, there is a possibility that sustainability disclosure has no effect on the relationship between proactive tax planning and firm value.

Board Independent and Proactive Tax Planning

To answer the research question in hypothesis 4.1, how does the board independent effect on the proactive tax planning? As the result showed that board independent has a negative effect on the proactive tax planning, hypothesis 4.1 is rejected.

Additionally, the agency theory explains the effect between board independent and proactive tax planning. There are many studies show that board independence has a negative effect on proactive tax planning (e.g., Peter, Hamid, & Ibrahim, 2020; Chaichuen et.al., 2022; Asviriwangi, Salman, & Masruri, 2023). As a result, companies with an increased number of independent directors may help reduce the level of proactive tax planning, in line with good corporate governance principles, because independent directors play a crucial role in overseeing the management's performance (The Stock Exchange of Thailand, 2021).

Board independence is a crucial mechanism for good corporate governance because it plays a role in monitoring and ensuring transparency in important decision-making, which may involve conflicts of interest, such as director remuneration, among others. Increasing the number of independent directors can help reduce agency problems and enhance the board's potential. Board independence can provide appropriate policy advice to the management team, especially regarding the benefits

or costs of proactive tax planning. Additionally, a higher proportion of board independence will reduce the level of proactive tax planning (Arunruangsirilert, Srihirunpunlop & Boonyawat, 2022).

This research examines data from the ESG100 sample group and finds that all companies appoint at least 3 independent board members, in accordance with the good corporate governance principles set by the Stock Exchange of Thailand. This may result in a reduction in proactive tax planning (Temboonprasertsuk, 2021; Khumtonwong, 2015), as the number of independent board members may affect the rigor of monitoring the executives' performance, requiring them to adhere to stricter standards of caution. On the other hand, if board independence does not adhere to good governance principles and lacks participation in decision-making regarding independent tax planning, it may negatively impact proactive tax planning (Razali et al., 2023). However, some studies predict that collecting data from only specific sample groups or only certain companies limits the research, making it unable to clearly explain the relationships (Temboonprasertsuk, 2021).

Board Duality and Proactive Tax Planning

To answer the research question in hypothesis 4.2, how does the board duality effect on the proactive tax planning? As the result showed that board duality has a positive effect on the proactive tax planning, hypothesis 4.2 is accepted.

Additionally, the agency theory explains the effect between board duality and proactive tax planning. There are some studies show that board duality has a positive effect on proactive tax planning (Iazzi et al., 2023). This research examines the sample data from ESG100 and finds that the majority of companies, 92.11 percent, adhere to the good corporate governance principles set by the Stock Exchange of Thailand, which include the separation of the positions of chairman of the board and chief executive officer (CEO) (The Stock Exchange of Thailand, 2017). Only a small number of companies, 7.89 percent, have duality. Therefore, some companies have a greater tendency towards tax planning due to the lack of power balance (Arunruangsirilert, Srihirunpunlop & Boonyawat, 2022).

Business operations today are highly competitive. Therefore, companies engage in tax planning to gain a competitive edge and increase shareholder wealth, with the authority to decide on dividend payments to investors to build confidence. This could negatively impact the company's value due to the long-term risks associated with tax planning. Therefore, the effectiveness of executives' actions should be evaluated by the board of directors and auditors to support governance and assure shareholders that the company will survive and maintain a competitive advantage (Iazzi et al., 2023).

Moreover, companies with a family-owned shareholding structure engage in more tax planning. The government may need to pay attention to businesses in this

group because their income tax expense is below the threshold, and it may indicate the legitimacy of tax planning and tax avoidance (Krongboon & Dampitakse, 2021). However, this study contradicts prior studies that recommend board duality has a negative effect on proactive tax planning (Chytis, Tasios, & Filos, 2020; Khaoula & Ali, 2012). Since most companies listed on the Stock Exchange of Thailand are family businesses, which have control and vested interests in the operations, they prioritize good corporate governance to maintain the family's reputation and ensure business succession. Additionally, increased disclosure of income tax expense reduces information asymmetry among internal parties, external parties, and government officials. Therefore, tax planning decreases (Thanjunpong, 2015).

Capital Structure and Proactive Tax Planning

Current Ratio and Proactive Tax Planning

To answer the research question in hypothesis 5.1, how does the current ratio effect on the proactive tax planning? As the result showed that the current ratio has no effect on the proactive tax planning, hypothesis 5.1 is rejected.

There are many studies that show that the current ratio does not affect proactive tax planning (Chytis, Tasios & Filos, 2020; Putri, Mudzakir & Suhendi, 2024; Onyeka-Iheme, 2021). As a result, many companies facing liquidity issues may not comply with tax regulations, and these companies are more interested in maintaining cash flow rather than paying high taxes. Therefore, when short-term debt repayment becomes difficult, companies can engage in proactive tax planning (Putri, Mudzakir & Suhendi, 2024).

Debt to Equity Ratio and Proactive Tax Planning

To answer the research question in hypothesis 5.2, how does the debt-to-equity ratio effect on the proactive tax planning? As the result showed that debt to equity ratio has no effect on the proactive tax planning, hypothesis 5.2 is rejected.

There are many studies show that the debt-to-equity ratio has a no effect on the proactive tax planning (Wutthimahanon, 2019; Khumtonwong, 2015; Aminah, Chairina & Sari, 2017; Chytis, Tasios, & Filos, 2020; Petteewang & Seangkhiew, 2023; Dampitakse et al., 2021). As a result, it may be that investors in developing countries do not pay attention to tax planning (Adetola, et al, 2023).

Investment decisions are associated with biases, which can either enhance or hinder the performance of the investment. Potential investments require substantial capital; therefore, diversification is recommended to mitigate risk. However, companies and investors rarely consider tax implications (Adetola, et al, 2023), because debt management is unaffected by profit management using the accrual basis (Petteewang & Seangkhiew, 2023).

However, this study's findings contradict some studies that found that debt to equity has a negative effect on proactive tax planning (Namachote, Mahoran & Masarat, 2024; Inua, 2018). A company with a high capital structure and high interest expenses can deduct these as tax expenses, resulting in a lower income tax expense (Richardson & Lanis, 2007; Noor, Fadzillah & Mastuki, 2010; Tantiyavarong, 2009).

While there are several researchers who show that the debt-to-equity ratio has a positive effect on proactive tax planning (Krongboon & Dampitakse, 2021; Allam, 2022; Maigoshi & Tanko, 2023; Putri et al., 2018; Chamnong, Pajongwong & Svetalekth, 2021). Companies with high financial risk will have high tax planning. This may be due to executives wanting to maximize benefits as much as possible. Therefore, tax planning increases to reduce expenses (Khumtonwong, 2015).

Contribution of the research

In terms of the contribution of the research expected, firstly, this is the first longitudinal study collecting data during the periods from 2020 to 2022 and aims to provide evidence that sustainability disclosure has an effect on the relationship between proactive tax planning and firm value. Secondly, the result showed that sustainability disclosure has a positive effect on the firm value. This indicates that companies in the ESG100 index are beginning to recognize and pay attention to environmental conservation, in line with the current situation where the world is placing greater importance on disclosing environmental, social, and governance information. Therefore, regulatory agencies should encourage companies to disclose information through sustainability reports more extensively, as disclosing sustainability information can help reduce information asymmetry (Kim & Koo, 2023), thereby reducing conflicts of interest (jizi, nehme & salama, 2016).

Finally, the proactive tax planning has a negative impact on the firm value. Indicates that the company's focus on proactive tax planning by strictly using legal tax incentives to reduce tax expenses will negatively impact the firm value. Although proactive tax planning may result in a decrease in firm value due to the costs associated with tax planning, such as tax advisory fees, management should weigh the costs against the benefits gained from tax planning. They should choose the method that provides the greatest benefit to the company, which could potentially lead to an increase in firm value in the long term (Jitkham & Yarana, 2022). Therefore, the results of this research can be used by the company in proactive tax planning by studying regulations and operating in accordance with the law to save on tax expenses. If there is knowledge of tax or tax law, it will enable the business organization to comply correctly. This study found that corporate income tax is a high cost. Therefore, understanding the tax costs for business operations is something that executives should prioritize (Arunruangsirilert, Srihirunpunlop & Boonyawat, 2022).

However, Thailand places importance on proactive tax planning and has found that the corporate income tax is lower than the prescribed tax rate. Therefore, the

government should establish tax policies that are consistent and appropriate for the current situation (Thanjunpong, 2018). Therefore, this study contributes especially to investors and other contributions also to management to pay attention to each policy taken such as tax planning because it can have an impact on the firm value.

Limitations and Future Research Directions

There is a limitation to this study finding that should be stressed. To understand the effect of proactive tax planning, sustainability disclosure, and firm value. This study measures the firm value by stock price only. This study found that there are two hypotheses that are not statistically significant: firstly, the proactive tax planning has no effect on the sustainability disclosure and the sustainability disclosure has no effect on the relationship between proactive tax planning and firm value. The results of this study can be explained; the limitations and future research directions are demonstrated as follows:

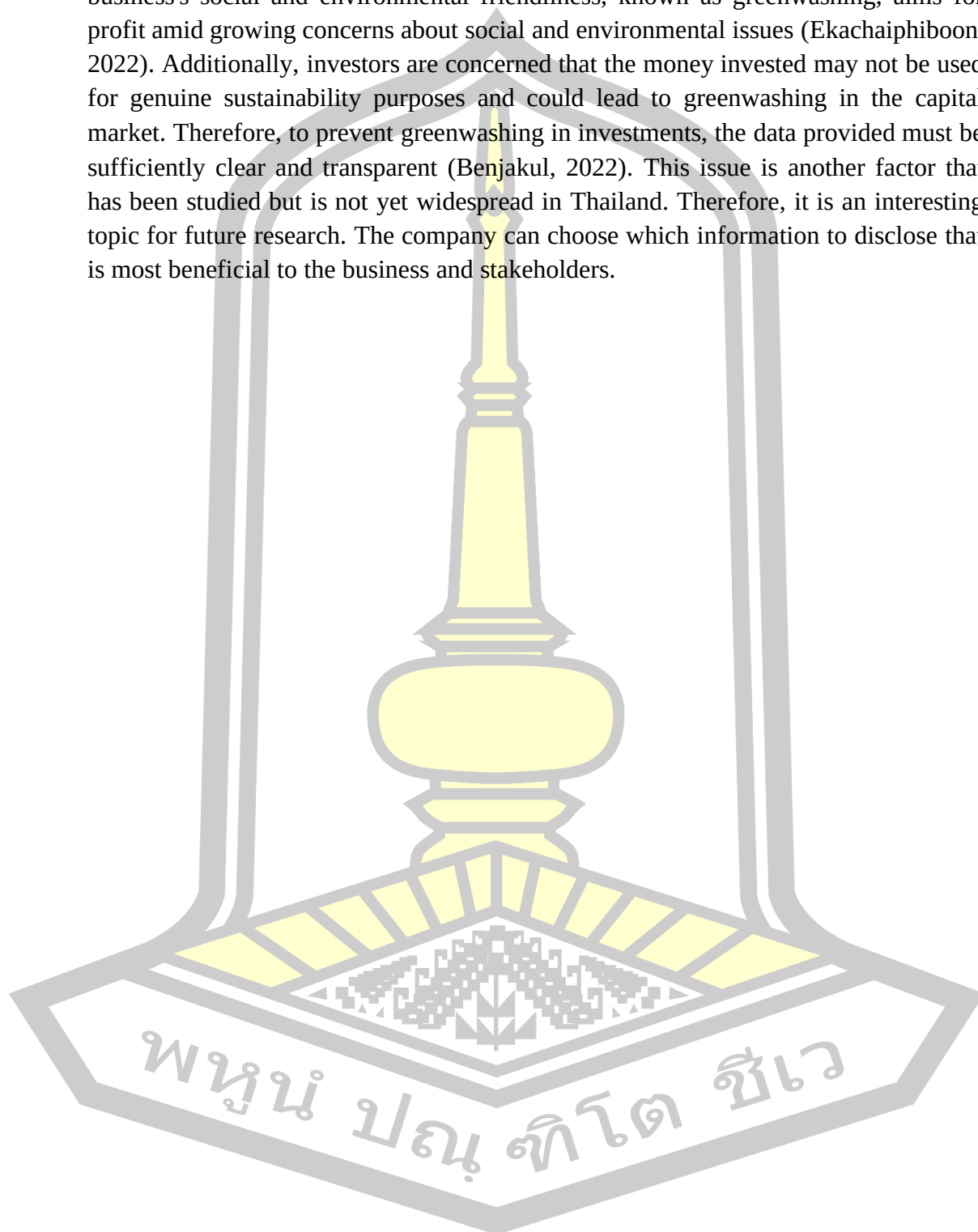
Firstly, as a result of this study, it lacks the results of other variables that can be used to measure firm value, such as return on assets (ROA), return on equity (ROE), and Tobin's Q. The variables return on assets (ROA) and return on equity (ROE) measure firm value in accounting terms. While Tobin's Q measures the variable from an economic perspective. Additionally, this study measures the sustainability disclosure only from the ESG score. As a result, this study lacks the results of other variables that can be used to measure sustainability disclosure, such as CG rating (Tunming, 2022) and CSR ranking (Zeng, 2015). Therefore, the measurement of variables in this research has not yet been updated by adding various variables; then, in future studies, it would be better if variables were added to update the results according to the latest theory and analysis.

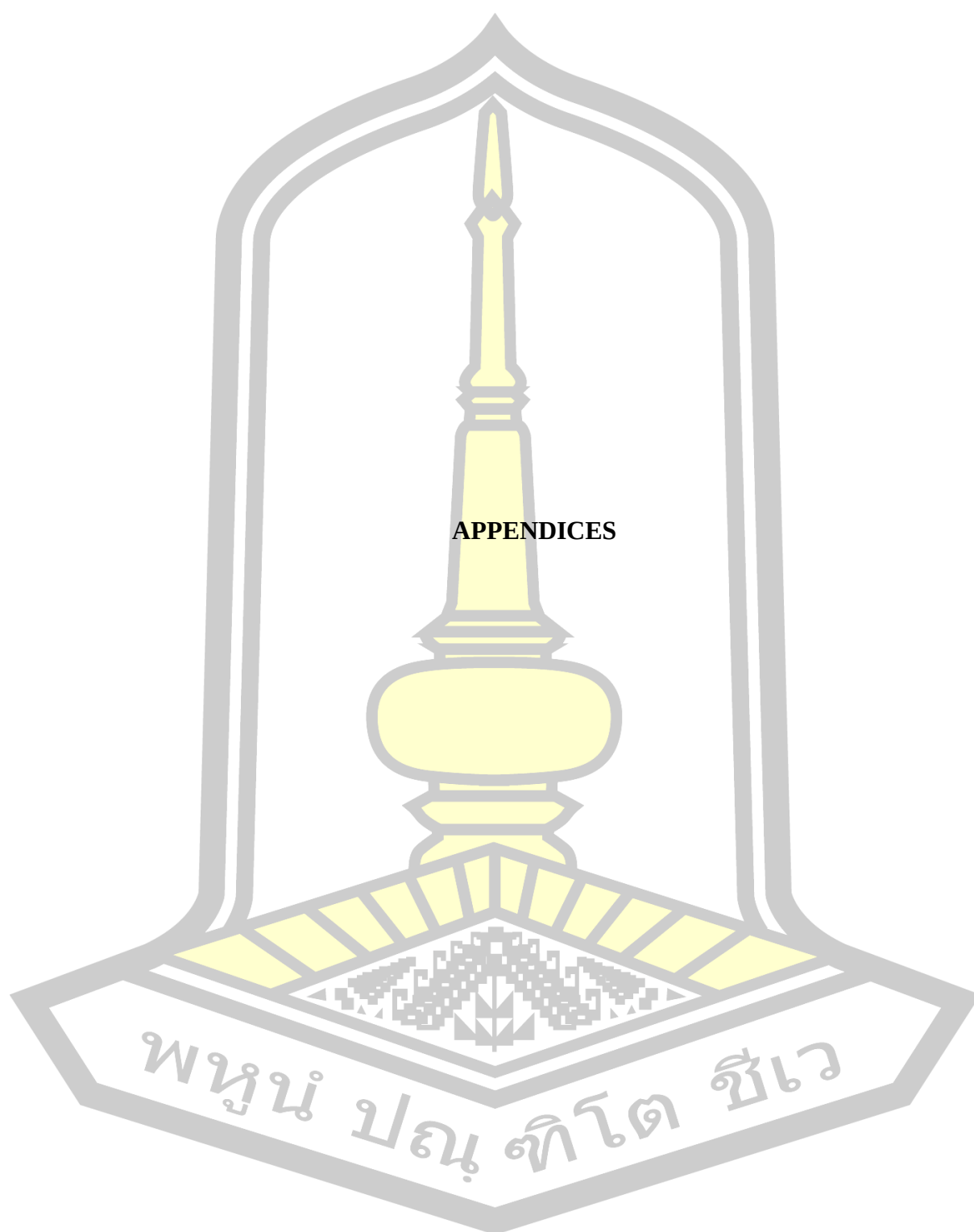
Secondly, this study focuses on proactive tax planning specifically within the ESG100 index. Future research should examine other groups that impact tax planning to determine how they are similar or different, especially in light of changes in compliance with financial reporting standards and tax measures that promote investment in environmentally impactful businesses.

Thirdly, total observation period is only 3 years so it is not too strong to generalize the results, it would be better if the observations were made longer so that the result will be more robust in confirming the theory and previous research.

Fourthly, the research data used for analysis is quantitative data, which is preliminary information that can be collected from various publicly available databases. If, in the future, there are additional detailed documents related to the company's tax filings, it may make the research results clearer. Additionally, qualitative data such as internal and external environments, as well as other factors that may affect the research, should be considered. This could also enhance the quality of the research.

Finally, the issue of disclosing information or messages that exaggerate a business's social and environmental friendliness, known as greenwashing, aims for profit amid growing concerns about social and environmental issues (Ekachaiphiboon, 2022). Additionally, investors are concerned that the money invested may not be used for genuine sustainability purposes and could lead to greenwashing in the capital market. Therefore, to prevent greenwashing in investments, the data provided must be sufficiently clear and transparent (Benjakul, 2022). This issue is another factor that has been studied but is not yet widespread in Thailand. Therefore, it is an interesting topic for future research. The company can choose which information to disclose that is most beneficial to the business and stakeholders.







Appendix A

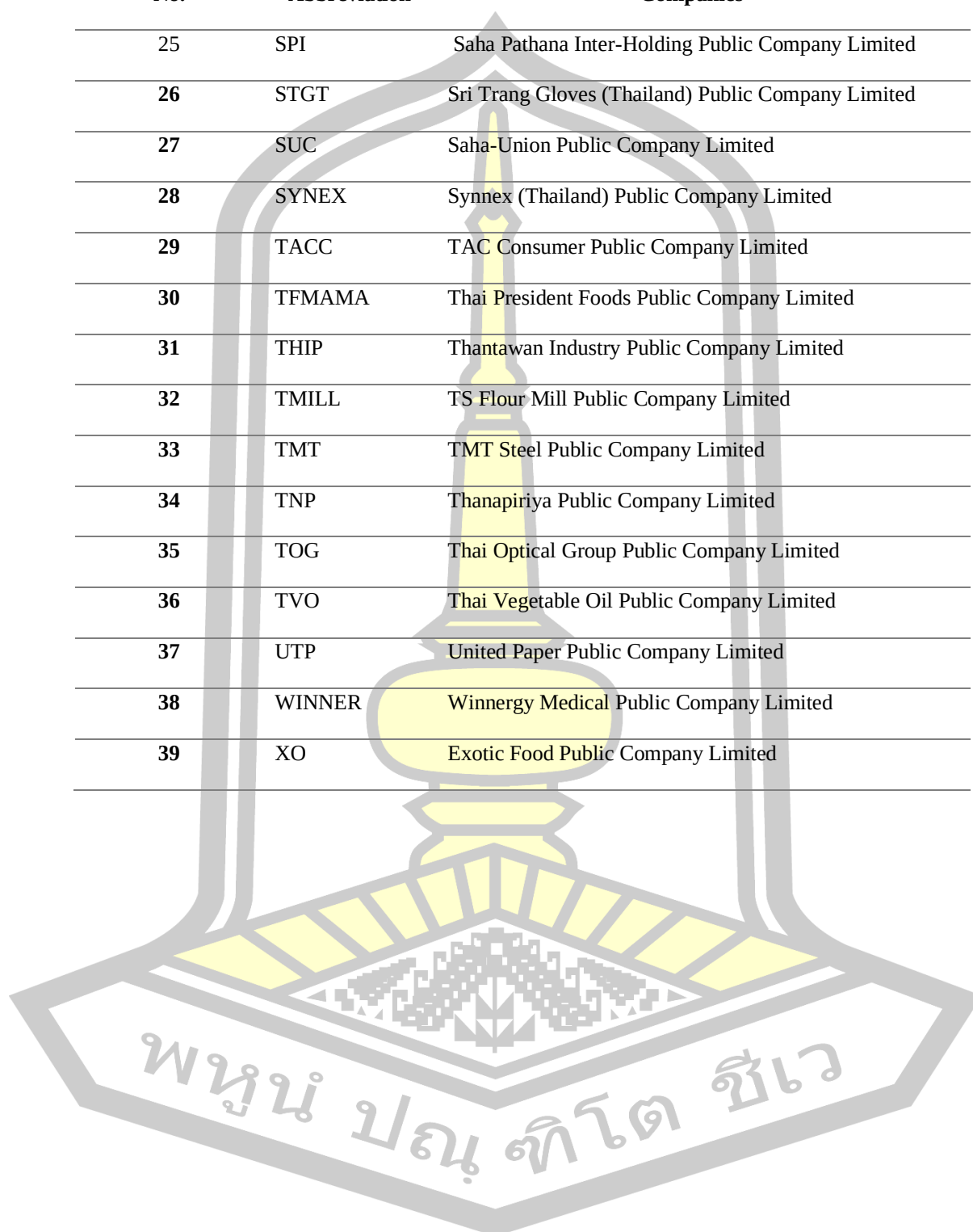
List of ESG100 Index for Research

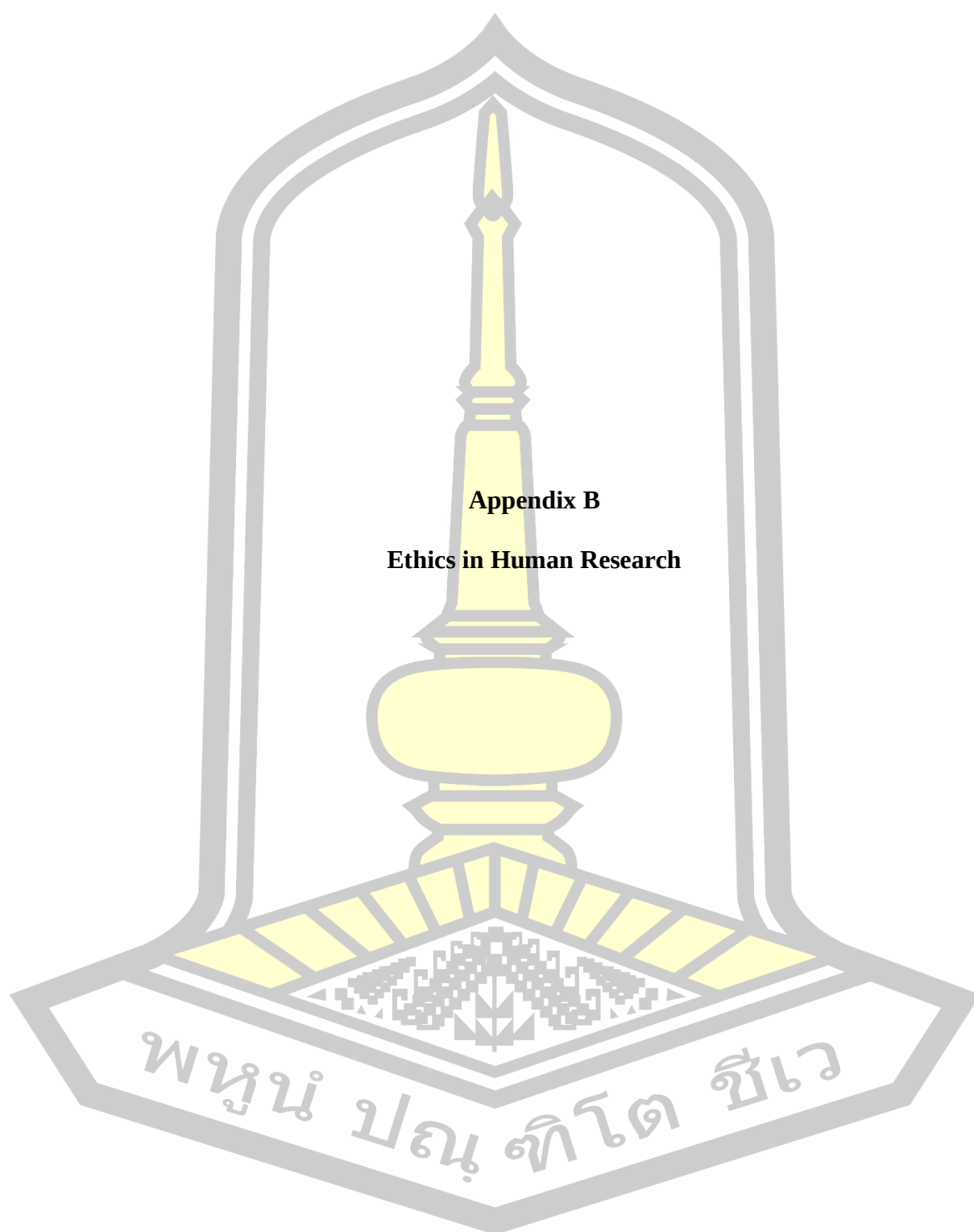
Table 24 List of ESG100 Index in Thai Listed Companies for Research

No.	Abbreviation	Companies
1	ADVANC	Advanced Info Service Public Company Limited
2	BCH	Bangkok Chain Hospital Public Company Limited
3	BCPG	BCPG Public Company Limited
4	BOL	Business Online Public Company Limited
5	COM7	Com7 Public Company Limited
6	CPALL	CP ALL Public Company Limited
7	CPF	CPF Public Company Limited
8	DELTA	Delta Electronics (Thailand) Public Company Limited
9	DRT	Diamond Building Products Public Company Limited
10	HANA	Hana Microelectronics Public Company Limited
11	HMPRO	Home Product Center Public Company Limited
12	HTC	Haad Thip Public Company Limited
13	INTUCH	Intouch Holdings Public Company Limited
14	KCE	KCE Electronics Public Company Limited
15	MEGA	Mega Lifesciences Public Company Limited
16	NER	North East Rubbers Public Company Limited
17	PB	President Bakery Public Company Limited
18	PHOL	Phol Dhanya Public Company Limited
19	2S	2S Metal Public Company Limited
20	SCC	The Siam Cement Public Company Limited
21	SCCC	Siam City Cement Public Company Limited
22	SIS	SiS Distribution (Thailand) Public Company Limited
23	SMPC	Sahamitr Pressure Container Public Company Limited
24	SNC	SNC Former Public Company Limited

Table 24 List of ESG100 Index in Thai Listed Companies for Research (Continue)

No.	Abbreviation	Companies
25	SPI	Saha Pathana Inter-Holding Public Company Limited
26	STGT	Sri Trang Gloves (Thailand) Public Company Limited
27	SUC	Saha-Union Public Company Limited
28	SYNEX	Synnex (Thailand) Public Company Limited
29	TACC	TAC Consumer Public Company Limited
30	TFMAMA	Thai President Foods Public Company Limited
31	THIP	Thantawan Industry Public Company Limited
32	TMILL	TS Flour Mill Public Company Limited
33	TMT	TMT Steel Public Company Limited
34	TNP	Thanapiriya Public Company Limited
35	TOG	Thai Optical Group Public Company Limited
36	TVO	Thai Vegetable Oil Public Company Limited
37	UTP	United Paper Public Company Limited
38	WINNER	Winergy Medical Public Company Limited
39	XO	Exotic Food Public Company Limited





Appendix B

Ethics in Human Research



**MAHASARAKHAM UNIVERSITY ETHICS COMMITTEE FOR
RESEARCH INVOLVING HUMAN SUBJECTS**

Certificate of Approval

Approval number: 241-247/2024

Title : The Mediating Effect of Sustainability Disclosure on the Impact of Proactive Tax Planning on Firm Value: An Empirical Evidence from ESG100 Index.

Principal Investigator : Miss. Pichaya Adithajak

Responsible Department : Faculty of Accountancy and Management

Research site : Faculty of Accountancy and Management

Review Method : Exemption Review

Date of Manufacture : 25 April 2024

expire : 24 April 2025

This research application has been reviewed and approved by the Ethics Committee for Research Involving Human Subjects, Mahasarakham University, Thailand. Approval is dependent on local ethical approval having been received. Any subsequent changes to the consent form must be re-submitted to the Committee.



(Assistant Professor Ratree Sawangjit)

Chairman

Approval is granted subject to the following conditions: (see back of this Certificate)

REFERENCES

- Abdi, Y., Li, X. & Càmara-Turull, X. (2020). Impact of Sustainability on Firm Value and Financial Performance in the Air Transport Industry. *Sustainability*, 12, 1-23.
- Abraham, R., Harris, J., & Auerbach, J. (2017). Earnings yield as a predictor of return on assets, return on equity, economic value added and the equity multiplier. *Modern Economy*, 8(01), 10-24.
- Aburajab, L., Maali, B., Jaradat, M. & Alsharairi, M. (2019). Board of Directors' Characteristics and Tax Aggressiveness: Evidence from Jordanian Listed Firms. *Theoretical Economics Letters*, 9, 2732-2745.
- Aca, A. I., Musa, F., & Garba, M. (2020). Audit quality and firm value of listed insurance companies in Nigeria. *Global Scientific Journals*, 8(7), 2083-2099.
- Adams, R. B., Hermalin, B. E., & Weisbach, M.S. (2010). The role of boards of directors in corporate governance: A conceptual framework and survey. *Journal of Economic Literature*, 48(1), 58-107.
- Adetola, R., Bello, H. A., Ajayi, J. K., & Mobolaji, M. A. (2023). Tax Planning and Portfolio Investment Decision of Listed Manufacturing Companies in Nigeria. *International Journal of Innovation Research & Advanced Studies (IJIRAS)*, 2(2), 105-122.
- Afrizal, M. I. (2023). *Pengaruh Profitabilitas, Likuiditas dan Leverage Terhadap Tax Avoidance Pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia Tahun 2018-2020*. Undergraduate thesis, Universitas Islam Sultan Agung.
- Agustina, H., Rahmadhani, K., Budiarti, R. P. N., Elfita, R. A., & Zhulqurnain, M. R. I. (2023). Implementation of Good Corporate governance And Tax Planning on Company Value. *Business and Finance Journal*, 8(1), 76-83.
- Ahmad, N., Shah, F. N., Ijaz, F., & Ghouri, M. N. (2023). Corporate income tax, asset turnover and Tobin's Q as firm performance in Pakistan: Moderating role of liquidity ratio. *Cogent Business & Management*, 10(1), 2167287.
- Akman, S. (2023). *Research type and sample size: Is there a correlation?*, Retire from <https://forms.app/en/blog/correlation-between-research-type-and-sample-size>
- Akintoye, I. R., Adegbe, F. F. & Iheme-Onyeka, C.V. (2020). Tax planning strategies and profitability of quoted manufacturing companies in Nigeria. *Journal of Finance and Accounting*, 8(3), 148-157.
- Al Abri, I., Bi, X., & Hodges, A. (2016). Does it pay to be sustainable? Corporate sustainability and corporate financial performance: A study based on the Dow Jones sustainability index (DJSI). *Presentation at the Southern Agricultural Economics Association's 2016 Annual Meeting (134)*, San Antonio, Texas.

- Allam, A. Z. (2022). Analysis of the Effect of Capital Intensity Ratio, Debt to Equity Ratio (DER) and Return on Assets Ratio (ROA) on Effective Tax Rate. *International Journal of Innovative Science and Research Technology*, 7(6), 1131-1135.
- Almashhadani, M., & Almashhadani, H. A. (2023). The Impact of Sustainability Reporting on Promoting Firm performance. *International Journal of Business and Management Invention*, 12(4), 101-111.
- Aminah, A., Chairina, C., & Sari, Y. Y. (2017). The influence of company size, fixed asset intensity, leverage, profitability, and political connection to tax avoidance. *AFEBI Accounting Review*, 2(2), 107-120.
- Ann, S. & Manurung, A. H. (2019). The influence of liquidity, profitability, intensity inventory, related party debt, and company size to aggressive tax rate. *Archives of Business Research*, 7(3). 105-115.
- Andayani, E. & Yanti, H., B. (2021). The effect of tax avoidance, sustainability report, corporate governance on firm value: Leverage as moderating (Empirical Study on Registered Manufacturing Companies on the Indonesia Stock Exchange 2014-2019). *Technium Social Sciences Journal*, 19, 506-519.
- Aribaba, F. O., Oladele, R., Ahmodu, A., L., O., & Yusuff, S., A. (2019). Tax policies and entrepreneurship sustainability in Ondo State, Nigeria. *Journal of Global Entrepreneurship Research*, 9(53), 2-13.
- Arunruangsirilert, T., Srihirunpunlop, C. & Boonyawat, K. (2022). The Relationship Between Board of Director's Characteristics and Corporate Tax Planning of Listed Companies in the Stock Exchange of Thailand. *Executive Journal*, 42(1), 44-58.
- Asvariwangi, V., Salman M. Z. N., & Masruri, M. A. (2023). The Impact of Institutional Ownership and Board of Independence on Tax Planning with Audit Committee as Variable Moderation. *Jurnal Ilmu Manajemen*, 6(4), 56-66.
- Atsawabunjongphon, P. (2021). *The Relationship between Sustainability Reporting and Tobin's Q Ratio Evidence from Thai Listed Companies in SET 100*. Master of Business Administration, Bangkok University.
- Aydoğmuş, M., Gülay, G., & Ergun, K. (2022). Impact of ESG performance on firm value and Profitability. *Borsa Istanbul Review*, 22(2), 119-127.
- Baltagi, B. (2008). *Econometric Analysis of Panel Data*. 5th ed. Great Britain : John Wiley & Sons.
- Baron, R. M., & Kenny, D. A. (1986). The modulator – mediator variable destination in social psychology research: conceptual, statistical consideration. *Journal of Psychology and Social Psychology*, 51. 1173-1182.
- Bartlett, J. E., Kotrlik, J. W., & Higgins, C. C. (2001). Organizational Research: Determining Organizational Research: Determining Appropriate Sample Size

- in Survey Research Appropriate Sample Size in Survey Research. *Information Technology, Learning, and Performance journal*, 19(1). 43-50.
- Barnard, C.I. (1938). *The Functions of the Executive*. Cambridge, MA: Harvard University Press.
- Beasley, M. S., Goldman, N. C., Lewellen, C. M., & McAllister, M. (2021). Board risk oversight and corporate tax-planning practices. *Journal of Management Accounting Research*, 33(1), 7-32.
- Beasley, M., S., & Pefftroni, K., R. (2001). Board independence and audit-firm type, auditing: *Journal of Practice and Theory*, 20, 97-114.
- Benjakul, P., santivasa, S. & Eiamchamroonlarp, P. (2022). *Guidelines from relevant agencies and stakeholders on issuing sustainability-promoting bonds to prevent the issue of greenwashing, which affects investors' decision-making*. Faculty of Law, Chulalongkorn University.
- Bervejillo, G., & Schiller, Z. (2023). *Setting the foundations for a thriving Ohio with a proactive tax agenda*. *Policy Matters Ohio*, Retire from <https://www.policymattersohio.org/files/research/proactivetaxplan.pdf>
- Bhagiawan, G., & Mukhlisin, M. (2020). Effect of corporate governance on tax planning & firm value. *International Journal of Commerce and Finance*, 6(2), 72-80.
- Chatiwong, T. (2017). Accounting Theory Research: From the Past to the Future. *Journal of Business Administration the Association of Private Education Institutions of Thailand*, 6(2), 203-212.
- Chaichuen, P., Phusuwan, P., Pung-ngam, P., Neungwanna, U., & Chammungpuk, W. (2022). Good Corporate Governance Factors Affecting Planning of Listed Companies in the Stock Exchange of Thailand. *Academic Journal of Phetchaburi Rajabhat University*. 12(3), 23-32.
- Chaiwan. N. (2015). *The impact of investment agreements on investment within ASEAN member states*. *Bachelor of Economics*. The University of the Thai Chamber of Commerce.
- Chamnong, D., Pajongwong, P., & Svetalekth, T. (2021). The Relationship between Women on The Board of Directors and Corporate Tax Planning of Listed Companies in the Stock Exchange of Thailand in SET 100 Index. *Journal of Management and Development Ubon Ratchathani Rajabhat University*, 8(1), 109-122.
- Chansarn, S. & Khluephiran, K. (2018). Determinants of Non-Performing Loans of Thai Commercial Bank Listed in the Stock Exchange of Thailand. *TNI Journal of Business Administration and Languages*, 6(1), 17-23.
- Chen, X., Hu, N., Wang, X. & Tang, X. (2014). Tax avoidance and firm value: evidence from China, *Nankai Business Review International*, 5(1), 25-42.
- Chen, X., Hu N., & Wang X. (2013). Tax avoidance and firm value: evidence from China. *Nankai Business Review International*, 5(1), 25-42.

- Chernviriyakul, W. & Srijunpetch, S. (2022). The Relationship between Corporate Governance Rating, Board of Directors, Family Ownership and Tax Planning of Listed Companies on The Stock Exchange of Thailand. *Kasetsart Applied Business Journal*, 16(25), 25-47.
- Chinchotangkul, R. (2007). *The relationship between corporate governance and audit fees of listed companies in the stock exchange of Thailand*. (Master's Thesis). Chulalongkorn university. Thailand.
- Chirakool, W., Poonpool, N. & Wangcharoendate, S. (2022). Key Audit Matters Readability and Investor Reaction. *Journal of Distribution Science*, 20(9), 73-81.
- Christina, S., & Alexander, N. (2018). *Corporate governance, tax planning and firm value*. In Proceedings of the 7th International Conference on Entrepreneurship and Business Management, 233-237.
- Chotsuwan, R. (2018). *The Relationship between Tax Planning and Stock Price of Listed Companies in the Stock Exchange of Thailand*. Accounting. Rajamangala University of Technology Thanyaburi.
- Chotsuwan, R. & Thongkong, S. (2019). The Relationship between Tax Planning and Stock Price of Listed Companies in the Stock Exchange of Thailand. Accounting. *RMUTT Global Business and Economics Review*, 14(1), 23-36.
- Chouaibi, J., Rossi, M., & Abdessamed, N. (2022). The Effect of Corporate Social Responsibility practices on Tax Avoidance: an empirical study in the French context. *Competitiveness Review*, 32(3), 326–349.
- Chung, K. H., & Pruitt, S. W. (1994). A Simple Approximation of Tobin's q. *Financial Management*, 23(3), 70-74.
- Chytis, E., Tasios, S. & Filos, I. (2020). The effect of corporate governance mechanisms on tax planning during financial crisis: an empirical study of companies listed on the Athens stock exchange. *Int J Discl Gov*. 17, 30-38.
- Cowan, M. J., & Cutler, J. (2023). *ESG and the demand for state tax incentives*. *Forth coming*, Florida Tax Review, Fall. Retire from <https://ssrn.com/abstract=4355083>
- Dampitakse, K., Panmanee, P., Choojan, J., & Krongboon, J. (2021). Relationships of Family Shareholders Structure, Profitability and Leverage Ratio on Corporate Income Tax Planning of Thai Listed Companies: Real Estate and Construction Industry. *Journal of Federation of Accounting Professions*, 3(8), 82-94.
- Dayacahyani, F. M. (2020). *Pengaruh pengungkapan laporan keberlanjutan terhadap nilai perusahaan dengan leverage sebagai pemoderasi* (studi pada perusahaan manufaktur sub sektor makanan dan minuman yang terdaftar di BEI tahun 2016-2018) [Sekolah Tinggi Ilmu Ekonomi (STIE) Malangkucecwara]. Retrieved from <http://repository.stie-mce.ac.id/1198/>
- Detnakarin, S. (2017). *The Role of Mediator Variables in the Relationships between High Performance Work System and Organizational Performance of Hotels in*

- Thailand*. Degree of Doctor of Philosophy in Management Prince of Songkla University.
- Detthamrong, U., Chancharat, N., & Vithessonthi, C. (2017). Corporate governance, capital structure and firm performance: Evidence from Thailand. *Research in International Business and Finance*, 42, 689-709.
- Dyreng, S. D., Hanlon, M., & Maydew, E. L. (2008). Long-Run Corporate Tax Avoidance. *The Accounting Review*, 83(1), 61–82.
- Eguavoen, I., Ukarin, I., & Enewerome, O. T. (2023). Board Attributes and Tax Planning of Corporate Organisations in Nigeria. *Management and Economics Review*, 8(1), 46-57.
- Elamer, A. A., Boulhaga, M., & Ibrahim, B. A. (2024). Corporate tax avoidance and firm value: The moderating role of environmental, social, and governance (ESG) ratings. *Business Strategy and the Environment*, 33(7), 7446-7461.
- Ebimobowei, A. (2022). Corporate governance attributes and tax planning of listed pharmaceutical companies in Nigeria. *British Journal of Management and Marketing Studies*, 5(1), 1-38.
- Ekachaiphiboon, S. (2022). *Green Washing: Dangerous Data, Destroying Ecosystem Sustainability*. Retrieved from <https://www.set.or.th/th/about/setsource/insights/article/179-greenwashing>
- Fraenkel, R. J., & Wallen, E. N. (2009). *What is the minimum sample size for correlation study?*, Retire from https://www.calendar-uk.co.uk/frequently-asked-questions/whatis-the-minimum-sample-size-for-correlation-study#google_vignette
- Freeman, R. E. (1983). *Strategic management: a stakeholderr approach*. Boston: Pitman Publishing Inc.
- Friske, W., Hoelscher, S. A., & Nikolov, A. N. (2023). The impact of voluntary sustainability reporting on firm value: Insights from signaling theory. *Journal of the Academy of Marketing Science*, 51(2), 372-392.
- Gonzalez, M. C., Mehrnezhad, A., Razaviarab, N., Barbosa-Silva, T. G., & Heymsfield, S. B. (2021). Calf circumference: cutoff values from the NHANES 1999–2006. *The American journal of clinical nutrition*, 113(6), 1679-1687.
- Gray, R., Kouhy, R., & Lavers, S. (1995). Corporate Social and Environmental Reporting: A Review of the Literature and a Longitudinal Study of UK Disclosure. *Accounting, Auditing and Accountability Journal*, 8(2), 47-77.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis*. New Jersey: Saddle River.
- Harrison, J. S., Barney, J. B., Freeman, R. E., & Phillips, R. A. (2019). *The Cambridge handbook of stakeholderr theory*. Cambridge University Press. Retire from <https://doi.org/10.1017/9781108123495>
- Harnesk, J., & Myhrberg, A. (2019). *Sustainable tax planning, Investigating the*

- relationship between ESG and tax aggressiveness*. Department of Business Administration International Business Program, Umeå University.
- Harsono, S. B., & Susanto, L. (2023). The Effect of Profitability, Capital Structure, Asset Structure, and Firm Age on Firm Value. *International Journal of Application on Economics and Business*, 1(3), 1050-1061.
- Hasan, M. M., Lobo G., & Qiu, B. (2021). Organizational capital, corporate tax avoidance, and firm value. *Journal of Corporate Finance*, 1-61.
- Hilderth, W., B., & Richardson, J., A. (1999). *Handbook on Taxation*. New York: Marcel Dekker.
- Hoffman, W. H. (1961). The Theory of Tax Planning. *The Accounting Review*, 36(2), 274-281.
- Huang, C., Zhou, H., Norhayati, W. A., Saad, R. A. J., & Zhang, X. (2024). Tax incentives, common institutional ownership, and corporate ESG performance. *Managerial and Decision Economics*, 45(4), 2516-2528.
- Husnan, S. & Pudjastuti, E. (2015). *Dasar-dasar Manajemen Keuangan (3rd ed.)*. UPP AMP YKPN.
- Husnin, A.I., Nawawi, A., & Salin, A.S. (2013). Corporate governance structure and its relationship with audit fee-evidence from Malaysian public listed companies. *Asian Social Science*, 9, 305-317.
- Iazzi, A., Vacca, A., Maizza, A., & Schiavone, F. (2023). The role of corporate board and auditors in tax planning: evidence from Italy. *Management Research Review*, 46(3), 321-339.
- Indrati, M., & Magfiroh, F. (2023). The Effect of Net Profit Margin, Debt Equity Ratio, and Tax Planning on Earnings Management. *International Journal of Multidisciplinary Research and Growth Evaluation*, 6(05), 1933-1942.
- Inua, O. I. (2018). Determinants of corporate effective tax rate: Empirical evidence from listed manufacturing companies in Nigeria. *Accounting and Taxation Review*, 2(3), 48-62.
- Jansaard, K. (2021). *Tax Planning*. School of Accountancy, Sripatum University
Retire from <https://www2.spu.ac.th/award/35618/academic>
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.
- Jitkham, T. & Yarana, C. (2022). The Relationship of Tax Planning and Earnings Management to Firm Performance of Listed Companies on the Market for Alternative Investment (MAI). *Journal of Accounting Profession*, 18(58), 29-52.
- Jizi, M., Nehme, R., & Salama, A. (2016). Do Social Responsibility Disclosures show improvements on Stock Price? *The Journal of Developing Areas*, 50(2), 77-95.

- Kamolsri, P. (2018). *The Relationships between Net Cash Flows from Operations, Accruals and Net Operating Assets with Future Profitability of Listed Companies in the Stock Exchange of Thailand in the Agro & Food Industry Group*, Faculty of Business Administration Rajamangala University of Technology Thanyaburi.
- Kannika, W. & Banchuenvijit, W. (2019). Factors Which Affect the Capital Structure of Listed Companies in Set Clmv. *Interdisciplinary Social Sciences and Communication Journal*. 2(3), 207-221.
- Katesorn, K. (2022). *5 things you need to know about business tax planning*. Retrieved from <https://shorturl.asia/RmxYq>
- Kaewmuang, W. & Pongsupatt, A. (2023). Factors affecting to stock price of the listed companies on the Stock Exchange of Thailand in health care services sector. *Journal of Buddhist Education and Research: JBER*. 9(2), 86-102.
- Kennedy, P. (2008). *A guide to econometrics*. John Wiley & Sons.
- Khaderr, L., B., A. (2017). Tax Planning Among College Teachers, With Special Reference to MES Ponnani College. *Intercontinental Journal of Finance Research Review*, 5(2).
- Khaoula, F., & Moez, D. (2019). The moderating effect of the board of directors on firm value and tax planning: Evidence from European listed firms. *Borsa Istanbul Review*, 19(4), 331-343.
- Khaoula A., & Ali M. A. (2012). Demographic Diversity in the Board and Corporate Tax Planning in American Firms. *Business Management and Strategy*. 3(1), 72– 86.
- Khaoula, A., & Ali, Z.M. (2012). The board of directors and the corporate tax planning: Empirical Evidence from Tunisia. *International Journal of Accounting and Financial Reporting*, 2, 142-157.
- Kim, R. & Koo, B. (2023). The impact of ESG rating disagreement on corporate value. *Journal of Derivatives and Quantitative Studies*, 31(3), 219-241.
- Kitdamrongtam, P. & Sukphan, J. (2022). Relationship between research and development disclosure and the stock return of listed companies on the stock exchange of thailand. *University of the Thai Chamber of Commerce Journal*. 43(1), 15-30.
- Krongboon, J. & Dampitakse, K. (2021). The Effects of Shareholder Structure, Profitability and Capital Structure on Corporate Income Tax Planning of Listed Companies on the Stock Exchange of Thailand: Real Estate and Construction Industries. *Journal of Management Science Nakhon Pathom Rajabhat University*, 8(2), 257-269.
- Kolias, G., & Koumanakos, E. (2022). CEO duality and tax avoidance: Empirical evidence from Greece. *Journal of International Accounting, Auditing and Taxation*, 47, 100465.
- Kunthini, A. (2016). *Factors Affecting Tax Planning of Listed Companies in the*

- Stock Exchange of Thailand: A Case Study of Service Sector*. (Master's Independent Study). University of the Thai Chamber of Commerce (UTCC), Thailand.
- Kurniasih, L., & Suranta, S. (2017). Earnings management, corporate governance and tax avoidance: The case in Indonesia. *Journal of Finance and Banking Review*, 2(4), 28-35.
- Kulsiriwanit, T. (2021). Effects of corporate income tax planning on firm value of companies listed on the market for alternative investment. *Journal of MCU Nakhondhat*, 8(10), 219-234.
- Kurniasih, L., & Suranta, S. (2017). Earnings Management, Corporate Governance and Tax Avoidance: The Case in Indonesia. *J. Fin. Bank. Review*, 2 (4), 28 - 35.
- Khumtonwong, N. (2015). *The relation between corporate governance and tax planning of the listed companies in the stock exchange of Thailand*. (Master's Independent Study). Thammasat University, Thailand.
- Laewprapa, K., Choojan, J. & Pholkeo, C. (2022). Corporate Income Tax Planning and Firm Performance of Listed Companies in the Stock Exchange of Thailand in SET100 Index. *Journal of Humanities and Social Sciences Nakhon Phanom University*, 13(1), 146-159.
- Lanis, R., & Richardson, G. (2018). Outside directors, corporate social responsibility performance, and corporate tax aggressiveness: An empirical analysis. *Journal of Accounting, Auditing & Finance*, 33(2), 228-251.
- Lawati, H., A. & Hussainey, K. (2021). Do Overlapped Audit Committee Directors Affect Tax Avoidance? *Journal of Risk and Financial Management*, 14, 1-14.
- Lemenkova, P. (2019). Regression models by Gretl and R statistical packages for data analysis in marine geology. *International Journal of Environmental Trends (IJENT)*, 3(1), 39-59.
- Lertsabanant, P. & Maglin, P. (2022). Influences of Sustainability Management of Environmental, Social & Governance on Sustainable Corporate Finance of the Listed Companies in the Stock Exchange of Thailand. *Journal of Business Administration and Languages (JBAL)*. 10(2), 101-122.
- Lestari, N. & Wardhani, R. (2015). The Effect of the Tax Planning to Firm Value with Moderating Board Diversity. *International Journal of Economics and Financial Issues*, 5, 315-323.
- Li, J., & Li, S. (2022). Environmental protection tax, corporate ESG performance, and green technological innovation. *Frontiers in Environmental Science*, 10, 982132.
- Li, Y., Luo, Y., Wang, J. & Foo, C. T. (2016). A theory of managerial tax aggression: evidence from China. *Chinese Management Studies*, 10(1), 12-40.
- Luu, D. H. (2021). The impact of capital structure on firm value: A case study in

- Vietnam. *The Journal of Asian Finance, Economics and Business*, 8(5), 287-292.
- MacKinnon, D., P. (2001). Mediating Variable. *International Encyclopedia of the Social & Behavioral Sciences*, 9503-9507.
- Mahmood, Z., Kouser, R., Ali, W., Ahmad, Z., & Salman, T. (2018). Does Corporate Governance Affect Sustainability Disclosure? A Mixed Methods Study. *Sustainability*, 10(1).
- Maigoshi, Z. S., & Tanko, U. M. (2023). Financial attributes, real earnings management and corporate tax planning of listed manufacturing firms in Nigeria. *Journal of Accounting*, 17(1), 43-54.
- Markowitz, H. (1959). *Portfolio Selection-Efficient Diversification of Investments*. New York: Wiley.
- Markowitz, H. M. (1991). Foundations of portfolio theory. *The journal of finance*, 46(2), 469-477.
- Martins, O. A., & Omoye, A. S. (2024). Board characteristics and tax planning of quoted companies in Nigeria. *International Journal of Applied Economics, Finance and Accounting*, 19(1), 186-195.
- Meng, L., & Zhang, Y. (2023). Impact of Tax Administration on ESG Performance-A Quasi-Natural Experiment Based on China's Golden Tax Project III. *Sustainability*, 15(14), 10946.
- Meng, F., & Wang, W. (2024). Tax Incentives, ESG Performance and Firm Value Based on the Perspective of Internal and External Interaction. *Journal of Beijing Institute of Technology (Social Sciences Edition)*, 26(2), 164-177.
- MGR Online. (2020). *6 years of the journey of the ESG100 stock index: What benefits do listed companies and investors get?*. Retrieved from <https://mgronline.com/greeninnovation/detail/9630000112787>
- Mishra, P., Pandey, C. M., Singh, U., Gupta, A., Sahu, C., & Keshri, A. (2019). Descriptive statistics and normality tests for statistical data. *Annals of cardiac anaesthesia*, 22(1), 67-72.
- Ministry of Finance. (2019a). *Economic stimulus package in 2019*. Retrieved from <https://shorturl.asia/GW1TR>
- Ministry of Finance. (2019b). *Ministry of Finance news*. Retrieved from <https://shorturl.asia/2mNF1>
- Modigliani, F., & Miller, M. H. (1963). Corporate income taxes and the cost of capital: a correction. *The American economic review*, 433-443.
- Monacelli, T., & Perotti, R. (2011). Redistribution and the Multiplier. *IMF Economic Review*, 59(4), 630-651.
- Mongkolnchaiarunya, J., Verapreyagura, P. & Buathong, S. (2017). *The study on effective property tax rates and guideline for tax restructure to achieve vertical equity: case study of Bangkok Metropolitan*. Thailand Science Research and Innovation.

- Mulyadi, M. S., & Anwar, Y. (2015). Corporate Governance, Earnings Management Tax Shelter benefits and Tax Management. *Procedia - Social and Behavioral Sciences*, 177, 363-366.
- Nguyen, D. T., Hoan, T. G. & Tran, H. G. (2022). Help or Hurt? The Impact of ESG on Firm Performance in S&P 500 Non-Financial Firms. *AABFJ*. 16(2). 91-102.
- Namachote, S., Mahoran, J., & Masarat, S. (2024). The impact of profit efficiency and tax planning on the stock prices of companies listed on the Stock Exchange Index 100. *Suthiparithat Journal*, 38(2). 123-141.
- Noor, R. M., Fadzillah, N. S. M., & Mastuki, N. A. (2010). Corporate tax planning: A study on corporate effective tax rates of Malaysian listed companies. *International journal of trade, economics and finance*, 1(2), 189.
- Nurhayati, I., & Kartika, A. (2020). Pengaruh Struktur Modal dan Profitabilitas Terhadap Nilai Perusahaan Dengan Kebijakan Dividen Sebagai Variabel Moderasi Pada Perusahaan Manufaktur Tahun 2016-2018. *Dinamika Akuntansi, Keuangandan Perbankan*, 9(2), 133-144.
- Nwaobia, A., & Jayeoba, O. (2016). Tax Planning and Firms' Liquidity. *IJRDO- Journal of Business Management*, 2(10), 1-22.
- Ocharatporn, T. (2008). *Relationship between key financial ratios and stock prices in the banking sector, the Stock Exchange of Thailand*. Master of Business Administration, Chiang Mai University.
- Office of the Securities and Exchange Commission. (2024). *Committee*. Retrieved from <https://shorturl.asia/eQYrd>
- Onyeka-Iheme, C. V. (2021). Tax Planning Strategies and Liquidity of Manufacturing Companies Quoted in Nigeria. *American Journal of Humanities and Social Sciences research (AJHSSR)*, 5(2), 138-148.
- Peter, Z., Hamid, T. K., & Ibrahim, M. (2020). Board attributes and tax planning of listed non-financial companies in Nigeria. *International Journal of Accounting & Finance (IJAF)*, 9(1).
- Petteewang, S., & Seangkhiew, P. (2023). The Impact of Operating Results and Financial Liquidity on Corporate Income Tax of Businesses Listed on the Stock Exchange of Thailand Service Industry Group. *Journal of Management and Local Innovation*, 5(7), 1-21.
- Prášilová, P. (2012). Determinanty kapitálové struktury českých podniků, E a M. *Ekonomie a Management, Czech Republic*, 15(1), 89-104.
- Pratomsrimek, S., Tienpaskorn, K., Sivamard, C., & Jaroenwatthanawinyoo, K. (2016). Factors affecting to the effective corporate income tax rate: A Case studies from the Stock Exchange of Thailand. *Journal of Business Management. Faculty of Management and Tourism Burapha*, 5(1), 101-111.
- Prempanichnukul, V. (2018). Effects of Corporate Income Tax Planning Efficiency

- on Corporate Image of SMEs in Thailand. *Journal of Accountancy and Management*, 10(4), 117-132.
- Piriyakul, M. (2016). Panel data analysis. *Ramkhamhaeng Research Journal of Science and Technology*, 30(2), 41-54.
- Piriyakul, M. (2015). Mediators and Tests of Indirect Effect, *Journal of Managament and Development*, 2(1), 11-31.
- Poonpool, N. & Plukphonngam, C. (2020). Social and Environmental Accounting to Tax Incentive. *Burapha Business College Journal*, 16(2), 16-30.
- Promaksorn, S., Wachirakitikun, C., Petcharat, T., Loychim., N., & Inthanoo, O., & Sirirungwattanachai, K. (2024). Relationship between Tax Planning and Stock Price of Companies Listed on the Stock Exchange of Thailand, Agro and Food industry group. *Journal of Federation of Accounting Professions*, 6(2), 36-53.
- Putri, G. N., Setiawan, V., Faisol, A., Roza, F. & Yulda, F. P. (2018). Does corporate governance affect tax planning? A case study of a manufacturing company. *Research Journal of Finance and Accounting*, 9(16), 95-101.
- Puspitaningrum, C., & Soetardjo, M. N. (2022). The influence of tax aggressiveness on firm value with corporate governance as a moderating variable. *In Proceeding of International Conference on Entrepreneurship*, 2, 108-123.
- Putri, M. Z. A., Mudzakir, A., & Suhendi, S. (2024). Pengaruh Return on Assets (Roa) Dan Current Ratio (Cr) Terhadap Cash Effective Tax Rate (Cetr) Pada Perusahaan Yang Terdaftar Di Indeks Saham Syariah Indonesia (Issi). *Jurnal Valuasi: Jurnal Ilmiah Ilmu Manajemen dan Kewirausahaan*, 4(2), 329-348.
- Putri, M. K. A. & Hudiwinarsih, G. (2018), Analysis of Factors that Affecting Tax Avoidance and Firm Value, *The Indonesian Accounting Review*, 8(2), 205-217.
- Putri, V. R., & Rachmawati, A. (2017). The Effect of Profitability, Dividend Policy, Debt Policy, and Firm Age on Firm Value in The Non-Bank Financial Industry, *Jurnal Ilmu Manajemen & Ekonomika*, 10(1), 14-21.
- Raduang, W. (2022). *Factors affecting Good Governance Securities Return: the case of this companies listed in the Stock Exchange of Thailand*. Business Administration Program, Naresuan University.
- Rahma, R. A., & Firmansyah, A. (2022). Does independent commissioner have a role in the relationship between sustainability disclosure, debt policy, and tax avoidance? *Journal of Contemporary Accounting*, 4(2), 65-79.
- Ramadhani, S., B. & Firmansyah, A. (2022). Are sustainability disclosure and tax avoidance Associated with firm risk? *AFEBI Accounting Review (AAR)*, 7(2), 79-96.
- Razali, M. W. M., Subanderayo, N. A. S., Abd Rahman, N., Yau, J. T. H., & Ali, D. H. A. (2023). Board diversity and tax planning in the context of Malaysian listed

- firm. *International Journal of Applied Economics, Finance and Accounting*, 17(1), 59-66.
- Razali, M. W. M., Ghazali, S. S., Lunyai, J., & Hwang, J. Y. T. (2018). Tax Planning and Firm Value: Evidence from Malaysia. *International Journal of Academic Research in Business and Social Sciences*, 8(11), 210-222.
- Revenue Department. (2020). *Revenue Department News*. Retrieved from https://www.rd.go.th/fileadmin/user_upload/news/news19_2563.pdf
- 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.
- Richardson, G., Taylor, G., & Lanis, R. (2013). The impact of board of director oversight characteristics on corporate tax aggressiveness: An empirical analysis. *Journal of Accounting and Public Policy*. 32, 68–88.
- Rukphanichmanee, S., Thammasiri, W. & Duangchaiyoosook, S. (2018). The Relationship Between Corporate Social Responsibility Performance and Financial Performance of Listed Companies in Thailand. *Nida busuness jounal*, 25, 140-157.
- Sabsombat, N., Sangthong, K., Yasaboo, N., Laddee, N., Chukaew, N., & Pongsri, S. (2020). The Relationship between Corporate Governance and Firm Value of Listed Companies on the Stock Exchange of Thailand in SET100 Index. *WMS Journal of Management*, 9(4), 1–14.
- Saengpao, C., Jarupathirun, S., & Tongkong, S. (2023). Importance of environmental, social and governance disclosures (ESG) for sustainable development. *Humanities and Social Science Research Promotion Network Journal*, 6(3), 107-119.
- Samaputra, P., Thanjunpong, S., Sumritsakun, C., & Waroonkun, S. (2021). The relationship between audit quality and tax planning of listed companies on the stock exchange of Thailand. *Journal of management science udon thani rajabhat university*, 3(4), 1 - 13.
- Simunic, D. (1980). The pricing of audit services: Theory and evidence. *Journal of Accounting Research*, 18(1), 161-190.
- Siminica, M., Cristea, M., Sichigea, M., Noja, G. G., & Anghel, I. (2019). Well-Governed Sustainability and Financial Performance: A New Integrative Approach. *Sustainability*, 11(17), 1-21.
- Sook-aram, P. (2022). *The effect of Environmental, Social, and Governance report disclosure on the value of listed companies on the Stock Exchange of Thailand*. Master of Economics in Economics. Chulalongkorn University.
- Sriersan, T., Poonpool, N., & Bhongchirawattana, U. (2024). The effect of sustainable report disclosure on investor confidence of energy group in Thai listed companies. *Uncertain Supply Chain Management*, 12(2), 779-786.
- Srisakonkit, S. (2015). *The relationship between good corporate governance and tax*

- planning of listed companies in the Stock Exchange of Thailand, SET 100 group*. Thammasat University.
- Sittichoksakunchai, P., Waitip, S. & Henglang, P. (2023). Value Relevance: The Literature Review of Financial and Non-financial Information. *The 14th Hatyai National and International Conference*. 2008-2021.
- Sribunruang, K. & Sutthi, J. (2021). The Relationship between Tax-Planning and Firm Value of Companies. Listed on The Market for Alternative Investment (MAI). *Social Science Journal of Prachachuen Research Network*, 3(3), 59-74.
- Srihirunpunlop, C. (2018). *The relationship between board of director's characteristics and effective corporate income tax rate of companies listed in the Stock Exchange of Thailand (SET 100)*. Master of Accounting. Thammasat University.
- Srisakonkit, S. (2015). *The Relationship Between Good Corporate Governance and Tax Planning of Companies Listed in the Stock Exchange Of Thailand (Set 100)*. Faculty Of Commerce and Accountancy. Thammasat University.
- Spence, M. (1973). Job Market Signaling. *Quarterly Journal of Economics*, 87, 355- 374. Retrieved from <https://doi.org/10.2307/1882010>
- Soepriyanto, G. (2018). Long Run Corporate Tax Avoidance and Firm Value: Evidence from Indonesia. *Journal of Contemporary Accounting and Economics Symposium*, 267-275.
- Song, X. (2023). The Effect of Corporate Social Responsibility on Stock Price Volatility Evidence from Chinese Listed Companies. *Journal of Information & Knowledge Management*, 22(01), 2250069.
- Studenmund, A. H. (1992). *Using Econometrics: A Practical Guide*. Second Edition, Washington, D.C.: HarperCollins.
- Suksathit, T. & Uachanachit, D. (2022). The Importance of Tax Planning to Growing Listed Companies on the Stock Exchange of Thailand. *Journal of Social Science and Buddhistic Anthropology*, 7(9), 1-15.
- Susanti, M. (2017) Corporate social responsibility, size and tax avoidance, *International Journal of Economic Perspectives*, 11(1), 1639-1650.
- Suwangerd, R. (2014). The relationship between accounting and tax expertise of Chief Financial Officer, Executive Directors and tax planning of listed companies in the Stock Exchange of Thailand. *WMS Journal of Management*, 3(1), 17-29.
- Suhardiyah, M., Khotimah, K., & Subakir, S. (2018). Pengaruh pengungkapan sustainability report terhadap kinerja keuangan perusahaan pertambangan yang terdaftar di bursa efek Indonesia tahun 2011-2015. *Majalah Ekonomi*, 23(1), 83-94.
- Suyanto, K. D., & Supramono, S. (2012). Likuiditas, leverage, komisaris independen, dan manajemen laba terhadap agresivitas pajak perusahaan. *Jurnal Keuangan*

dan Perbankan, 16(2), 167-177.

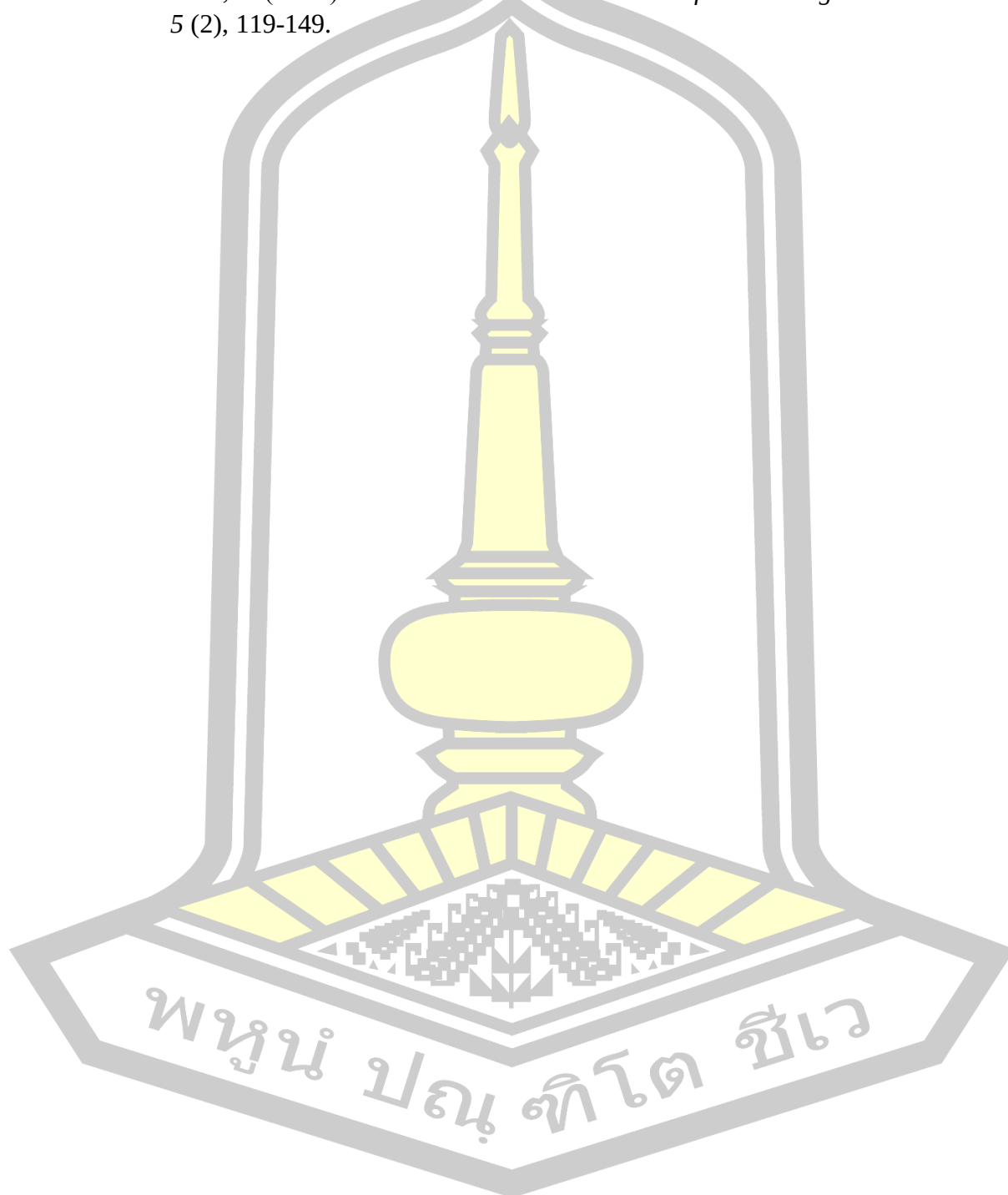
- Swetwattana, S. & Kleebbuabarn, N. (2019). An Empirical Evaluation of Optimal Asset Allocations under Markowitz Frontier in Comparison with Single Index Model by Sharpe. *Burapha Journal of Business Management, 8(1)*, 95-116.
- Tantiyavarong T. (2009). *A study of the determinants of tax planning and the association between tax planning and firm value: an empirical evidence of Thailand*. Doctoral dissertation, Ph.D. (accounting). Bangkok: Chulalongkorn University.
- Tarmidi T. & Murwaningsari, E. (2019). The Influence of Earnings Management and Tax Planning on Firm Value with Audit Quality as Moderating Variable. *Research Journal of Finance and Accounting, 10(4)*, 49-58.
- Tasnia, M., AlHabshi, S., M., S., J., & Rosman, R. (2020). The impact of corporate social responsibility on stock price volatility of the US banks: a moderating role of tax. *Journal of Financial Reporting and Accounting, 1985-2517*.
- Temboonprasertsuk, K. (2021). The Relationship between Corporate Governance and Tax Planning of The Listed Companies in the Stock Exchange of Thailand and Singapore (Top 100). *Journal of Accounting Profession, 17(54)*, 52-67.
- Thanjunpong, S. (2014). The impact of good corporate governance on tax planning of listed companies in the Stock Exchange of Thailand. *Journal of Accounting Profession, 10(28)*, 5-18.
- Thanjunpong, S. (2015). Good Corporate Governance Effects on Performance through Mediation of Tax Planning of Listed Companies in the Stock Exchange of Thailand. *Journal of the Association of Researchers, 20(2)*, 105-113.
- Thanjunpong, S. (2017). The Causal Effect of Tax Planning on Firm's Performance: on the Case Study of Listed Company in Thailand. *Journal of Modern Management Science, 11(2)*, 42-57.
- Thanjunpong, S. (2018). The Impact of Corporate Income Tax Planning on Firm Value: An Empirical Evidence from Listed Companies in Thailand. *Journal of Modern Management Science, 11(2)*, 42-57.
- Thanjunpong, S. & Bangmek, R. (2017). The Influence of Board of Directors, Audit Committee and Ownweship Structure Impact on Tax Planning: An Empirical Evidence of Thailand. *Journal of Federation of Accounting Professions, 13(37)*, 29-44.
- Thanjunpong, S., Dechsiri, P. & Awirothananon, T. (2018). The Impact of Sustainable Development Report Disclosures on Firm Value. *Journal of Accountancy and Management, Mahasarakham Business School, Mahasarakham University, Kamrieng, 11(1)*, 131-144.
- Thanjunpong, S., Chaiwong, D., P. & Dechsiri, P. (2018). The Association between Sustainable Development Report Disclosures and Tax Planning of Listed

- Companies in the Stock Exchange of Thailand. *Journal of MFU Connexion*, 7(2), 273-295.
- Thai, H. M., Dang, K. N., Nor, N. M., Nguyen, H. T., & Nguyen, K. V. (2023). Corporate tax avoidance and stock price crash risk: the moderating effects of corporate governance, *International Journal of Emerging Markets*, 20(1), 1-25.
- Thaipat Institute. (2022a). *Sustainability assessment information for ESG100 securities groups*. Retrieved from https://esg100.thaipat.org/2022/Issuer_search.php
- Thaipat Institute. (2022b). *ESG100 2022*. Retrieved from <https://www.thaipat.org/2022/05/esg-100-2022.html?m=0>
- Thaipat Institute. (2023a). *ESG 100 List*. Retrieved from <https://www.thaipat.org/2020/12/esg-100-universe.html>
- Thaipat Institute. (2023b). *Criteria for evaluating ESG100 securities*. Retrieved from <https://www.thaicsr.com/2017/06/esg100.html>
- The Board of Investment of Thailand. (1977). *Investment Promotion Act B.E. 1977*. Retrieved from <https://shorturl.asia/PeLl9>
- The Board of Investment of Thailand. (2021). *Announcement of the Board of Investment No. 13/2021*. Retrieved from https://www.boi.go.th/upload/content/17_2564_60668e2238781.pdf
- The Board of Investment of Thailand. (2022). *Announcement of the Board of Investment No. 15/2022*. Retrieved from https://www.boi.go.th/upload/content/15_2565EN.pdf
- The Royal Gazette. (2023). *Announcement of the Director-General of the Revenue Department regarding Income Tax (No. 433) concerning the criteria, methods, and conditions for income tax exemption for companies or juristic partnerships undertaking greenhouse gas emission reduction projects*. Retrieved from https://www.rd.go.th/fileadmin/user_upload/kormor/newlaw/dg433A.pdf
- The Secretariat of the Cabinet. (2019). *Economic stimulus package at the end of 2019*. Retrieved from https://resolution.soc.go.th/PDF_UPLOAD/2562/9933399716.pdf
- The Stock Exchange of Thailand. (2015). *Tax Planning*. Retrieved from https://portal.set.or.th/education/th/start/start_start_3_7.pdf
- The Stock Exchange of Thailand. (2017a). *Corporate Governance Code for listed companies 2017*. Retrieved from <https://www.sec.or.th/cgthailand/TH/Documents/Regulation/CGCode.pdf>
- The Stock Exchange of Thailand. (2017b). *Sustainability disclosure & reporting*. Retrieved from <https://setsustainability.com/page/disclosure>
- The Stock Exchange of Thailand. (2021). *Corporate Governance*. Retrieved from <https://setsustainability.com/download/p8nimwkzhy9bqje>

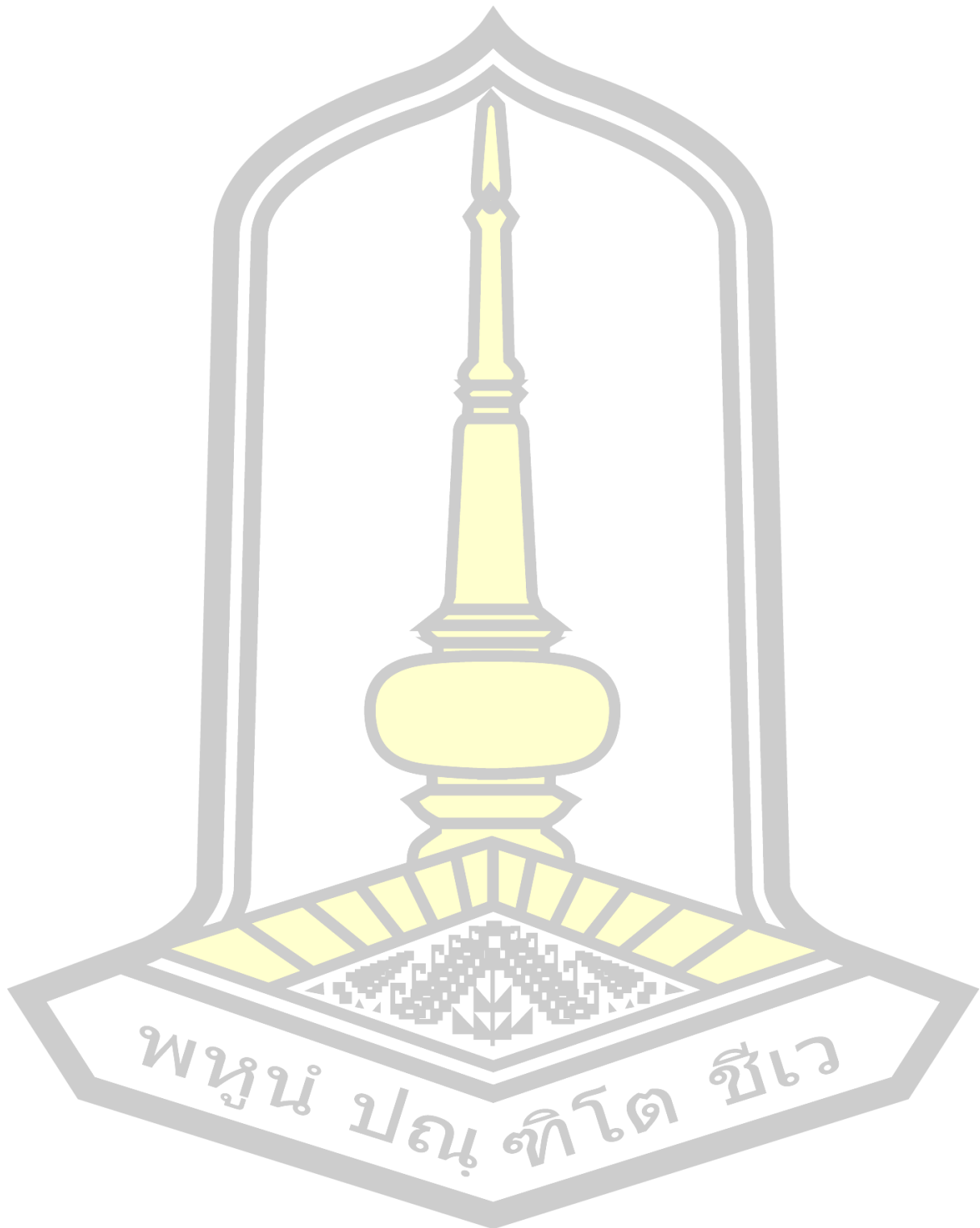
- The Stock Exchange of Thailand. (2022). *Tax Planning*. Retrieved from <https://www.set.or.th/th/education-research/education/happymoney/tax>
- The Revenue Department. (2023). *Royal Thai Government Gazette*. Retrieved from https://www.rd.go.th/fileadmin/user_upload/kormor/newlaw/dg433A.pdf
- Thomson Reuters. (2019). *Thomson Reuters ESG Scores*. Retrieved from https://www.refinitiv.com/content/dam/marketing/en_us/documents/methodology/ESGscores-methodology.pdf
- Thongdee, C. & Rangkhakunnuwat, P. (2019). The Relationship between Risk Liquidity and Return in the Stock Exchange of Thailand. *The 14th UTCC National Graduate Research Conference*, 458-473.
- Timothy, O. U., Izilin, M. O. & Ndifereke, B. A. (2020). Corporate tax planning, board compensation and firm value. *Accounting and Taxation Review*, 4(3), 11-28.
- Tobin, J. & Brainard, W. C. (1976). Asset Markets and the Cost of Capital. *Economic Progress, Private Values and Public Policy, Essays in Honor of William Fellner*. Amsterdam: North Holland, 235–262.
- Tran, N., M. & Tran, M., H. (2022). Corporate social responsibility disclosure and firm performance: Evidence from Vietnam. *Investment Management and Financial Innovations*, 19(3), 49-59.
- Tunming, S. (2022). *Corporate environmental and sustainability disclosures listed on the stock exchange industrial products and resource industries affects the enterprise value according to the market price*, Sripatum University. Bangkok.
- Tunming, S., & Channgam, J. (2023). Corporate Environmental and Sustainability Disclosures Listed on the Stock Exchange Industrial Products and Resource Industries Affects the Enterprise Value According to the Market Price. *Journal of Legal Entity Management and Local Innovation*, 9(8), 129-142.
- Vanijjakul, S. (2017). *Relationship between how management by a professional chief executive officer (CEO) affected performance of family firm and effect of leverage on relationship between how management by professional CEO and family firm's performance of listed companies on the Stock Exchange of Thailand*. Thammasat University
- Vacca, A., Iazzi, A., Vrontis, D., & Fait, M. (2020). The Role of Gender Diversity on Tax Aggressiveness and Corporate Social Responsibility: Evidence from Italian Listed Companies. *Sustainability*, 12, 2-14.
- Wahab, A., Shaipah, N., & Holland, K. (2012). Tax Planning, Corporate Governance and Equity Value, *The British Accounting Review, Elsevier*, 44(2), 111-124.
- Waentongkom, K. (2020). *Quality of social and environmental responsibility disclosure affecting stock prices of listed companies in the MAI market*. Master of Accountancy in Accounting. Maejo University.
- Wang, X. (2010). *Tax Avoidance, Corporate Transparency, and Firm Value*, American Accounting Association Annual Meeting. Retrieved from

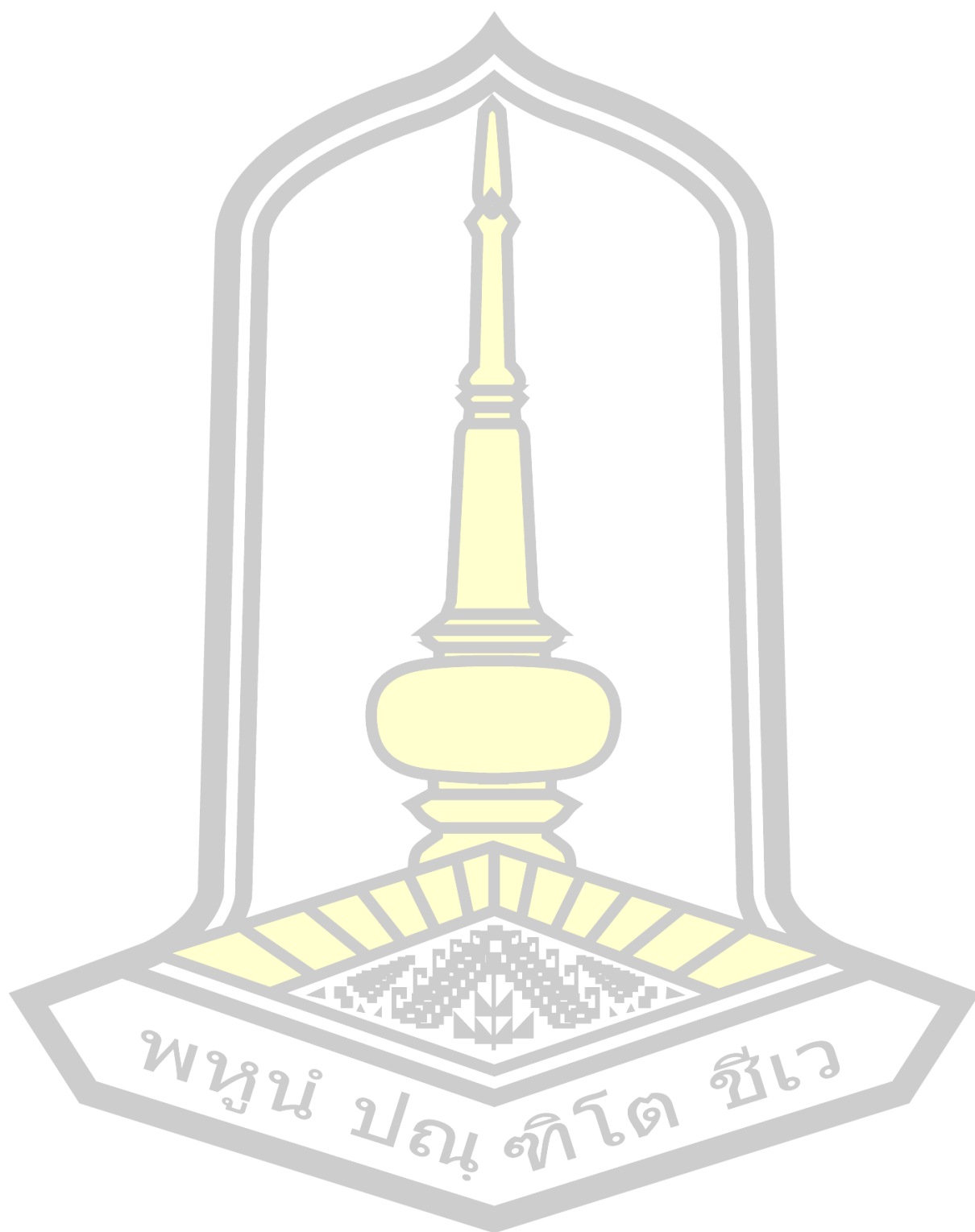
- http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1716474
- Wang, H., Shen, H., & Li, S. (2023). ESG performance and stock price fragility. *Finance Research Letters*, 56, 104101.
- Wangweang, P. (2019). The Relationship between Board Characteristics and Tax Management of listed companies in the Stock Exchange of Thailand. *Journal of Liberal Arts and Management Science*, 6(1), 46-64.
- Wardhani, W. K., Titisari, K. H., & Suhendro, S. (2021). Pengaruh Profitabilitas, Struktur Modal, Ukuran Perusahaan, Dan Good Corporate Governance terhadap Nilai Perusahaan. *Ekonomis: Journal of Economics and Business*, 5(1), 37.
- Wardani, S. D. M., Wijaya, A. L., Devi, H. P., & Ayera, A. (2022). Effect of Capital Structure, Tax Avoidance, and Firm Size on Firm Value with Dividend Payout Ratio as Moderating. *Journal of Business and Management Review*, 3(1), 69-81.
- Wheeler, D. J. (2011). *Problems with skewness and kurtosis, Part One*. Quality Digest Daily Retrieved from www.spcpress.com/pdf/DJW231.pdf
- Widyanto C. R., Kristanto A. B., & Sucahyo, U. S. (2019). The Influence of Tax Aggressiveness as an Intervening Variable on the Relationship between Managerial Ownership and Firm Value. *International Journal of Recent Technology and Engineering (IJRTE)*, 7, 965-971.
- Wutthimahanon, R. (2019). *The Corporate Income Tax planning of Agro and Food Industry Groups that Listed on the Stock Exchange of Thailand*. [Master's thesis]. Retrieved from <http://dspace.spu.ac.th/handle/123456789/7087>
- Wu, S., Li, X., Du, X., & Li, Z. (2022). The Impact of ESG Performance on Firm Value: The Moderating Role of Ownership Structure. *Sustainability*, 14, 2-22.
- Xu, S., Wang, F., Cullinan, C., & Dong, N. (2022). Corporate Tax Avoidance and Corporate Social Responsibility Disclosure Readability: Evidence from China. *Australian Accounting Review*, 101(32), 267-289.
- Yothachan, N., Meeampol, S., & Pajongwong, P., (2020). The Relationship between the Disclosure Data of Sustainability Reports and Operating Performance in ESG100. *Journal of Library and Information Science Srinakharinwirot University*. 13(2), 12-26.
- Zeng, T. (2015). Corporate Social Responsibility, Tax Aggressiveness, and Firm Market Value. *Accounting Perspectives*, 15(1), 7-30.
- Zhang, X., Jiang, Q., Cifuentes-Faura, J., Hu, X., & Li, Y. (2024). Do tax incentives matter in promoting corporate ESG performance toward sustainable development? *Business Strategy and the Environment*. Retrieved from <https://doi.org/10.1002/bse.3966>

- Zhu, N., Zhou, Y., Zhang, S., & Yan, J. (2023). Tax incentives and environmental, social, and governance performance: empirical evidence from China. *Environmental Science and Pollution Research*, 30(19), 54899-54913.
- Zimmerman, J. (1983). Taxes and firm size. *Journal of Accounting and Economics*, 5 (2), 119-149.



REFERENCES





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