THE EFFECT OF THIN CAPITALIZATION ON TAX AVOIDANCE: A LITERATURE REVIEW FROM 2015 TO 2025

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Abstract

This study presents a Systematic Literature Review (SLR) on the impact of thin capitalization on tax avoidance based on an analysis of 21 accredited SINTA 2 and 3 journals from 2015 to 2025. The synthesis results show that the relationship between the two variables is inconsistent, with varying findings: significant, positive, negative, and no effect. This variation is driven by differences in the underlying theory (dominant Agency Theory), research context, sample characteristics, and proxies used (MAD Ratio and DER for thin capitalization; ETR and CETR for tax avoidance). This study highlights methodological limitations in the existing literature and recommends methodological improvements, diversification of proxies, and expansion of the research context for future studies.

Keywords: Thin Capitalization, Tax Avoidance, Systematic Literature Review

INTRODUCTION

In the dynamics of global taxation, the practice of tax avoidance has become a central issue, causing tension between the fiscal sovereignty of the state and corporate strategy. Tax avoidance is a form of aggressive tax planning that aims to minimize the tax burden legally (Natalia & Widyadhana, 2021). Unlike tax evasion, which is illegal, this practice operates in a regulatory "gray area" (Ivantio & Wibowo, 2023). Although technically legal, this activity often triggers fierce ethical debates. The complexity of these regulations makes the line between acceptable and aggressive tax avoidance very blurred.

The fundamental characteristic of tax avoidance lies in the exploitation of legal loopholes and regulatory ambiguities (Rohmah & Romadhon, 2023). Sophisticated companies exploit technical weaknesses in legislation to design transactions that are primarily aimed at reducing tax liabilities (Utami & Irawan, 2022). The main motivation behind this practice is to maximize after-tax profits in a way that does not explicitly violate the law. However, the impact on state revenue can be significant and detrimental. Therefore, a deep understanding of the mechanisms and drivers is crucial for business actors and policymakers.

Empirically, various tax avoidance mechanisms have been studied, with strategies often involving transactions between companies within the same group. One of the most prominent strategies and a frequent focus of study is thin capitalization. This strategy takes advantage of the fiscal shield of interest expenses by building a capital structure dominated by debt (Zahara et al., 2025). Interest expenses paid can be deducted from taxable income, thereby reducing the company's tax liability (Fauziah & Helmy, 2025). However, empirical findings on the effectiveness of thin capitalization as a tax avoidance strategy show significant variation.

On a global scale, thin capitalization is an integral part of the massive profit shifting schemes carried out by multinational companies (Hananto, 2022). Empirical evidence identifies debt shifting as the main channel for profit shifting. Through this mechanism, companies centralize financing through loans in entities located in high-tax countries. This strategy allows companies to systematically shift profits from high-tax jurisdictions to countries with low tax rates. As a result, countries with high tax rates experience significant erosion of their tax base.

This profit shifting behavior stems from a conflict of interest between the goal of maximizing the company's global profits and their fiscal obligations in each country where they operate (Puspita & Lilik, 2022). By exploiting differences in tax rates between countries, multinational companies can artificially reduce the profits reported in jurisdictions with high tax rates. This strategy ultimately minimizes their overall global tax burden. This practice not only erodes vital state revenues for development, but also creates distortions in business competition. This situation widens the inequality where domestic companies bear a heavier tax burden.

In response to this global challenge, the Indonesian government has taken progressive policy measures. Nationally, PMK No. 169/PMK.010/2015 was issued, limiting the debt-to-equity ratio to a maximum of 4:1 (Natalia & Widyadhana, 2021).

This thin capitalization rule policy is directly aimed at preventing tax base erosion through excessive interest charges. This rule is Indonesia's first line of defense against tax avoidance practices through debt. Its implementation demonstrates the country's commitment to protecting its domestic tax base.

As part of its global commitment, Indonesia is also actively adopting an international framework by implementing Pillar Two of the OECD's BEPS Framework. This policy applies a minimum global effective tax rate of 15% for large multinational enterprises (Hapsari, 2024). Pillar Two is designed to prevent harmful tax competition and stop the race to the bottom on tax rates. This global initiative complements national regulations such as PMK 169/2015. Collectively, these policies strengthen Indonesia's fiscal sovereignty.

This study aims to fill an academic gap by conducting the first systematic literature review (SLR) that comprehensively maps the development of research on the impact of thin capitalization on tax avoidance in Indonesia during the period 2015–2025. The novelty of this study also lies in its long coverage, which allows for analysis of the evolution of research findings in line with changes in global (BEPS) and national (PMK 169/2015) regulatory paradigms. Specifically, this study aims to: (1) map research on the effect of thin capitalization on tax avoidance; (2) identify the theories and measurement proxies used; and (3) analyze the findings and gaps in the literature. Theoretically, this study is expected to explain the variation in findings through diverse theoretical perspectives, while practically, it can be used as material for consideration by regulators in evaluating the effectiveness of thin capitalization policies.

THEORETICAL REVIEW

In this study, a theoretical framework is used to analyze why research findings on the relationship between thin capitalization and tax avoidance vary greatly. The researchers do not test a specific theory, but rather utilize existing theories to examine the differences in results from various studies. Each theory offers a different perspective on why companies choose debt-based capital structures and their relationship to tax avoidance.

Agency Theory

The Agency Theory proposed by Jensen & Meckling (1976) explains that the relationship between principals and agents has the potential to cause conflicts of interest, which can encourage thin capitalization practices as a form of tax avoidance. Managers, who have more complete information and want to maximize compensation and visible performance, have the potential to use high debt structures to reduce tax burdens and increase reported profits. However, this strategy can increase financial risk and agency costs, which are detrimental to owners. The decision to apply thin capitalization in this theoretical framework reflects the tendency of agents to take advantage of information asymmetry for personal gain, even though it has the potential to cause long-term losses for the company.

Trade-off Theory

The trade-off theory proposed by Kraus & Litzenberger (1973) explains that companies balance the tax benefits of debt with the risk of financial difficulties. The benefits of debt arise from tax savings because interest is deductible, while the risks include the cost of financial distress and conflicts of interest. This theory can be applied to a company's decision to use thin capitalization for tax avoidance. On the one hand, high debt can increase tax savings; on the other hand, excessive debt increases financial risk. This decision is rational, in that companies will continue to increase debt as long as the tax savings benefits are greater than the cost of risk.

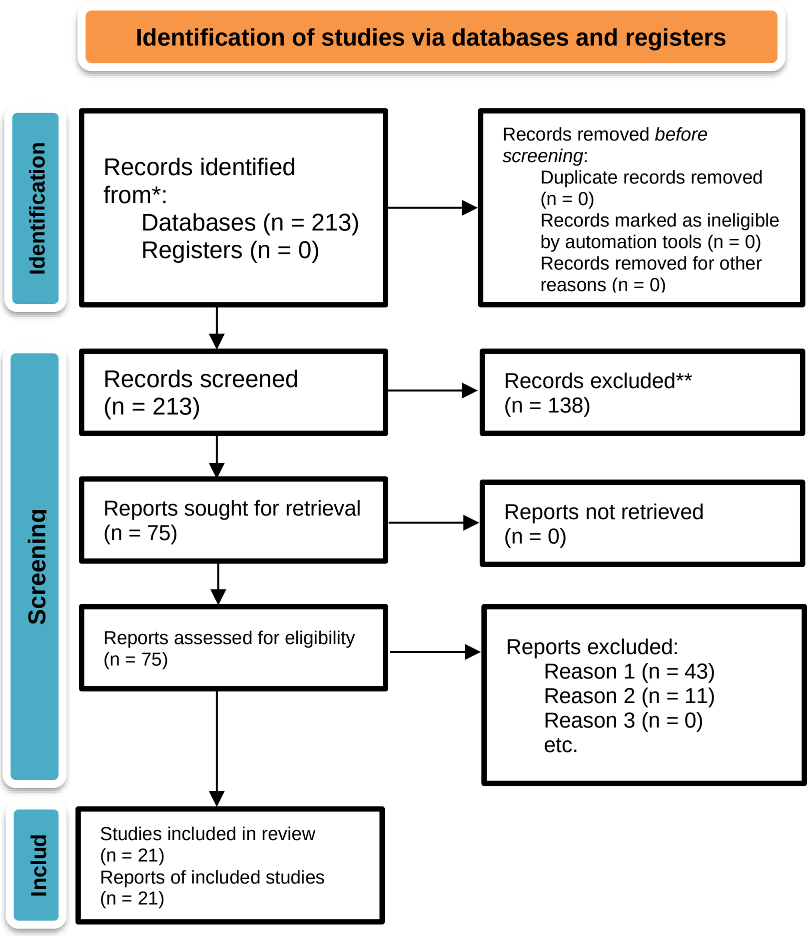
Positive Accounting Theory

In the Positive Accounting Theory proposed by Watts & Zimmerman (1978), managers tend to choose accounting policies that can increase reported profits so that their bonuses and compensation are greater. Thin capitalization helps achieve this by utilizing interest expense deductions to reduce the company's tax burden. These tax savings directly increase the net profit reported in the financial statements. With higher profits, financial performance targets for bonus payments can be more easily met. Thus, thin capitalization becomes a tool deliberately used by managers to increase their personal compensation through a reduction in the company's tax liabilities.

The three theories above are common theories often used as a framework for examining the relationship between thin capitalization and tax avoidance. Each theory provides a different perspective on why companies choose to take on a lot of debt and how that choice is related to tax savings. It is these differences in perspective that are used in this study to understand why the results of other studies on this topic can be so diverse or differ from one another.

RESEARCH METHOD

This research was conducted using the Systematic Literature Review (SLR) method, which was designed to comprehensively examine the influence of thin capitalization on tax avoidance in the period from 2015 to 2025. Systematic Literature Review (SLR) research is conducted with the aim of identifying, reviewing, evaluating, and interpreting all available research in a field of topic or phenomenon of interest in accordance with specific and relevant research questions, so that this approach ensures that all relevant literature can be reviewed comprehensively and in depth (Triandini et al., 2019). The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework was adopted as a guideline in conducting the literature review stages. These stages included the identification, screening, eligibility determination, and final inclusion of articles that met the criteria in a systematic and structured manner (PRISMA Executive, 2020). The primary data source in this study was the GARUDA (Garba Rujukan Digital) platform, which is a trusted database for accredited scientific journals in Indonesia. The search was conducted using a combination of keywords, namely "Thin Capitalization" and "Tax Avoidance," to capture empirical studies relevant to the research topic.



Source: Data processed by the researchers

Figure 1
PRISMA Flowchart

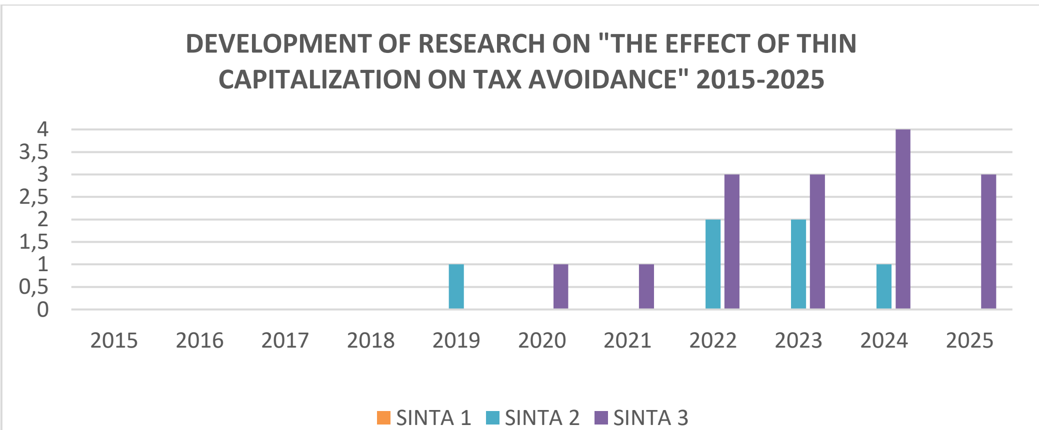
From the initial identification process, 213 journal articles were obtained that potentially met the topic. Next, the screening stage was carried out by applying four main inclusion criteria, namely: 1) the journal must have been published between 2015 and 2025; 2) the journal must be accredited by SINTA with a rating of 1 to 3; 3) the article empirically tests the relationship between thin capitalization and tax avoidance; and 4) the full text is available and accessible. After the screening stage, the number of eligible journals was reduced to 75 articles. At the eligibility stage, the suitability of each article was assessed in greater depth based on the appropriateness of the methods, the accuracy of variable measurements, and the quality of the analysis.

As a result, 32 articles were deemed eligible for further review. After a final assessment of the contribution and originality of the findings, 21 journals were finally selected as the basis for analysis in this study.

The collected data were then analyzed qualitatively using a thematic approach. The analysis focused on several key aspects, namely: 1) the pattern and direction of the relationship between thin capitalization and tax avoidance; 2) moderating, mediating, or control variables that influence this relationship; 3) research context such as industry sector, observation period, and variable measurement methods; and 4) consistency or differences in findings between studies and identification of research gaps that still need to be examined in the future. By applying this comprehensive and systematic method, this study is expected to provide an in-depth and reliable synthesis of the dynamics of thin capitalization and tax avoidance in the context of the literature.

RESULTS AND DISCUSSION

Based on a systematic literature review of 21 research articles, this study identifies the developments and characteristics of research on the effect of thin capitalization on tax avoidance during the period 2015-2025. The analysis focused on four main aspects, namely publication trends, accompanying variables studied, theoretical foundations, proxies used, and variations in findings from each study. This mapping provides a comprehensive basis for understanding the dynamics of research in this field while identifying research gaps that need to be explored further.



Source: Data processed by the researchers

Figure 2
Development of Research on The Effect of Thin Capitalization on Tax Avoidance 2015-2025

Based on the results of a systematic literature review, the researchers found 21 articles that examined the relationship between thin capitalization and tax avoidance during the 2015-2025 period. The graph shows a research gap in the early period, where no publications were found from 2015 to 2018. The research trend began to emerge in 2019 with 1 article and showed an increase after 2021, peaking in 2022 and 2024, which produced 6 and 5 articles, respectively. In terms of publication quality, a rather worrying finding is that none of the studies were indexed in the reputable SINTA 1 journal. Six articles were classified as SINTA 2, and 15 articles were in the SINTA 3 category, indicating that most studies on this topic are still not in-depth and need to improve their methodological quality. The surge in research after 2021 is strongly suspected to be related to the implementation of the Base Erosion and Profit Shifting (BEPS) Action 4 policy and the increasingly strict transfer pricing regulations in Indonesia. These findings highlight the need to improve the quality of research and explore innovative aspects in order to penetrate reputable journals in the future.

Table 1
Mapping of Sinta 1-3 Journals

No	Author, Year	Title	Journal	Method	Sinta
1	Prastiwi dan Ratnasari (2019)	The Influence of Thin capitalization And The Executives' Characteristics Toward Tax avoidance By Manufacturers Registered On ISE In 2011-2015	AKRUAL: Jurnal Akuntansi	Quantitative – Multiple Regression Analysis	Sinta 2
2	Rini et al. (2022)	Effects of Transfer Pricing, Tax Haven, and Thin capitalization on Tax avoidance	Jurnal Ekonomi dan Bisnis Jagaditha	Quantitative - Multiple Linear Regression	Sinta 2
3	Fasita et al. (2022)	Transfer Pricing Aggressiveness, Thin capitalization, Political Connection, Tax avoidance: Does Corporate Governance Have A Role in Indonesia?	Jurnal Riset Akuntansi dan Keuangan Indonesia	Quantitative – Panel Data Regression	Sinta 2

4	Hermi dan Petrawati (2023)	The Effect Of Management Compensation, Thin capitalization And Sales Growth On Tax avoidance With Institutional Ownership As Moderation	Media Riset Akuntansi, Auditing & Informasi	Quantitative	Sinta 2
5	Rusdi et al. (2023)	An analysis of tax avoidance of family companies in Indonesia	JPPI (Jurnal Penelitian Pendidikan Indonesia)	Quantitative – Regression analysis	Sinta 2
6	Lestari et al. (2024)	The Gender Diversity Executive, Thin capitalization, Capital intensity On Tax avoidance And Firm value	AKRUAL: Jurnal Akuntansi	Quantitative – Multiple Linear Regression	Sinta 2
7	Sueb (2020)	Penghindaran Pajak: Thin capitalization Dan Asset Mix	JIAFE (Jurnal Ilmiah Akuntansi Fakultas Ekonomi)	Quantitative - Moderated Regression Analysis (MRA)	Sinta 3
8	Natalia dan Widyadhana (2021)	Thin capitalization Dan Penghindaran Pajak Setelah Penerapan PMK 169	Keberlanjutan : Jurnal Manajemen dan Jurnal Akuntansi	Quantitative – Multiple Linear Regression	Sinta 3
9	Istiqfarosita dan Abdani (2022)	Political Connections And Thin capitalization On Tax avoidance During The Covid-19 Pandemic	E-JURNAL AKUNTANSI	Quantitative - Multiple Linear Regression	Sinta 3
10	Utami dan Irawan (2022)	Pengaruh Thin capitalization Dan Transfer Pricing Aggressiveness Terhadap Penghindaran Pajak Dengan Financial Constraints Sebagai Variabel Moderasi	Owner: Riset & Jurnal Akuntansi	Quantitative - Multiple Linear Regression	Sinta 3
11	Suryantari dan Mimba (2022)	Sales Growth Memoderasi Transfer Pricing, Thin capitalization, Profitabilitas, Dan Bonus Plan Terhadap Tax avoidance Practice	E-JURNAL AKUNTANSI	Quantitative - Moderated Regression Analysis	Sinta 3
12	Rohmah dan Romadhon (2023)	Apakah Karakter Eksekutif Memoderasi Hubungan Antara Thin capitalization, Transfer Pricing, Financial Distress Dan Penghindaran Pajak?	Jurnal Akademi Akuntansi	Quantitative - Panel data regression	Sinta 3

13	Curry dan Fikri (2023)	Determinan Financial Distress, Thin capitalization, Karakteristik Eksekutif, Dan Multinationality Terhadap Praktik Tax avoidance Pada Perusahaan Properti Dan Real Estate	Jurnal Informasi, Perpajakan, Akuntansi, dan Keuangan Publik	Quantitative - Panel Data Regression	Sinta 3
14	Fitri dan Dwita (2023)	Pengaruh Transfer Pricing Dan Thin capitalization Terhadap Praktik Penghindaran Pajak	Jurnal Eksplorasi Akuntansi	Quantitative - Panel data regression	Sinta 3
15	Nur Kholisah dan Pratiwi (2024)	Keputusan Penghindaran Pajak Dengan Thin capitalization Dan Capital intensity Dimoderasi Oleh Pertumbuhan Penjualan	Jurnal Akuntansi Universitas Jember	Quantitative	Sinta 3
16	Fahmi dan Yanti (2024)	The Effect Of Leverage, Thin capitalization, And Tax Havens On Tax avoidance With Firm Size As A Moderating Variable	Jurnal Akuntansi dan Auditing	Quantitative - Multiple linear regression analysis	Sinta 3
17	Putri dan Evana (2024)	The Effect Of Transfer Pricing, Tunneling Incentive, Thin capitalization, And Capital intensity Against Tax avoidance	JOURNAL LA SOCIALE	Quantitative	Sinta 3
18	Widiani dan Trisnawati (2024)	The Impact Of Transfer Pricing, Capital Intensity, Thin capitalization On Tax avoidance With Sales Growth As Moderating Variabel In Pharmaceutical And Health Companies Listed On Indonesia Stock Exchange 2017-2022	Ganaya : Jurnal Ilmu Sosial dan Humaniora	Quantitative	Sinta 3
19	Fauziah dan Helmy (2025)	Pengaruh Thin capitalization Dan Capital intensity Terhadap Tax avoidance	Jurnal Eksplorasi Akuntansi (JEA)	Quantitative - Panel Data Regression	Sinta 3
20	Gusharita et al. (2025)	Penghindaran Pajak Perusahaan Multinasional: Pengaruh Intensitas Modal, Kapitalisasi Tipis, Dan Harga Transfer Dengan Moderasi Negara Surga Pajak	CURRENT Jurnal Kajian Akuntansi dan Bisnis Terkini	Quantitative - Multiple Linear Regression	Sinta 3

21	Febilia et al. (2025)	The Effect Of Thin capitalization, Capital Intensity, And Deferred Tax Expense On Tax avoidance	Multidiciplinary Output Research For Actual and International Issue (MORFAI Journal)	Quantitative - Multiple Linear Regression	Sinta 3

Source: Data processed by the researchers

Based on a review of 21 research articles, it was identified that previous researchers not only analyzed thin capitalization as an independent variable, but also combined it with other variables to enrich the analysis in several main groups. The group of financial and operational strategy variables includes transfer pricing, capital intensity, leverage, tunneling incentive, and deferred tax expense. The group of company characteristics and ownership variables includes executives' characteristics, management compensation, institutional ownership, political connections, gender diversity of executives, and family companies. The group of performance and financial condition variables consists of sales growth, profitability, financial distress, and bonus plans. In terms of moderating variables, the most studied is sales growth, followed by institutional ownership, financial constraints, corporate governance, firm size, and executives' characteristics. Some studies also include contextual variables such as tax havens and multinationality as independent variables, and emphasize specific periods such as the COVID-19 pandemic as the research context.

All studies in the table use a quantitative approach with various data analysis techniques, such as multiple linear regression, panel data regression, and Moderated Regression Analysis (MRA). The selection of these methods is considered appropriate because they are able to measure the relationship between variables objectively and test the formulated hypotheses. The use of panel data regression, for example, increases the accuracy of the results by considering the time dimension and individual-level, while MRA allows for more precise identification of the role of moderating variables.

Table 2
Mapping of Research Theory

Theory	Author
Theory of Planned Behavior	Prastiwi dan Ratnasari (2019)
Agency Theory	Rini et al. (2022)
	Rusdi et al. (2023)
	Lestari et al. (2024)
	Sueb (2020)
	Istiqfarosita dan Abdani (2022)
	Utami dan Irawan (2022)
	Suryantari dan Mimba (2022)
	Fitri dan Dwita (2023)
	Nur Kholisah dan Pratiwi (2024)
	Fahmi dan Yanti (2024)
	Putri dan Evana (2024)
	Widiani dan Trisnawati (2024)
	Fauziah dan Helmy (2025)
	Gusharita et al. (2025)
	Febilia et al. (2025)
Positive Accounting Theory	Fasita et al. (2022)
Trade-Off Theory	Hermi dan Petrawati (2023)
	Rohmah dan Romadhon (2023)
	Curry dan Fikri (2023)
Fiscal Psychology Theory	Natalia dan Widyadhana (2021)

Source: Data processed by the researchers

Based on the literature mapping, Agency Theory proved to dominate, being used in 15 of the 21 studies. This shows that the main focus of the researchers was on the conflict of interest between managers and company owners. The main issue examined is the information asymmetry that benefits managers. This theory consistently serves as the basis for analyzing governance and financial issues. Thus, Agency Theory remains the primary perspective in understanding corporate financial relationships.

On the other hand, several researchers have developed alternative perspectives by applying different theories. The Theory of Planned Behavior specifically examines individual psychological factors in the decision-making process. This theory analyzes how attitudes, subjective norms, and perceptions of control shape the behavior of economic actors. Meanwhile, Trade-Off Theory focuses on rational considerations between gains and losses in financial decisions. This perspective is mainly applied in research on corporate capital structure.

Positive Accounting Theory offers a different approach by predicting the accounting policy choices made by management. This theory argues that the selection of accounting methods is influenced by the motivation to maximize the utility of the actors. In the fiscal field, Fiscal Psychology Theory highlights the behavioral and emotional aspects of taxpayers as determinants of compliance. Each of these theories provides a unique analytical lens for understanding the same phenomenon. This diversity of perspectives enriches academic discourse with a multidisciplinary approach.

Table 3
Mapping of Thin Capitalization Proxies

Thin Capitalization Proxy	Author
MAD (Maximum Amount Debt) ratio	Prastiwi dan Ratnasari (2019)
	Fasita et al. (2022)
	Hermi dan Petrawati (2023)
	Rusdi et al. (2023)
	Natalia dan Widyadhana (2021)
	Utami dan Irawan (2022)
	Fitri dan Dwita (2023)
	Putri dan Evana (2024)
	Fauziah dan Helmy (2025)
	Gusharita et al. (2025)
DER (Debt to Equity Ratio)	Lestari et al. (2024)
	Istiqfarosita dan Abdani (2022)
	Rohmah dan Romadhon (2023)
	Curry dan Fikri (2023)
	Nur Kholisah dan Pratiwi (2024)
	Fahmi dan Yanti (2024)
	Febilia et al. (2025)
	Rini et al. (2022)
DTA (Debt to Total Asset Ratio)	Sueb (2020)
Not explicitly mentioned	Suryantari dan Mimba (2022)
	Widiani dan Trisnawati (2024)

Source: Data processed by the researchers

Based on the proxy mapping of thin capitalization calculations above, two dominant methodological approaches were identified, namely the MAD (Maximum Amount Debt) ratio and DER. The MAD (Maximum Amount Debt) ratio was the primary choice of 10 researchers, reflecting a focus on compliance with Indonesian tax regulations, particularly

PMK No. 169/PMK.010/2015 concerning the 4:1 DER limit. This approach emphasizes compliance with specific anti-tax avoidance rules. Meanwhile, 8 other researchers chose DER, which is a more general debt ratio that can be used for international comparisons. Then, 2 researchers were found who did not explicitly mention the use of thin capitalization proxies. And the last researcher used DTA (Debt to Asset Ratio). DTA is used to represent a debt-dominated capital structure and measure the use of interest expenses as tax deductions. This ratio was also chosen by Sueb (2020) because of its ease of calculation and suitability for analyzing compliance with interest-based financing restrictions in Sharia rules.

Table 4
Mapping of Tax Avoidance Proxies

Tax Avoidance Proxy	Author
BTD (Book Tax Difference)	Prastiwi dan Ratnasari (2019) Fitri dan Dwita (2023) Putri dan Evana (2024)
ETR (Effective Tax Rate)	Rini et al. (2022) Fasita et al. (2022) Hermi dan Petrawati (2023) Lestari et al. (2024) Sueb (2020) Utami dan Irawan (2022) Suryantari dan Mimba (2022) Rohmah dan Romadhon (2023) Fahmi dan Yanti (2024) Febilia et al. (2025)
CETR (Cash Effective Tax Rate)	Rusdi et al. (2023) Natalia dan Widyadhana (2021) Istiqfarosita dan Abdani (2022) Curry dan Fikri (2023) Nur Kholisah dan Pratiwi (2024) Gusharita et al. (2025)
GPM (Gross Profit Margin)	Widiani dan Trisnawati (2024)
LRETR (Long-run Effective Tax Rate) dan BTD (Book Tax Differences)	Fauziah dan Helmy (2025)

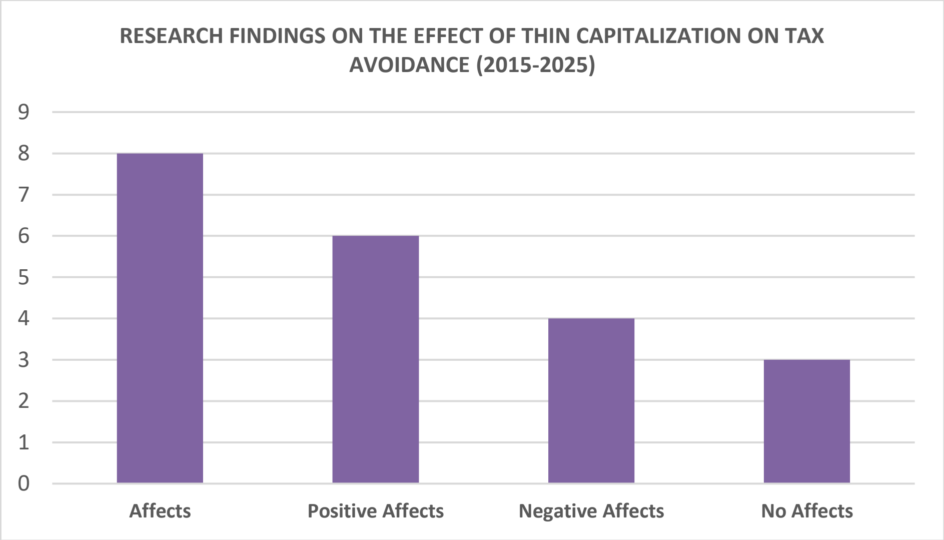
Source: Data processed by the researchers

Based on this mapping, four tax avoidance proxies were identified, namely Book Tax Difference (BTD), Effective Tax Rate (ETR), Cash Effective Tax Rate (CETR), Gross Profit Margin (GPM), and a combination of LRETR & BTD. Among the five, ETR is the most dominant and consistently used proxy, with 11 studies adopting it between 2020 and 2025. The use of ETR is based on the ease of calculation and the wide availability of data in financial reports.

Meanwhile, CETR ranked second with six studies. CETR measures the level of corporate tax avoidance by looking at actual cash tax payments, thus providing a more realistic picture than accrual-based proxies. Furthermore, three articles were found to use BTD. BTD is used as a proxy because it can detect potential tax avoidance by measuring the difference between accounting profit and fiscal profit, which reflects the aggressiveness of a company's tax reporting. One article was also found to use GPM as a proxy for tax avoidance. Based on the research context, GPM was chosen because the research focused on its main variable, namely transfer pricing in the pharmaceutical industry, where manipulation of cost of goods sold and revenue is a common tax avoidance mechanism. So even though GPM is not a common proxy for tax avoidance , in fact, it can be used in the context of this research. The final finding is a proxy that combines LRETR & BTD. This combination of proxies serves to provide a dual perspective in measuring tax avoidance, where LRETR captures stable long-term strategies, while BTD reveals the aggressiveness of tax reporting in a given period. Thus, this approach is able to produce a more comprehensive and robust analysis of tax avoidance practices.

Findings in the Literature

A literature review reveals variations in empirical findings regarding the relationship between thin capitalization and tax avoidance. The differences in these research results are influenced by the selection of theories, hypothesis formulation, regulatory and jurisdictional contexts, company characteristics, research time periods, the amount of observational data, data analysis methods, and different research proxies. The following is a detailed explanation of the four patterns of findings identified:



Source: Data processed by the researchers

Figure 3 Research Findings on the Effect of Thin Capitalization on Tax Avoidance (2015-2025)

Based on 21 studies, four varying results were found, including eight studies that revealed a significant effect, six studies that produced a positive effect on tax avoidance, four studies with negative effects on tax avoidance, and three studies that showed that thin capitalization had no effect on tax avoidance.

Significant Effect of Thin Capitalization on Tax Avoidance

Research conducted byet al.(2024), Sueb (2020), Natalia and Widyadhana (2021), Rohmah and Romadhon (2023), Nur Kholisah and Pratiwi (2024), Widiani and Trisnawati (2024), Fauziah and Helmy (2025), and Gusharita et al.(2025) found that thin capitalization has a significant effect on tax avoidance. Lestari et al. (2024) examined two dependent variables simultaneously, namely tax avoidance and firm value, by conducting a complete classical assumption test. However, this study used a limited sample of 16 companies in the food and beverage sub-sector with 53 observations and did not include control variables in the analysis model. Sueb (2020) implemented a unique approach by using the Indonesian Sharia Stock Index (ISSI) as a moderating variable and a comprehensive asset mix concept covering capital intensity and inventory intensity. This study also included the control variables ROA and size, although it did not present the complete results of the classical assumption test and the explanation of the limited moderation mechanism of ISSI. Natalia and Widyadhana (2021) used fairly in-depth tax avoidance proxies, namely CETR and MAD, with a relatively large sample of 91 companies over a period of 5 years (455 observations). However, this study does not report the implementation of classical assumption tests and does not present R-squared and Adjusted R-squared values.

Rohmah and Romadhon (2023) examined executive character as a moderating variable measured through risk preference (risk taker vs. risk averse) in line with behavioral theory. This study conducted a complete classical assumption test and used the appropriate trade-off theory, despite the limited sample of 18 companies (54 observations) and an Adjusted R-squared of 13% without control variables. Nur Kholisah and Pratiwi (2024) added sales growth as a moderating variable and used CETR to measure tax avoidance. This study reports in detail the results of model selection, normality, multicollinearity, and hypothesis testing, albeit with a sample of 15 companies without control variables. Widiani and Trisnawati (2024) focus on the pharmaceutical and health sectors during the COVID-19 pandemic period by testing three independent variables and one moderating variable (sales growth). The study uses 6-year panel data with 132 observations from 22 companies, applying model selection through the Chow test and Hausman test (Fixed Effect Model), as well as Moderated Regression Analysis (MRA) with R-squared of 35.39% and Adjusted R-squared of 32.29% without control variables.

Fauziah and Helmy (2025) used four different tax avoidance proxies with clear model selection procedures and complete classical assumption tests. This study included four control variables with a sample of 290 observations from 58 companies, although it showed inconsistent results between proxies where thin capitalization was significant in three proxies but not in LRETR1. Gusharita et al. (2025) tested three independent variables with tax haven moderation using two tax avoidance proxies (CETR and ETR). This study explains the sample selection procedure in detail with a complete classical assumption test focusing on multinational companies, although with a sample of 15 companies (105 observations) without important control variables.

The Positive Effect of Thin Capitalization on Tax Avoidance

Research by Prastiwi and Ratnasari (2019), Fasita et al. (2022), Hermi and Petrawati (2023), Rusdi et al. (2023), Fahmi and Yanti (2024), and Putri and Evana (2024) found that thin capitalization has a positive effect on tax avoidance ( ). Prastiwi and Ratnasari (2019) used in-depth proxies in the form of BTD and MAD by combining thin capitalization and executive characteristics through strict sampling, albeit with a sample of 38 companies over 5 years (190 observations) and without control variables. Fasita et al. (2022) measured tax avoidance with two different proxies, namely DiffETR and DTAX, as an accurate combination, with a sample of 61 multinational companies producing 244 observations. Rusdi et al. (2023) also use in-depth proxies in the form of CETR and MAD with a larger sample covering 317 companies over 3 years and complete classical assumption tests, although the regression model used is simple without control variables and does not report the R-squared value.

Several studies added unique variables to the analysis. For example, Hermi and Petrawati (2023) used compensation management as a novel variable with a sample of 27 companies in the consumer goods manufacturing sector (108 observations), although there was inconsistency in the control variables tested. Fahmi and Yanti (2024) tested three independent variables and one moderating variable (firm size) on 204 observations from 87 companies in the energy sector, with an R-squared of 6.1%-6.9% without control variables. Putri and Evana (2024) focused on the mining sector by testing four independent variables, including tunneling incentive and thin capitalization, which are still rarely studied simultaneously in Indonesia, and cleaning 9 extreme outliers to meet the normality assumption.

The Negative Effect of Thin Capitalization on Tax Avoidance

Findings regarding the negative impact of thin capitalization on tax avoidance were produced by four researchers, namely Istiqfarosita and Abdani (2022), Utami and Irawan (2022), Suryantari and Mimba (2022), and Curry and Fikri (2023). Istiqfarosita and Abdani (2022) included political connections as an independent variable that is still rarely studied in the Indonesian context, using a fairly good CETR proxy, and reported a complete classical assumption test, albeit with a sample of 48 companies for one year of observation and without control variables. Utami and Irawan (2022) implemented a unique approach by including financial constraints as a moderating variable measured using the Whited & Wu index, as well as transfer pricing aggressiveness measured by the sumscore index of 7 indicators. This study uses the control variables ROA, inventory intensity, and leverage with complete classical assumption testing and FGLS correction to overcome heteroscedasticity, albeit with R-squared and Adjusted R-squared of 12.87% and 15.65% and a focus only on the manufacturing sector.

Suryantari and Mimba (2022) examine four independent variables simultaneously with sales growth as a moderating variable, which is still rare in Indonesian tax literature, despite using a sample of 29 companies (91 observations), without classical assumption testing, and with several errors in the writing of equations and tables. Curry and Fikri (2023) used panel data from 2015-2020 with clear model selection and measured tax avoidance using CETR, although the use of dummy variables for financial distress and multinationality may be too simplistic and did not include control variables such as company size or profitability.

No Effect of Thin Capitalization on Tax Avoidance

Unlike previous researchers, the findings of Rini et al.(2022) , Fitri and Dwita (2023), and Febilia et al.(2025) did not produce statistical evidence regarding the effect of thin capitalization on tax avoidance. Rini et al. (2022) used a sample of 13 companies with 42 observations over a 4-year period, measuring tax avoidance with ETR without adding control variables in the analysis model. Fitri and Dwita (2023) had a sample of 32 companies from a population of 606 companies that met the criteria, testing the direct effect without exploring the moderating role of corporate governance or tax compliance, and did not use additional control variables in the analysis. Febilia et al. (2025) introduced deferred tax expense as an independent variable that has not been widely studied in the Indonesian context, with comprehensive classical assumption testing reports including Kolmogorov-Smirnov, scatter plot, VIF/tolerance, and Durbin-Watson. This study uses the latest regulatory framework of Law No. 7/2021 on Taxation, although with a sample of 20 companies and 60 observations, and there is an inconsistency in the regression equation where $\beta 6X1X2X3$ is not defined and not used in the analysis.

CONCLUSIONS AND SUGGESTIONS

Conclusions

Based on a synthesis of 21 research articles examining the effect of thin capitalization on tax avoidance, it can be concluded that the relationship between the two variables is inconsistent and open to multiple interpretations. It is important to note that SINTA 1-3 accredited research on this topic was only conducted in the 2019-2025 period, so that the year 2015, which was the starting point for the research inclusion criteria, did not yet have adequate studies. The research findings vary, ranging from significant, positive, negative, to no effect, due to differences in theoretical foundations, research contexts, sample characteristics, time periods, analysis methods, and proxies used. The Agency Theory proved to dominate as an analytical perspective, while the thin capitalization proxy was dominated by MAD Ratio and DER, and the tax avoidance proxy by ETR and CETR. Methodologically, all studies used a quantitative approach, but there were still limitations in terms of sample coverage, completeness of assumption testing, and the use of control variables.

Limitations and Suggestions

Based on the findings and conclusions above, this study has the following implications: First, theoretically, the inconsistency of the relationship between thin capitalization and tax avoidance shows that a single theoretical approach is insufficient. Future research needs to adopt a multi-theory perspective, for example, by combining Agency Theory (for managerial motives) and Trade-off Theory (for risk considerations), to gain a more comprehensive understanding. Second, for tax authorities, the variation in these findings indicates that thin capitalization supervision needs to be more focused and targeted. Rather than applying a uniform 4:1 ratio, oversight should prioritize companies with weak governance, political connections, or complex multinational structures, as they are at greater risk of abusing the rules. Third, for practitioners and company management, these findings serve as a reminder that thin capitalization strategies are not instant solutions. Aggressive tax avoidance without strengthening governance can trigger long-term risks, such as intensive tax audits, fines, reputational damage, and increased agency costs.

Therefore, good tax planning must consider the balance between tax savings and corporate sustainability.

Based on the synthesis of the research findings and the identified limitations, a number of recommendations have been formulated for future research on the effect of thin capitalization on tax avoidance. First, from a methodological perspective, it is necessary to expand the scope of the sample and research period, given that some studies, such as Rini et al. (2022), only used 13 companies with 42 observations. The use of robust control variables and the completion of classical assumption tests (such as normality, heteroscedasticity, and multicollinearity) are necessary to ensure the validity of the model. Second, in terms of variable measurement, researchers are advised to diversify the proxies used. In addition to ETR, which is susceptible to non-tax influences, other proxies can be developed, such as CETR, BTD, or even contextual proxies such as GPM, which was used by Sueb (2020). Third, from a theoretical perspective, research needs to enrich its perspective with theories such as Trade-Off Theory or Positive Accounting Theory, as well as explore moderating and mediating variables that have not been widely studied. Fourth, the research context can be expanded to include untouched industrial sectors, non-listed companies, or the post-regulation period, such as the HPP Law. Fifth, technical reporting aspects need to be considered, including clear table presentation, adequate R-Squared and Adjusted R-Squared reporting, and avoiding equation writing errors. Finally, to increase impact and quality, research should be directed not only to be descriptive but also to provide applicable policy implications and target publication in reputable journals such as SINTA 1 by enriching international literature references. By implementing these recommendations, it is hoped that future research can make a more substantive and methodological contribution to the development of tax accounting science.

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