



SYNTHESIS OF EMPIRICAL EVIDENCE ON THE RELATIONSHIP OF TAX PLANNING AND THIN CAPITALIZATION WITH TAX AVOIDANCE: A SYSTEMATIC REVIEW OF COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE

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Abstract

Tax avoidance remains an important issue in state revenue, and two factors frequently associated with it are tax planning and imbalanced capital structures. Empirical findings in Indonesia regarding these two factors are not uniform, creating a need for systematic evidence synthesis. This study aims to map and classify empirical findings on the effects of tax planning and thin capitalization on tax avoidance among companies listed on the Indonesia Stock Exchange and to analyze the sources of differences across studies. The study employs a systematic literature review based on the PRISMA 2020 protocol. Searches were conducted through Google Scholar and the Garuda portal for publications from 2015 to 2026, resulting in nine eligible articles with ten testing results. The findings were classified into four groups using vote counting and followed by narrative synthesis. The mapping indicates that the direction of the effect of tax planning on tax avoidance remains inconclusive because the available evidence is limited and contradictory, while findings on thin capitalization are divided, with positive and negative results occurring in balanced numbers. The main sources of inconsistency are differences in measurement proxies, sector characteristics, and observation periods that overlap with regulatory changes concerning debt-to-equity limitations. The study recommends more consistent reporting of proxy directions to improve comparability across studies.

Keywords: Systematic literature review; Tax avoidance; Tax planning; Thin capitalization

INTRODUCTION

Taxes are one of the important sources of state revenue for financing Indonesia's development (Republik Indonesia, 2021). In the corporate context, tax decisions relate not only to compliance but also to how management designs transactions and funding structures so that the tax burden is managed efficiently within the limits of applicable regulations. Tax avoidance has therefore become an important issue in the study of tax management.

Tax avoidance is a taxpayer's effort to minimize the tax burden by exploiting loopholes in tax provisions without formally violating the law (Pohan, 2018). Its legal nature makes the practice difficult to prosecute, yet its impact on state revenue remains material. For companies, tax avoidance is viewed as a cost-efficiency strategy that increases cash flow and after-tax profit, whereas for fiscal authorities the practice represents an erosion of the tax base that reduces the capacity to finance development. This divergence of interests is what makes tax avoidance an issue that continues to be studied in the accounting and taxation literature.

One instrument that is directly related to the level of tax avoidance is tax planning. Tax planning is the initial stage of tax management, which aims to select among transaction alternatives and accounting policies so that the tax payable is at its most efficient point (Pohan, 2018; Suandy, 2020). When tax planning is carried out aggressively, the boundary between reasonable efficiency and tax avoidance becomes blurred, so the intensity of tax planning is often positioned as a main determinant of tax avoidance. Several studies in Indonesia have found that tax planning has a significant positive effect on tax avoidance, but not a few studies have also failed to establish this effect partially.

The second instrument that is widely discussed is thin capitalization, namely the formation of a capital structure dominated by debt relative to equity in order to maximize the



deduction of interest expense from taxable income (Taylor & Richardson, 2013). This practice has become a global concern through BEPS Action 4 and has been responded to by the Indonesian government through Minister of Finance Regulation Number 169/PMK.010/2015, which limits the debt-to-equity ratio to a maximum of four to one, on the basis of Article 18 paragraph (1) of the Income Tax Law (Minister of Finance of the Republic of Indonesia, 2015). Although this regulation is already in force, empirical findings on the effect of thin capitalization on tax avoidance remain divided. Some studies report a positive relationship, indicating that the higher the debt-to-equity ratio, the greater the tax avoidance undertaken, whereas other studies find a negative direction or even find no significant effect.

This inconsistency in findings is a research gap that is best addressed not by adding one more new empirical test, but by systematically mapping and synthesizing the existing evidence. A systematic literature review allows researchers to identify patterns in the direction of effects, group findings by test results, and trace sources of differences arising from differences in measurement proxies, industry sectors, observation periods, and regulatory context. This approach provides a more complete picture than a single study (Page et al., 2021).

This study aims to map and classify the empirical evidence on the effect of tax planning and thin capitalization on tax avoidance among companies listed on the Indonesia Stock Exchange, and at the same time to identify factors that can explain the differences in results across studies. Based on this aim, the research questions are as follows: (RQ1) What are the direction and significance of the effect of tax planning and thin capitalization on tax avoidance among companies listed on the Indonesia Stock Exchange? (RQ2) What factors can explain the differences in research results regarding these relationships?

The scope of the study is limited to scientific articles reporting quantitative research that tests tax planning and/or thin capitalization against tax avoidance among companies listed on the Indonesia Stock Exchange. The articles used were published in the 2015–2026 period, are available in full text, and can be verified through the journal/publisher website or an indexing portal. Articles must explicitly report the direction and/or significance of the test results. The extension of the year limit to 2026 was made so that articles published in the current year and already verified could be considered consistently.

LITERATURE REVIEW

Tax avoidance is understood as a company's effort to minimize its tax burden by legally utilizing available tax provisions. Pohan (2018) explains that tax avoidance is carried out by exploiting weaknesses or loopholes in tax regulations without formally violating applicable provisions. In empirical research, tax avoidance is generally proxied by the effective tax rate (ETR), cash effective tax rate (CETR), book-tax difference, or tax shelter score. Differences in proxies need attention because the direction of interpretation can differ; for ETR, for example, a lower value indicates a higher level of tax avoidance.

Tax avoidance behavior can be explained through agency theory, which positions management as an agent with broader information about the company's conditions and transactions than external parties. Jensen and Meckling (1976) explain that the separation of ownership and control gives rise to an agency relationship and agency costs, while Scott and O'Brien (2019) are used as an additional explanatory source on the implications of this theory. In the tax context, differences in interests and information asymmetry can encourage agents to make decisions that provide economic benefits to both the company and management. In the tax context, this condition opens room for management to determine policies and transactions that can reduce the tax burden. This perspective provides a basis for understanding why tax planning and the arrangement of the funding structure can be part of management decisions related to tax avoidance.



Positive accounting theory is also relevant in explaining management decisions related to taxation. Watts and Zimmerman (1978) developed positive accounting theory to explain the choice of accounting policies based on economic incentives and contractual consequences, while Scott and O'Brien (2019) are used as an additional explanatory source. In the context of tax planning, the selection of accounting policies is driven by economic considerations, including efforts to obtain certain benefits through alternative accounting treatments and transactions. In the context of tax planning, management can choose alternatives that produce more efficient tax consequences as long as they remain within the bounds of applicable provisions. Suandy (2020) and Pohan (2018) position tax planning as a process of identifying and evaluating various alternatives to optimize the tax burden. One proxy used in research is the tax retention rate, namely the ratio of net income to income before tax; a higher value indicates a greater ability of the company to retain after-tax profit.

Thin capitalization describes a funding structure with a relatively high proportion of debt compared with equity. This condition can provide tax benefits because, under certain conditions, interest expense can be deducted from taxable income. Taylor and Richardson (2013) developed a measurement of thin capitalization through the maximum amount of debt ratio, which takes into account debt exceeding a reasonable limit. In Indonesia, Minister of Finance Regulation Number 169/PMK.010/2015 sets the maximum ratio of debt to capital at four to one, so that the fiscal benefit from debt exceeding that limit is restricted.

The relationship between thin capitalization and tax avoidance can further be understood through trade-off theory. Brigham and Houston (2007) explain that the use of debt provides a benefit in the form of a tax shield from deductible interest expense, but increased debt also increases the risk of financial distress. Thus, the capital structure decision is the result of weighing the benefit of tax savings against financial risk. In the context of this study, tax planning and thin capitalization have different mechanisms in relation to tax avoidance: tax planning focuses on selecting strategies and transaction alternatives to obtain tax efficiency, whereas thin capitalization relates to funding decisions and the use of interest expense as a tax shield.

The three theoretical perspectives are used differently. Agency theory explains management incentives and conflicts of interest that can influence tax decisions; positive accounting theory explains the choice of accounting policies that have economic consequences, including taxes; and trade-off theory explains the trade-off between the benefit of the tax shield from debt and the increased risk of financial distress. In synthesizing the results, theory is not used to force a particular direction, but as a lens to explain why empirical results may differ across proxies, sectors, and regulatory periods. Accordingly, RQ2 is directed at assessing whether these contextual differences provide a consistent explanation for the variation in findings.

METHODS

This study uses a descriptive qualitative approach with a systematic literature review method that refers to PRISMA 2020. PRISMA 2020 is used as a reporting guideline so that the processes of identification, screening, eligibility assessment, and determination of the included articles can be reported transparently (Page et al., 2021).

The data sources are Google Scholar and the Garuda portal. Google Scholar was used as the main search source, while Garuda was used as a verification and supplementary search source. The status and metadata of the articles were verified through the official journal/publisher website and/or the Garuda portal. The search in this manuscript uses a publication limit of 2015–2026. The initial search notes yielded 2,460 records for the thin capitalization string and 9,640 records for the tax planning string. Because Google Scholar does



not provide separate abstract and keyword search fields as bibliographic databases do, the manuscript no longer states that the search was restricted to those fields.

The search used combinations of keywords with Boolean operators. For the first variable, the following was used: ('tax planning' OR 'perencanaan pajak') AND ('tax avoidance' OR 'penghindaran pajak') AND (Indonesia OR 'Indonesia Stock Exchange'). For the second variable, the following was used: ('thin capitalization' OR 'thin capitalisation') AND ('tax avoidance' OR 'penghindaran pajak') AND (Indonesia OR 'Bursa Efek Indonesia'). The term debt-to-equity ratio was not treated as a synonym for thin capitalization; articles using DER were considered only if the authors explicitly linked the measure to thin capitalization or to a funding structure relevant to tax avoidance. Because of limitations in recording the search results in the initial draft, the initial screening was limited to the 30 most relevant results for each keyword string. This limitation is stated explicitly so that the process can be understood and is not disguised as an exhaustive database search.

Articles were included if they met all of the following criteria: (1) quantitative empirical research; (2) tax avoidance as the dependent variable; (3) tax planning or thin capitalization as the independent variable; (4) companies listed on the Indonesia Stock Exchange as the object; (5) journal articles with verifiable metadata; (6) published in 2015–2026; (7) full text available; and (8) the direction and/or significance of the test results can be identified. Articles were excluded if they were conceptual articles, literature reviews, proceedings, undergraduate theses, master's theses, or dissertations; placed tax avoidance as an independent/moderating variable; had objects other than IDX-listed issuers; were duplicates; or had test results that could not be interpreted. The APAJI article, which was dated 2025 in the initial draft, was excluded from the corpus because its publication year could not be adequately verified from the official sources available at the time of revision. As a replacement, the article by Khoirunisa and Sugiyarti (2023), which was verified through the official journal website and directly tests tax planning against tax avoidance among IDX-listed issuers, was included in the corpus.

The selection stage consisted of identification, initial screening, full-text eligibility assessment, and determination of the included studies. Table 1 and Figure 1 report the selection flow. Because the initial records did not separately keep the number of duplicates removed, this value was not fabricated; its status is stated as 'not recorded'. The 60 articles reviewed at the screening stage are a combination of the top 30 results from each keyword string. Accordingly, the manuscript does not claim that the 60 articles represent all of the results identified.

All articles that passed were managed using Mendeley Reference Manager. Each article was coded and recorded by author, year, title, journal, DOI, verifiable indexing status, object, observation period, sample size, variable proxies, analysis technique, direction of results, significance, and classification. Reference formatting follows APA 7.

Data extraction was carried out using separate mapping matrices for tax planning and thin capitalization. For each article, the following were recorded: complete bibliographic metadata, verified indexing, object and period, number of observations, variable proxies, analysis technique, direction and significance of results, and notes on the sector and regulatory context.

The quality assessment was carried out using five criteria: clarity of objectives, appropriateness of population and sample, clarity of operational definitions/proxies, suitability of analysis technique, and completeness of results reporting. Each criterion was scored 1–3. The total score is used as information on reporting quality, not as evidence that one article is 'more correct' than another. Because the item-level score sheets from the initial assessment are not documented in the draft, this manuscript does not fabricate item-level score details; the quality results table retains only the total scores that have been recorded and explains the assessment criteria.



The analysis was conducted using vote counting followed by narrative synthesis. Vote counting was used to map the frequency of results into four categories: positive effect, negative effect, no significant effect, and results dependent on the proxy. Because ETR is a proxy whose direction of interpretation is opposite to that of increasing tax avoidance, the direction of results was normalized based on the substantive meaning of tax avoidance prior to classification. The narrative synthesis then compared differences in proxies, sectors, observation periods, and regulatory context. Vote counting was not used to estimate effect size.

RESULTS AND DISCUSSION

Search Results and Article Selection

The search was conducted on Google Scholar and the Garuda portal using the two keyword strings that had been formulated, namely the string for the thin capitalization variable and the string for the tax planning variable. The selection used the 30 most relevant results from each keyword string, so 60 records became the basis for the initial screening. The results at each selection stage are presented in Table 1. The identification stage recorded the number of records reported by the search engine for each keyword string. The screening stage included a review of the titles and abstracts of the first thirty results of each string, accompanied by the removal of duplicate records. The eligibility stage was carried out by reading the full text, and articles that passed all criteria were determined to be the articles included in the synthesis.

Table 1. Results of Article Selection Based on the PRISMA Stages

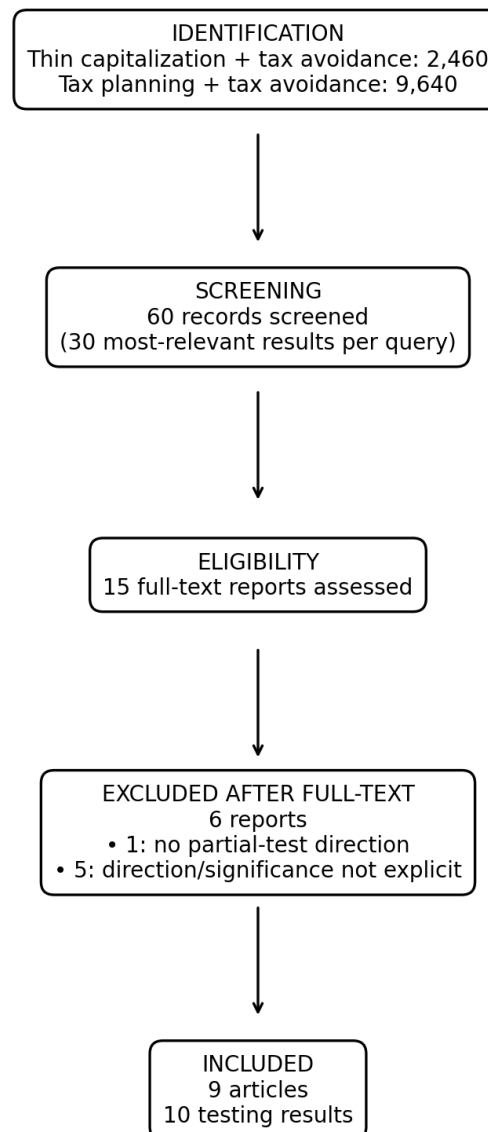
Stage	Activity	Number
Identification	Records from the thin capitalization + tax avoidance search	2,460
Identification	Records from the tax planning + tax avoidance search	9,640
Screening	Records reviewed from the top 30 results per keyword string	60
Screening	Records excluded based on title/abstract	45
Eligibility	Full-text reports assessed	15
Eligibility	Full-text reports excluded	6
Inclusion	Articles included in the synthesis	9

Source: Data processed by the authors (2026).

The first and second rows were obtained from the number of results reported by Google Scholar at the time the search was run. The third row is the first thirty results for each keyword string. The six articles excluded after full-text reading consisted of one article that reported only a simultaneous test without a partial direction and five articles that did not explicitly state the direction and significance of the results. The nine included articles yielded ten testing results, because one article tested both exogenous variables and was therefore recorded in both the tax planning and thin capitalization mapping tables.



Figure 1. PRISMA 2020-Based Article Selection Flow



Note: the number of duplicates was not recorded separately in the initial search log and was therefore not fabricated in the diagram. The initial screening used the 30 most relevant results from each keyword string.

Characteristics of Selected Articles

The characteristics of the included articles are described along four dimensions. The first dimension is the distribution of publication years, which is concentrated in the range from 2020 to 2026. This range shows that the evidence meeting the inclusion criteria in this corpus is relatively recent, but the number of available studies remains limited. The second dimension is the distribution of sectors, with manufacturing companies dominating the research objects with four articles, followed by the financial sector, the cyclical and non-cyclical sectors, and the transportation and logistics sector with one article each, while the remainder used IDX-listed issuers in general without sector restriction. The third dimension is the proxies used, both dependent variable proxies in the form of the effective tax rate or cash effective tax rate and



independent variable proxies in the form of the tax retention rate for tax planning and the debt-to-equity ratio or maximum amount of debt ratio for thin capitalization. The fourth dimension is the analysis technique, most of which was multiple linear regression and panel data regression using SPSS or EViews software.

Mapping of Tax Planning

The mapping of articles that test the effect of tax planning on tax avoidance is presented in Table 2. The number of articles that specifically place tax planning as the independent variable and tax avoidance as the dependent variable is relatively smaller than that of articles on thin capitalization, because many studies pair tax planning with firm value or earnings management as the dependent variable. Articles with such configurations were excluded at the eligibility stage in accordance with the exclusion criteria, as were undergraduate and master's theses whose topics were relevant but did not meet the publication-type criterion. The scarcity of articles in the configuration of tax planning against tax avoidance is itself a finding worth reporting, because among the top thirty results only two articles met all the criteria.

Table 2. Article Mapping Matrix for the Tax Planning Variable

No	Source	Object and Period	Analysis Technique	Classification
1	Khoirunisa & Sugiyarti (2026)	Non-primary consumer goods sector companies listed on the IDX, 2019–2023; 16 companies, 80 observations	Panel data regression, EViews 12	Has an effect; coefficient direction follows the tax avoidance proxy
2	Wahyuda et al. (2024)	Cyclical and non-cyclical sector companies listed on the IDX, 2020–2022	Panel data regression	Negative effect

Source: Data processed by the authors (2026).

Mapping of Thin Capitalization

The mapping of articles that test the effect of thin capitalization on tax avoidance is presented in Table 3. This group of articles is denser and at the same time more divided in the direction of its findings, so it becomes the main part analyzed in the discussion subsection.

Table 3. Article Mapping Matrix for the Thin Capitalization Variable

No	Source	Object and Period	Analysis Technique	Classification
1	Jumailah & Mulyani (2020)	Consumer goods companies listed on the IDX, 2014–2018	Multiple regression with a moderating variable	Positive effect
2	Ravanelly & Soetardjo (2023)	Manufacturing companies listed on the IDX, 2018–2020; 200 firm-years	Multiple regression	Positive effect
3	Mahaputra & Yasa (2024)	Manufacturing companies listed on the IDX, 2019–2021; 105 observations	Multiple regression, SPSS 20	Positive effect
4	Heidy & Ngadiman (2021)	Manufacturing companies listed on the IDX, 2015–2019; 301 observations	Multiple regression, SPSS 25	Negative effect
5	Wahyuda et al. (2024)	Cyclical and non-cyclical sector companies listed on the IDX, 2020–2022	Panel data regression	Negative effect
6	Sumekar et al. (2023)	Financial sector companies listed on the IDX, 2020–2022; 56 companies	Multiple linear regression, SPSS	Negative effect



7	Anggraeni & Oktaviani (2021)	Manufacturing companies listed on the IDX, 2017–2019; 69 companies	Panel data regression, EViews 10	No significant effect
8	Fauziah & Helmy (2025)	Manufacturing companies listed on the IDX, 2018–2022; 58 samples; MAD and four tax avoidance proxies	Panel data regression, EViews 12	Results dependent on the proxy

Source: Data processed by the authors (2026).

The direction and significance of all articles in Table 2 and Table 3 have been confirmed. Articles on similar topics that did not explicitly state the direction of the test were excluded at the eligibility stage in accordance with the exclusion criteria.

Classification of Findings

The results of classifying all articles into the four groups of findings are presented in Table 4 using the vote counting technique. The frequency count was performed only on articles whose direction and significance had been confirmed through full-text reading.

Table 4. Frequency of Finding Classifications by Variable

Classification	Tax Planning	Thin Capitalization	Total
Positive effect	0	3	3
Negative effect	1	3	4
No significant effect	0	1	1
Results dependent on the proxy	1	1	2
Number of testing results	2	8	10

Source: Data processed by the authors (2026).

The figures in this table count testing results, not the number of articles. The ten testing results come from nine articles, because one article tested tax planning and thin capitalization simultaneously.

Quality Assessment

The quality assessment was conducted on the nine included articles using five criteria, namely clarity of objectives, appropriateness of the explanation of the population and sampling technique, clarity of the operational definitions and variable proxies, suitability of the analysis technique, and completeness of the reporting of test results. Each item was rated on a scale of one to three, so the maximum score is fifteen, with a minimum threshold of nine.

Table 5. Results of Article Quality Assessment

No	Article	Total Score (max. 15)	Interpretation
1	Khoirunisa & Sugiyarti (2026)	-	Item-level reassessment needed; metadata and results verified
2	Wahyuda et al. (2024)	13	Adequate
3	Jumailah (2020)	13	Adequate
4	Ravanelly & Soetardjo (2023)	14	Adequate
5	Mahaputra Gusti & Yasa (2024)	14	Adequate
6	Heidy & Ngadiman (2021)	14	Adequate
7	Sumekar, Mulyani, and Nurindah (2023)	14	Adequate
8	Anggraeni & Oktaviani (2021)	13	Adequate
9	Fauziah & Helmy (2025)	15	Adequate

Source: Data processed by the authors (2026).

The assessment was prepared based on the information reported in the abstract, methods, and results of each article. Articles with a documented score are above the minimum threshold of nine. Meanwhile, Khoirunisa and Sugiyarti (2023) do not yet have an adequately documented total score and therefore require item-level reassessment. This article was



nevertheless retained in the corpus because its metadata and test results can be verified. The item that most often received a low score was the clarity of operational definitions and variable proxies, so this aspect became one of the considerations in explaining the inconsistency of findings.

The Effect of Tax Planning on Tax Avoidance

The empirical evidence on the effect of tax planning on tax avoidance in this study's corpus remains limited and shows heterogeneous results. Based on the results of the systematic literature review, there are two testing results that specifically analyze tax planning as the independent variable and tax avoidance as the dependent variable. Khoirunisa and Sugiyarti (2023) found that tax planning has an effect on tax avoidance in non-primary consumer goods sector companies listed on the Indonesia Stock Exchange during the 2019-2023 period. Meanwhile, Wahyuda et al. (2024) found a negative effect of tax planning on tax avoidance in cyclical and non-cyclical sector companies during the 2020-2022 period. Thus, both studies indicate a relationship between tax planning and tax avoidance, but the direction of the relationship found does not yet show a consistent pattern.

One possible reason for this difference in results is the use of proxies in measuring the research variables. In the studies included in the corpus, tax planning was measured, among other ways, using the tax retention rate, namely the ratio of net income after tax to income before tax. A higher tax retention rate indicates a larger amount of after-tax profit that the company can retain. Therefore, the interpretation of the relationship between tax planning and tax avoidance needs to take into account the direction and characteristics of the proxy used in each study.

In addition to differences in proxies, the heterogeneity of results can also be influenced by differences in the characteristics of the objects and periods of the studies. Khoirunisa and Sugiyarti (2023) used non-primary consumer goods sector companies with an observation period of 2019-2023, whereas Wahyuda et al. (2024) used cyclical and non-cyclical sector companies with an observation period of 2020-2022. Differences in sector characteristics can cause companies to have different operating conditions, transaction structures, and tax management strategies. On the other hand, differences in study periods also allow for differences in economic conditions and tax policies that can influence companies' decisions to carry out tax planning.

Viewed from agency theory, tax planning can be seen as a form of management decision in managing the company's tax burden. Differences in interests between management and owners, as well as information asymmetry, give management room to determine strategies that can increase the company's economic benefits, including through the management of tax obligations. Thus, tax planning can be used as part of the company's strategy to achieve tax efficiency.

Meanwhile, positive accounting theory explains that management tends to choose policy alternatives and transactions that provide certain economic consequences for the company. In the tax context, choosing alternatives that yield a more efficient tax burden can be part of management decisions as long as applicable tax provisions are observed. Tax planning therefore cannot be directly equated with tax avoidance. Tax planning emphasizes the process of planning and selecting alternatives to optimize the tax burden, whereas tax avoidance relates to the company's efforts to minimize the tax burden by utilizing available tax provisions.

Overall, the results of this systematic literature review do not yet provide sufficient evidence to conclude that tax planning consistently increases or decreases tax avoidance. This is due to the still limited number of studies that specifically test the relationship between tax planning and tax avoidance in the context of companies listed on the Indonesia Stock Exchange. From the literature search, only two articles met the inclusion criteria for the configuration of



tax planning as the independent variable and tax avoidance as the dependent variable. Therefore, the findings of this study indicate that the effect of tax planning on tax avoidance remains heterogeneous and inconclusive. This condition indicates the need for further research with more diverse and consistent objects, periods, and variable measurements so that the relationship between tax planning and tax avoidance can be understood more comprehensively.

The Effect of Thin Capitalization on Tax Avoidance

Findings on the effect of thin capitalization on tax avoidance show more diverse results than those for tax planning. Based on the eight testing results in the research corpus, three studies show a positive effect, three studies show a negative effect, one study shows a non-significant result, and one study shows that the direction of the relationship depends on the tax avoidance proxy used. These results indicate that thin capitalization cannot yet be explained by a single consistent pattern of relationship in the context of companies listed on the Indonesia Stock Exchange.

Positive findings indicate that increased use of debt in the funding structure can be associated with increased tax avoidance. Conceptually, the use of debt can provide a benefit in the form of a tax shield through interest expense that can reduce taxable income. This condition can create an incentive for companies to use debt-based funding as one part of their tax burden management strategy. In this study's corpus, positive results were found by Jumailah and Mulyani (2020), Ravanelly and Soetardjo (2023), and Mahaputra and Yasa (2024). These findings support the view that a funding structure that relies more on debt can be associated with a company's efforts to obtain tax benefits.

However, not all studies show a positive relationship. Heidy and Ngadiman (2021), Wahyuda et al. (2024), and Sumekar, Mulyani, and Nurindah (2023) found a negative direction in the relationship between thin capitalization and tax avoidance. These negative results indicate that increased use of debt is not always followed by increased tax avoidance. One matter to consider is the existence of fiscal limits on interest expense as well as the company's considerations in determining its funding structure. Thus, the tax shield benefit that can theoretically be obtained from debt does not always result in increased tax avoidance in practice.

In addition to positive and negative results, Anggraeni and Oktaviani (2021) found that thin capitalization has no significant effect on tax avoidance. Meanwhile, Fauziah and Helmy (2025) showed that the results of the relationship can change depending on the tax avoidance proxy used. Both findings further indicate that the relationship between thin capitalization and tax avoidance needs to be interpreted carefully and cannot be judged merely by looking at the company's level of debt use.

Differences in results across studies can also be linked to differences in the measurement of thin capitalization and tax avoidance. In the research corpus, thin capitalization was measured using different proxies, including the debt-to-equity ratio and maximum allowable debt. The debt-to-equity ratio describes the company's debt structure in general, whereas maximum allowable debt is more closely related to the debt limit permitted from a tax perspective. These differences in measurement characteristics can produce different interpretations of the relationship.

Sector characteristics and observation periods also need to be considered. Some studies used manufacturing companies, while others examined the financial sector as well as the cyclical and non-cyclical sectors. Differences in industry characteristics can influence funding structure, debt needs, and companies' tax policies. In addition, different study periods can overlap with changes in tax policy regarding the debt-to-equity ratio limit, so that results across periods cannot always be compared directly.



Viewed from trade-off theory, the use of debt provides a benefit in the form of a tax shield through a reduction of the tax burden, but at the same time companies also face costs and risks related to the use of debt. Therefore, companies do not always have an incentive to increase debt without limit. Agency theory also offers the perspective that funding structure decisions can be influenced by the interests of management and owners, while positive accounting theory explains that management can choose policy alternatives that provide certain economic consequences for the company.

Overall, the results of the systematic literature review show that the effect of thin capitalization on tax avoidance remains heterogeneous. Although there is evidence supporting a positive relationship through the tax shield mechanism, there are also negative results, non-significant results, and results that depend on the proxy. Therefore, thin capitalization cannot be used as a single indicator to explain a company's level of tax avoidance. Interpretation of the relationship needs to take into account the proxies used, sector characteristics, observation periods, and the applicable regulatory context.

Findings on thin capitalization fall into four categories: positive, negative, non-significant, and proxy-dependent. Three studies show a positive direction, three a negative direction, one a non-significant result, and one shows results that change according to the tax avoidance proxy. These results indicate that the relationship between thin capitalization and tax avoidance cannot be explained by a single mechanism alone. The tax shield benefit of debt can encourage tax avoidance, but regulatory restrictions, sector characteristics, creditor pressure, and the choice of proxy can change the direction of the results.

Synthesis of Tax Planning and Thin Capitalization

Tax planning and thin capitalization are both related to the management of a company's tax burden, but they operate through different mechanisms. Tax planning relates more to the process of planning and selecting transaction alternatives or policies to optimize the tax burden, whereas thin capitalization relates to the company's funding structure and the use of debt that can generate a tax shield benefit through interest expense.

In this study's corpus, the evidence on tax planning remains very limited because there are only two testing results that meet the inclusion criteria. Both results show a relationship with tax avoidance, but the direction is not yet consistent. Meanwhile, thin capitalization has eight testing results with findings divided into positive, negative, non-significant, and proxy-dependent directions. Thus, although there is more evidence on thin capitalization, the research results for both variables do not yet show a fully consistent pattern of relationship.

These differences indicate that the relationship between tax strategy and tax avoidance cannot be explained by a single factor alone. Tax planning and thin capitalization need to be viewed by considering how these variables are measured, company characteristics, industry sector, observation period, and the applicable tax regulatory context.

Sources of Inconsistency in Findings

The sources of inconsistency in findings can be grouped into four. First, the tax avoidance proxy can change the direction of interpretation. The effective tax rate (ETR) is a measure that is substantively opposite in direction to tax avoidance: a lower ETR indicates higher tax avoidance. Therefore, regression results need to be normalized before being compared. Second, thin capitalization proxies differ; the debt-to-equity ratio captures debt structure in general, whereas maximum allowable debt (MAD) is closer to the concept of debt exceeding the fiscal limit of reasonableness. Third, sector characteristics differ, especially in the financial sector, whose funding structure and regulation differ from those of manufacturing. Fourth, observation periods can overlap with changes in tax policy, so that results across periods are not always comparable.



Implications of the Results

Theoretically, the mapping results show that trade-off theory helps explain the tax shield motive for using debt, but is not sufficient to explain all of the variation in results. The perspectives of agency theory and positive accounting theory help explain that tax decisions are influenced by management incentives and economic consequences. Practically, these results show that the debt ratio should not be used as a single indicator of tax avoidance risk. Interpretation needs to consider the composition of debt, the tax avoidance proxy, sector characteristics, and the regulatory context.

CONCLUSIONS

Based on nine articles with ten testing results, the evidence on tax planning and thin capitalization in relation to tax avoidance among companies listed on the Indonesia Stock Exchange remains heterogeneous. For tax planning, two testing results show an effect, but the directions of the results differ, so no universal conclusion can yet be drawn. For thin capitalization, the results are divided into positive, negative, non-significant, and proxy-dependent. The synthesis shows that differences in proxies, sector characteristics, observation periods, and regulatory context are the main explanations that need to be considered in interpreting the inconsistency.

Recommendations

Based on the results of the systematic literature review, future research is advised to expand the search databases by using international databases such as Scopus and Web of Science so that the literature coverage becomes broader. Future research can also use a more structured and replicable search strategy by documenting all search results, the screening process, and the reasons for excluding each article. In addition, subsequent studies can consider using more consistent proxies for tax planning, thin capitalization, and tax avoidance so that results across studies can be compared better. If the number of studies and the available effect size data are adequate, future research can develop this systematic literature review into a meta-analysis to obtain a more measurable estimate of the relationship.

Limitations

This study has limitations in its use of Google Scholar and Garuda, as well as the restriction of the initial screening to the 30 most relevant results for each keyword string. These limitations mean that the results cannot be regarded as a census of all available literature. In addition, the number of articles meeting the inclusion criteria is relatively limited, and most are national journals. Therefore, generalization of the results needs to be done carefully. These limitations are reported explicitly so that readers can assess the strength of the evidence synthesized.

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