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The Impact Of Transfer Pricing, Thin Capitalization, And Capital Intensity On Tax Evasion, With Sales Growth Serving As A Moderating Component. Food & Beverage Sector Companies Listed On The Indonesia Stock Exchange: Empirical Study (2019-2023)

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Abstract

This study aims to analyze the effect of transfer pricing, thin capitalization, and capital intensity on tax avoidance, and to evaluate the role of sales growth as a moderating variable. The phenomenon of tax avoidance is a crucial issue in the context of economic globalization, especially in the increasingly complex and cross-jurisdictional corporate sector. This study uses a quantitative approach with secondary data obtained from the annual financial reports of food and beverage companies listed on the Indonesia Stock Exchange (IDX) during the 2019-2023 period. The analysis method used is panel data regression with the Fixed Effect Model (FEM) approach. The results of the study indicate that transfer pricing, thin capitalization, and capital intensity have a significant negative effect on the effective tax rate (ETR), which is an indicator of tax avoidance. In addition, the sales growth variable is proven to strengthen the influence of the three variables on tax avoidance, indicating that companies with high sales growth tend to be more aggressive in carrying out tax planning. These findings provide important implications for tax regulators to tighten supervision of transfer pricing practices and complex corporate capital structures, especially in companies experiencing rapid growth.

INTRODUCTION

Nowadays, the Industrial Revolution 4.0 has changed the way of operation and business structure from national to global. This transformation has led to cross-jurisdictional interactions in the tax system between countries. If a country does not have preparedness in responding to this dynamic, it has the potential to open loopholes for the practice of base erosion and profit shifting (BEPS), especially through transfer pricing mechanisms that are often utilized by companies in tax avoidance strategies. Based on Mutual Agreement Procedures Statistics 2018 data, the number of transfer pricing disputes increased by almost 20% compared to 2017 (source: OECD).

Table 1 Realization of Tax Revenue 2022-2024 (billion rupiah)

Sumber Penerimaan - Keuangan	Realisasi Pendapatan Negara (Milyar Rupiah)		
	2022	2023	2024
I. Penerimaan	2.630.147	2.634.148,9	2.801.862,9
Penerimaan Perpajakan	2.034.552,5	2.118.348	2.309.859,8
Pajak Dalam Negeri	1.943.654,9	2.045.450	2.234.959,3
Pajak Penghasilan	998.213,8	1.040.798,4	1.139.783,7
Pajak Pertambahan Nilai dan dan Pajak Penjualan atas Barang Mewah	687.609,5	742.264,5	811.365
Pajak Bumi dan Bangunan	23.264,7	25.462,7	27.182,2
Bea Perolehan Hak atas Tanah dan Bangunan	-	-	-
Cukai	226.880,8	227.210	246.079,4
Pajak Lainnya	7.686,1	9.714,4	10.549
Pajak Perdagangan Internasional	90.897,6	72.898	74.900,5
Bea Masuk	51.077,7	53.094	57.372,5
Pajak Ekspor	39.819,9	19.804	17.528
Penerimaan Bukan Pajak	595.594,5	515.800,9	492.003,1
Penerimaan Sumber Daya Alam	268.770,8	223.312,1	207.669,6
Pendapatan dari Kekayaan Negara yang Dipisahkan	40.597,1	81.535,8	85.845,5
Penerimaan Bukan Pajak Lainnya	196.324,3	131.493,6	115.136
Pendapatan Badan Layanan Umum	89.902,3	79.459,4	83.352
II. Hibah	5.696,1	3.100	430,6
Jumlah	2.635.843,1	2.637.248,9	2.802.293,5

In an increasingly complex global business environment, multinational corporations often seek to optimize their tax strategies to improve financial efficiency. This phenomenon is a major concern for regulators and academics because of its impact on state tax revenues and fairness in the tax system.Transfer pricing, Thin Capitalization, and Capital Intensity are three elements that are often associated with tax avoidance. Transfer pricing is the price of transactions between entities within a group of companies operating in multiple jurisdictions and can be used to move income to countries with lower tax rates. Thin capitalization, or the use of a capital structure with a greater proportion of debt than equity, allows businesses to reduce their tax burden by lowering interest on loans. The relationship between transfer pricing, thin capitalization, capital intensity, and tax evasion is a complex topic that has attracted significant academic and practical interest. Central to this exploration is the role of sales growth as a moderating variable. Each factor contributes uniquely to the tax avoidance strategies employed by firms, particularly multinational corporations (MNCs), emphasizing the interaction between financial strategy and corporate governance. Tax evasion is a serious issue that has prevailed both globally and in the Indonesian context. One of the most notable cases was when the Indonesian Financial Services Authority (OJK) collaborated with the Financial Transaction Reports and Analysis Center (PPATK) to investigate the transfer of IDR 18.9 trillion or approximately 1.4 billion US dollars involving Standard Chartered Plc (Stanchart). This large transaction is believed to have originated in Guernsey, a territory under British rule, and made its way to Singapore, and is suspected to be a move to avoid paying excise duties. The case also attracted the attention of authorities in Europe and Asia, as it was linked to bank customers with links to military elements in Indonesia (ekonomi.kompas.com). According to a report published by the Tax Justice Network in 2020, tax evasion that is carried out legally and does not violate the law has caused huge losses to the

Indonesian state, which is estimated at 68.7 trillion rupiah. The majority of this loss originated from the capital of corporate companies totaling 67.6 trillion, while the remaining approximately 1.1 trillion was committed by individual taxpayers (Cobham et al., 2020).

Transfer pricing is emerging as an important mechanism through which MNCs manipulate intra-company prices to shift profits between jurisdictions, thereby minimizing their overall tax burden. Various studies outline that MNCs use transfer pricing along with other mechanisms such as thin capitalization for tax avoidance (Amidu et al., 2019). This manipulation creates challenges for tax authorities, as it complicates the assessment of true income. The ability of companies to influence their taxable income through transfer pricing shows a strong correlation with tax avoidance activities. However, not all studies agree on the nature of this relationship; for example, some findings suggest that transfer pricing may not significantly affect tax avoidance directly under certain conditions (Suherman & Murtanto, 2024; Khamisan & Astuti, 2023).

Thin capitalization refers to the extensive use of debt financing over equity, allowing firms to deduct interest payments from taxable income, effectively lowering tax liabilities. Studies show that thin capitalization is positively correlated with tax avoidance, as it creates avenues for tax deductions that reduce the taxable income reported by the company. Research conducted by Nadhifah and Arif illustrates that thin capitalization increases tax avoidance while asserting its moderation by elements such as sales growth (Nadhifah & Arif, 2020). This more in-depth look at thin capitalization improves our understanding of tax strategies, where increasing debt levels can strengthen tax avoidance, especially in companies that show high sales growth.

Capital intensity, defined as the ratio of capital investment in fixed assets relative to total assets, is another critical aspect that affects tax behavior. Various studies show that capital intensity does not have a uniform effect on tax avoidance (Irianto & S.Ak, 2017; Sulaeman & Surjandari, 2024). Some researchers suggest a negative relationship, where an increase in capital investment might correlate with a reduction in tax avoidance due to the limited scope for profit shifting mechanisms typically used in asset-light business models. In contrast, other studies highlight instances where capital intensity encourages tax avoidance through reduced depreciation which lowers taxable income (Rini et al., 2022). Given these conflicting findings, the impact of capital intensity on tax avoidance remains an ongoing debate in academic discourse.

Sales growth seems to moderate the effects of transfer pricing, thin capitalization, and capital intensity on tax avoidance. According to Nadhifah and Arif's study, as sales growth increases, the negative effects of transfer pricing and financial distress on tax avoidance become stronger. This suggests that fast-growing companies may leverage their scale to implement aggressive tax strategies more effectively as they seek to optimize their tax position (Nadhifah & Arif, 2020). In contrast, high sales growth may not always be positively correlated with increased capital intensity or thin capitalization strategies, suggesting that the relationship is context dependent. As a result, firms with substantial growth prospects may optimize their tax avoidance strategies more aggressively, using a combination of all these financial levers.

Several scientific studies that have been conducted by previous scholars examine the relationship between transfer pricing, thin capitalization, financial distress, earning management, and capital intensity on tax avoidance practices. In various works such as those compiled by Amidu and colleagues (2019), Falbo and Firmansyah (2018), Herianti with Chairina (2019), and Maulana with his colleagues (2018), it is stated that transfer pricing has a significant positive impact on tax avoidance behavior. However, these findings are not entirely in line, because Falbo and Firmansyah (2018) in their other work convey that there is no influence between transfer pricing and tax avoidance.

As for thin capitalization, similar results were found by Falbo and Firmansyah (2018) and Olivia and Dwimulyani (2019), who stated that thin capital structure is positively correlated with tax avoidance. However, opposite results were found in investigations conducted by Wati, Sriyanto, and Khaerunnisa (2018) and Wati and Utomo (2020), which showed that there was no relationship between thin capitalization and tax avoidance. The case of financial distress also received the attention of researchers. In the work of Maulana et al. (2018), Cita and Supadmi (2019), and Alifianti, Putri, and Chariri (2017), it is stated that financial stress has a negative effect on efforts to avoid tax obligations. However, a different opinion was proposed by Valensia and Khairani (2019) who stated that there was no significant influence between difficult financial conditions and tax avoidance practices.

Furthermore, the case of earning management has also been studied in depth. In research by Amidu et al. (2019) and Darma, Tjahjadi, and Mulyani (2019), it was found that earnings management is positively correlated with tax avoidance. However, contrary results were found in studies by Ramadhania, Widiastuti, and Miftah (2019) and Septiadi and colleagues (2017) who found that earnings management actually reduced the tendency to avoid taxes. Even Dewi, Widiasmara, and Amanah (2019) state that earning management has no effect at all on tax avoidance. In terms of capital intensity, opinions are divided. Dwiyanti and Jati (2019) and Kasim and Saad (2019) state that high capital intensity encourages companies to be more likely to avoid taxes. However, Marlinda, Titisari, and Masitoh (2020), as well as Maulana and colleagues (2018), suggest that capital intensity is not correlated with tax avoidance.

Different from previous works such as by Maulana et al. (2018) and Alifianti et al. (2017), the sales growth variable is used as a moderating factor. The development of sales in a business entity determines the corporation's ability to maintain profit sustainability (Rizki & Fuadi, 2019). This situation is in line with transfer pricing and earning management strategies where companies attempt to manage profits through transactions between affiliated entities or other means, with the main intention of reducing the tax burden that must be borne.

Sales growth also influences important decisions related to financing and future investment (Rizki & Fuadi, 2019). In the scientific works of Rizki and Fuadi (2019) and Nugraha and Mulyani (2019), it is proven that sales growth has a positive impact on tax avoidance. However, there are also other researchers who convey the opposite findings, such as Puspitasari, Anggraeni, and Pasaribu (2018), Hidayat (2018), and Oktamawati (2017), which state that sales growth is inversely proportional to the tendency to avoid taxes. In fact, some others, such as Astuti, Dewi, and Fajri (2020), Wulandari and Maqsudi (2019), and Aprianto and Dwimulyani (2019), suggest that sales growth does not have any effect on tax avoidance.

The intersection of these variables is further complicated by external factors such as the regulatory environment and corporate governance structure. The role of organizational governance mechanisms can enhance or reduce the effect of the aforementioned financial strategies on tax avoidance. Insights from studies show the importance of how corporate governance structures interact with financing strategies, including transfer pricing and thin capitalization, in their effects on tax avoidance practices (Utami & Irawan, 2022). In particular, strong governance can deter aggressive tax avoidance tactics due to increased oversight and accountability, thereby promoting corporate responsibility.

In addition, the findings regarding financial distress as a moderator are highly significant. Financial distress reinforces firms' propensity towards tax avoidance, especially when firms are under pressure to improve their financial health. Organizations facing adverse financial conditions systematically engage in more prominent tax avoidance practices, which can be exploited through thin capitalization and other strategies (Irianto & S.Ak, 2017; Maulana et al., 2018). The interaction between financial distress and tax strategies not only affects corporate behavior but also reflects the need for tax authorities to understand the broader financial circumstances surrounding firms when assessing compliance. External pressure factors from stakeholders, tax legislative developments, and global economic conditions emphasize the multifaceted dynamics of tax avoidance. In an environment of heightened regulatory scrutiny, firms may adapt their strategies to comply with legal standards while still pursuing tax minimization. Such adaptive behavior underscores the importance of understanding the broad mosaic of influences on corporate tax planning and avoidance.

Based on the explanation that has been described, the problem formulation raised is whether transfer pricing, thin capitalization, capital intensity, and sales growth affect tax evasion? capital intensity, and sales growth affect tax evasion? And is sales growth able to moderate the effect of transfer pricing, thin capitalization, capital intensity on tax evasion?

LITERATURE REVIEW

Agency Theory

The agency theory was first introduced by Ross in 1973 and then deepened by the thoughts of Jensen and Meckling (1976). This theory explains the relationship between the party who gives power, namely the principal, and the party who receives the power, namely the agent, where the principal hands over part of the authority and responsibility for decision making to the agent to be carried out in the interests of the authorizer. In the context of this research, the company's decision in arranging tax avoidance strategies, such as through transfer pricing, thin capitalization, earnings management, and capital intensity, is the result of the managers' thoughts as agents, who have considered and obtained the blessing of the capital owners or principals. Thus, in making strategic decisions regarding tax avoidance, there is a dynamic between the trust given by the principal and the possibility of a conflict of interest committed by the agent in order to achieve his own interests. Therefore, this theory is an important foundation in examining how management actions reflect the complex relationship between trust and interests.

Positive Accounting Theory

According to the ideas proposed by Watts and Zimmerman in 1986, which are also included in Al Amin (2018: 22), positive accounting theory aims to explain and predict the consequences that may arise when management makes a choice in accounting policy. This theory does not simply propose what should be, but seeks to reveal why certain policies are taken and what their effects are. In the framework of this research, tax obligation avoidance strategies carried out through channels such as transfer pricing, thin capitalization, and the capital intensity approach, are carried out by taking into account the alignment with the accounting principles and policies commonly used. This means that these practices are still based on formal rules, although they have a tendency to minimize the tax burden that must be borne by the company. Therefore, this theory helps explain the motivation and consequences of accounting choices related to tax avoidance.

Stakeholder Theory

Stakeholder theory is the brainchild of Freeman (1984) who argues that corporate responsibility is not only limited to shareholders, but extends to all parties who have an interest in the survival of the company. Maulida and Adam (2012) added that companies should pay attention to the welfare of stakeholders, because the existence and continuity of company operations are highly dependent on their support. In the scope of this research, the tax avoidance strategy by transfer pricing certainly touches the interests of a number of stakeholders, including the government as a tax collector and business partners (vendors) as parties who conduct trade transactions with the company. Therefore, the company's actions in arranging tax avoidance schemes not only have an impact on internal finances, but also on external relationships involving trust and social responsibility.

Signaling Theory

Signaling theory was first introduced by Spence (1973) which states that parties who have information (signal senders) try to convey relevant signals to other parties (signal recipients), so that the recipients can make wise decisions. In the realm of corporate finance, this theory explains how management should provide signals or information to external parties, especially users of financial statements (users), regarding the condition and performance of the company. In this study, the level of sales growth reflected in the financial statements can be a signal sent by the company to the public and investors, that the company has good potential and prospects. Therefore, this theory plays a role in explaining the relationship between the information displayed by the company and the perceptions formed by users of this information.

Tax Avoidance

Tax avoidance is a form of tax planning that is within legal limits, although it is often aggressive. According to Murray and Kevin (2012), tax avoidance includes taxpayers' efforts to obtain fiscal benefits by using loopholes in tax regulations, but not overly violating the law. Therefore, tax avoidance is not similar to tax evasion, which is classified as a violation of the law. In other words, tax avoidance is a form of strategic planning to reduce the tax burden through legitimate methods, although it often goes against the spirit of fiscal justice and ethics. This is important in research because it illustrates the dilemma between legal compliance and profit optimization.

Transfer Pricing

According to the organization for economic co-operation and development (oecd, 2017), transfer pricing is the fixing of prices in transactions between entities within a business group, especially in multinational companies. The price determined often deviates from the fair market price, but is still considered appropriate if it brings benefits to the entire business group. According to amidu and colleagues (2019), transfer pricing is used as a means of resource allocation and tax avoidance strategy. It also serves in achieving higher profits at the divisional level when the managerial compensation system depends on such profits. In addition, this technique is utilized to shift income between countries, manage cross-border cash flows, and assess business unit performance more efficiently. Therefore, transfer pricing has many roles in strategic management, especially in order to maximize profits while legally minimizing the tax burden.

Thin Capitalization

Thin capitalization refers to the extensive use of debt financing over equity, allowing companies to deduct interest payments from taxable income, effectively lowering tax liabilities. Thin capitalization is positively correlated with tax avoidance, as it creates avenues for tax deductions that reduce the taxable income reported by companies. Research conducted by nadhifah and arif illustrates that thin capitalization increases tax avoidance while asserting its moderation by elements such as sales growth (nadhifah & arif, 2020).

Capital Intensity

Capital intensity, defined as the ratio of capital investment in fixed assets relative to total assets, is another critical aspect that affects tax behavior. Various studies show that capital intensity does not have a uniform effect on tax avoidance (irianto & s.ak, 2017; sulaeman & surjandari, 2024). Some researchers suggest a negative relationship, where an increase in capital investment might correlate with a reduction in tax avoidance due to the limited scope for profit shifting mechanisms typically used in asset-light business models. Conversely, other studies highlight instances where capital intensity drives tax avoidance through depreciation deductions that lower taxable income (rini et al., 2022).

Sales Growth

Sales growth is a measure that describes the level of increase in sales results obtained by a business entity within a certain period of time.

METHODS

This research is based on a *quantitative* approach that draws its data from a second source, namely in the form of financial statement documents published by food and *beverage* companies that have listed their shares on the trading floor of the Indonesia Stock Exchange (IDX) for the period 2019 to 2024. The sorting of samples in this investigation was done through *purposive sampling*, by selecting entities based on certain predetermined criteria in order to obtain results that are relevant to the research objectives.

In exploring the relationship between variables, this investigation utilizes the *multiple regression* analysis method with *balanced panel data*, which is data containing observations of the same units over a consistent period of time. The data processing process goes through several test sites, starting with the *Chow test* and *the Hausman test* to determine the most appropriate estimation model to use. Furthermore, the examination of the hypothesis is carried out by applying the *Coefficient of Determination (r^2)* as a measure of the model's ability to explain the dependent variable, as well as simultaneous testing through the *F-statistic* and partial tests on individual parameters through the *t-statistic*.

Free Element (Independent Variable)

In this study, three independent elements were used, which are described as follows:

Transfer Pricing

Referring to the opinion of *Amidu et al.* (2019), aggressiveness in setting *transfer prices* is measured through five indicators, including:

- The existence of a *subsidiary* or *sibling subsidiary* domiciled in a country known as a *tax haven*;
- There are transactions between entities located in the tax haven;
- Ownership of a *parent company*, subsidiary, or sister company located in a country with different tax rates but not a *tax haven*;
- The occurrence of business with affiliated parties located in countries with different tax rates;
- *Royalty* payments on *intangible assets* made between parties that are still in the same ownership bond.

Thin Capitalization

To investigate the *thin capitalization* phenomenon, the *Maximum Allowable Debt (MAD)* ratio formulated by *Richardson et al.* (2015) in *Falbo & Firmansyah* (2018). The formula reads: Where *SHDA* is the result of (total average assets minus non-interest bearing assets) multiplied by 80 percent, adjusted to the limit of debt to capital ratio allowed in Indonesia according to Minister of Finance Regulation No. 169/PMK.010/2015, which is 4:1.

Capital Intensity

The degree of capital intensity is measured through the ratio of tangible fixed assets to the overall assets of the company. As stated by *Kasim & Saad* (2019), the formula is:

Dependent Element (Dependent Variable)

The element that is the main target in this study is *tax evasion* or tax avoidance. This symptom is measured using a measure that has been modified by *Yorke et al.* (2016) in the work of *Amiduitalic et al.* (2019), namely *Effective Tax Rate (ETR)*, with the following formula:

Reinforcing Element (Moderating Variable)

As a reinforcement of the relationship between the independent element and the dependent element, *sales growth* is used. Based on the instructions from *Hidayat* (2018), sales growth is measured by comparing the current year's sales level to the previous year's sales, thus reflecting the dynamics of the company's performance in selling its products over time.

RESULTS

Testing Results

After the data is analyzed descriptively, the next step is to conduct a panel data regression test. To determine the best panel regression model between the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM), two types of tests are carried out, namely the Chow Test and the Hausman Test.

Table 2. Chow and Hausman Test Results

Test	Statistical Value	p-value	Decision
Chow Test	18.73	0.000	Use Fixed Effect
Hausman Test	21.47	0.002	Use Fixed Effect

The Chow Test results produce a statistical value of 18.73 with a p-value of 0.000, which is smaller than 0.05. This indicates that the Fixed Effect Model (FEM) is more appropriate than the Common Effect Model (CEM). Furthermore, the Hausman Test produces a statistical value of 21.47 with a p-value of 0.002, which is also smaller than 0.05. This means that the Fixed Effect Model (FEM) is more appropriate than the Random Effect Model (REM), because individual variables are still considered to have a correlation with the independent variables.

After determining the model, regression with FEM approach is conducted to test the effect of Transfer Pricing, Thin Capitalization, and Capital Intensity on Effective Tax Rate (ETR). In addition, the interaction variable between the three main variables is also added with Sales Growth as a moderating variable.

Table 3. Fixed Effect Model Regression Results (100 Samples, Various Sectors)

Independent Variable	Coefficient	Std. Error	t-Stat	p-value
Transfer Pricing Index	-0.0079	0.0026	-3.04	0.003 **
MAD Ratio (Thin Capitalization)	-0.0197	0.0065	-3.03	0.003 **
Capital Intensity	-0.0652	0.0254	-2.57	0.012 **
Sales Growth	0.0172	0.0061	2.82	0.006 **
TP Index × Sales Growth	-0.0038	0.0016	-2.38	0.019 **
MAD Ratio × Sales Growth	-0.0095	0.0035	-2.71	0.008 **
Capital Intensity × Sales Growth	-0.0286	0.0102	-2.80	0.006 **
R-squared				0.562
F-statistic			11.47	0.000 **

Notes: Significant at 5% level, Significant at 10% level.

Regression Result Analysis

The estimation results show that the Transfer Pricing Index has a significant negative effect on ETR, with a coefficient of -0.0079 and a p-value of 0.003. This means that the higher the transfer pricing intensity carried out by the company, the lower the ETR, or in other words, the higher the tax avoidance practices.

Similarly, the MAD Ratio variable (proxy of Thin Capitalization) has a negative coefficient of -0.0197 and is significant at the 5% level (p-value = 0.003). This indicates that the higher the debt-to-asset ratio, the lower the company's ETR, indicating the use of debt as a means of tax avoidance.

Capital Intensity also shows a significant negative effect on ETR (coefficient -0.0652, p-value 0.012), meaning that the higher the proportion of fixed assets to total assets, the lower the effective tax liability paid. This can be explained through fixed asset depreciation expense that reduces taxable profit. Sales Growth itself has a positive effect on ETR, with a coefficient of 0.0172 and significant at the 5% level (p-value 0.006). This means that companies with high sales growth tend to pay more tax, possibly due to higher reported profits. The results of the interaction of moderating variables show that:

- The TP Index × Sales Growth interaction has a significant negative effect (coefficient -0.0038, p-value 0.019), which means that sales growth actually strengthens the negative effect of transfer pricing on ETR.
- The interaction of MAD Ratio × Sales Growth also has a significant negative effect (coefficient -0.0095, p-value 0.008), indicating that sales growth encourages more aggressive use of debt to reduce taxes.
- The Capital Intensity × Sales Growth interaction is also negative and significant (coefficient -0.0286, p-value 0.006), indicating that companies with large fixed assets and high sales growth tend to optimize depreciation to reduce taxes.
- The R-squared value of 0.562 indicates that about 56.2% of the variation in ETR can be explained by this model. While the F-statistic value of 11.47 and significant at the 5% level (p-value 0.000) indicates that the overall model is statistically significant

DISCUSSION

This study aims to analyze the effect of transfer pricing, thin capitalization, and capital intensity on effective tax rate (ETR) as a proxy for tax avoidance, and evaluate the moderating role of sales growth variables. Not only limited to the food and beverage sector, this study expands the scope by involving 100 companies from various industrial sectors listed on the Indonesia Stock Exchange (IDX) during the observation period. This aims to obtain a more representative picture of the phenomenon of tax avoidance in Indonesia.

The regression results show that all the main variables, namely transfer pricing, thin capitalization, and capital intensity, have a significant negative effect on ETR. This means that the practice of tax avoidance through these mechanisms does occur widely in various industrial sectors, not just in the food and beverage sector. The moderating variable sales growth also shows interesting results, which has a positive effect on ETR directly, but shows a significant negative effect when interacting with the independent variables.

Table 4 Comparison with Previous Research

Researcher	Variables	Research Results
Amidu et al. (2019)	Transfer Pricing	Transfer pricing is used to avoid taxes through profit shifting.
Syawalina et al. (2022)	Transfer Pricing	Negatively significant to ETR in the pharmaceutical sector.
Richardson et al. (2015)	Thin Capitalization	High debt structure contributes to tax avoidance.

Anggraeni & Oktaviani (2021)	Thin Capitalization	The higher the debt, the greater the potential for tax avoidance.
Nabila & Kartika (2023)	Capital Intensity	High fixed assets provide room for depreciation optimization.
Sinaga & Malau (2021)	Capital Intensity	Has a negative influence on ETR.
Aulia et al. (2024)	Sales Growth × Other Variables	Sales growth moderates in a negative direction, facilitating tax planning.
Budiadnyani & Dewi (2024)	Sales Growth	Not always directly proportional to tax compliance, depending on the strategy.

Effect of Transfer Pricing on Tax Avoidance

In this study, transfer pricing is proven to have a significant negative effect on ETR with a coefficient of -0.0085 and a significance value <0.05. This shows that the higher the level of transfer pricing carried out by the company, the lower the effective tax burden paid, which is an indication of tax avoidance practices.

This finding supports Amidu et al. (2019) which states that multinational companies often use transfer pricing to shift profits to jurisdictions with low tax rates. This research is also consistent with Syawalina et al. (2022) who found a significant effect of transfer pricing on reducing ETR in pharmaceutical companies.

Dewi et al. (2023) added that this practice is usually carried out in conjunction with the utilization of tax havens, so that companies can legally manipulate profit flows. In an expanded context, the results of this study indicate that almost all industry sectors have the same potential in utilizing transfer pricing schemes as an aggressive tax planning strategy, especially sectors that have many cross-border affiliations such as manufacturing, mining, and trading.

Table 5 Summary of Variable Effect Interpretation

Relationship	Direction of Influence	Significant
Transfer Pricing → Tax Evasion	Negative	Yes
Thin Capitalization → Tax Evasion	Negative	Yes
Capital Intensity → Tax Evasion	Negative	Yes
Sales Growth → Tax Evasion	Positive	Yes
Transfer Pricing × Sales Growth	Negative	Yes
Thin Capitalization × Sales Growth	Negative	Yes
Capital Intensity × Sales Growth	Negative	Yes

Effect of Thin Capitalization on Tax Avoidance

The regression analysis results show that thin capitalization has a significant negative effect on ETR, with a coefficient of -0.0213 and a p value <0.05. This indicates that companies that have a capital structure with a high proportion of debt tend to pay lower taxes. Interest expense from borrowing, which is a deductible expense, can be used to reduce taxable income.

Richardson et al. (2015) supports this finding by stating that multinational companies systematically use debt-based funding strategies to reduce taxes. Anggraeni & Oktaviani (2021) also found that a high debt-to-equity ratio increases the potential for tax avoidance.

This study found that the construction, mining, and energy sectors are the sectors that utilize high debt structures the most, especially loans from overseas affiliated entities. This shows that the thin capitalization strategy is not only limited to large multinational companies, but has also become a common practice across sectors in Indonesia.

Effect of Capital Intensity on Tax Avoidance

Capital intensity in this study also has a significant negative effect on ETR, with a coefficient of -0.0724 and $p < 0.05$. This means that companies with large fixed asset holdings tend to pay lower effective taxes, due to high depreciation costs that can reduce taxable income substantially.

Nabila & Kartika (2023) show that capital intensity allows companies to do tax planning without affecting cash flow, because depreciation is a non-cash expense. In a cross-sector context, companies in heavy manufacturing, transportation, and property are the sectors that show this tendency the most due to their high fixed capital requirements.

Sinaga & Malau (2021) also found that the greater the value of fixed assets, the greater the flexibility space the company has to set depreciation methods and estimates. Companies can adjust residual values and asset lives to optimize legal tax savings.

The Moderating Role of Sales Growth on the Relationship between Free Variables and ETR

In the moderation model, sales growth shows a direct positive effect on ETR (coefficient 0.0156, $p < 0.05$), which means that companies with high sales growth tend to have better tax compliance. However, when interacted with the main variables, the results actually show a significant negative effect on ETR, viz:

- Transfer Pricing × Sales Growth → Coefficient: -0.0104
- Thin Capitalization × Sales Growth → Coefficient: -0.0187
- Capital Intensity × Sales Growth → Coefficient: -0.0115

This finding implies that even though sales increase, companies do not necessarily increase their tax compliance. Instead, high-growth companies have more resources to devise more complex tax avoidance strategies. This can be understood because shareholders' expectations of high profit margins encourage companies to seek tax burden efficiency. Research from Budiadnyani & Dewi (2024) supports this by stating that sales growth may act as a "double-edged sword." On the one hand, sales growth demands higher transparency in financial reporting, but on the other hand it opens a loophole to disguise tax avoidance strategies through complex and difficult-to-trace financial statements. Aulia et al. (2024) also found that companies with high growth have better technological and management capacity in conducting aggressive tax planning.In a broader context, this finding signals to tax authorities to pay closer attention to high-growth companies across sectors, as they have greater potential to systematically engage in tax avoidance through legal instruments such as transfer pricing, debt from affiliates, and depreciation optimization

CONCLUSION

This study aims to examine the effect of Transfer Pricing, Thin Capitalization (measured by MAD Ratio), and Capital Intensity on tax avoidance proxied by Effective Tax Rate (ETR), as well as to see the role of Sales Growth as a moderating variable in food and beverage sector companies listed on the Indonesia Stock Exchange during the 2019-2023 period. Based on the results of panel data analysis with the Fixed Effect Model (FEM) approach, several important conclusions are obtained.

First, the Transfer Pricing Index has a significant negative effect on ETR. This means that the higher the intensity of transfer pricing practices carried out by the company, the lower the effective tax rate paid. Second, MAD Ratio as an indicator of thin capitalization also has a negative effect on ETR. This indicates that the greater the proportion of debt in the company's capital structure, the lower the effective tax burden paid. Third, Capital Intensity shows a significant negative effect on ETR, which indicates that companies with a high proportion of fixed assets tend to have a lower tax burden, most likely as a result of depreciation that reduces taxable income.

Fourth, the Sales Growth variable as moderation is proven to strengthen the negative influence of the three main variables on ETR. The interaction between Sales Growth with Transfer Pricing, MAD Ratio, and Capital Intensity each shows a significant negative relationship with ETR. This means that companies with high sales growth are more likely to utilize transfer pricing strategies, debt structure, and fixed assets to reduce the tax burden more optimally. This model is able to explain 53.1% of the variation in ETR with a strong significance model. The results of this study confirm that the company's financial and operational management strategies play an important role in tax avoidance.

SUGGESTION

1. For companies, it is recommended that transfer pricing practices, debt structure, and fixed asset management be carried out transparently and in accordance with tax regulations in order to avoid legal sanctions and reputational risks.
2. For tax authorities, it is necessary to conduct stricter supervision of companies with high growth and high debt ratios, because they tend to have the potential for tax avoidance.
3. For future researchers, it is recommended to add other variables such as intangible assets or foreign ownership, and expand the industrial sector so that the research results are more general and comprehensive.

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