CORPORATE SOCIAL RESPONSIBILITY AND CORPORATE TAX BEHAVIOR: THE DUAL ROLE OF CSR IN EXPLAINING LEVERAGE AND TAX AGGRESSIVENESS

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Abstrak: This study examines the role of Corporate Social Responsibility (CSR) as both a mediating and moderating variable in the relationship between leverage and tax aggressiveness. The research focuses on food and beverage companies listed on the Indonesia Stock Exchange during the 2019–2023 period. The study employs a quantitative approach using secondary data obtained from annual reports and financial statements. Data analysis was conducted using Partial Least Squares–Structural Equation Modeling (PLS-SEM) with SmartPLS software. The results indicate that CSR does not have a significant effect on tax aggressiveness. In addition, leverage is not found to significantly influence CSR or tax aggressiveness. The moderation analysis also shows that CSR does not significantly moderate the relationship between leverage and tax aggressiveness. Furthermore, mediation testing confirms that CSR does not mediate the relationship between leverage and tax aggressiveness. These findings suggest that CSR disclosure does not necessarily reflect corporate tax responsibility in the Indonesian food and beverage sector.

Kata Kunci: Corporate Social Responsibility, Leverage, Tax Aggressiveness, PLS-SEM, Indonesia Stock Exchange

INTRODUCTION

The food and beverage sector represents one of the most strategic manufacturing subsectors in the Indonesian economy. This industry plays a crucial role in supporting national economic growth through its contribution to industrial production, employment creation, and domestic consumption. In addition, companies operating in this sector generate substantial government tax revenues due to the high volume of production activities, distribution networks, and commercial transactions carried out within the industry. With large operational scales and extensive market coverage, firms in the food and beverage sector possess considerable potential to contribute significantly to national tax revenue. However, despite this potential, various studies indicate that corporations do not always fulfill their tax obligations optimally, as many firms engage in tax planning strategies designed to minimize their tax liabilities.

One commonly discussed corporate strategy in this context is tax avoidance, which refers to the practice of reducing tax liabilities through the exploitation of loopholes in tax regulations without directly violating the law. Although tax avoidance remains technically legal, it often raises ethical concerns because it can significantly reduce government revenue that should otherwise be allocated to economic development and public welfare. In the academic literature, this practice is frequently associated with tax aggressiveness, which describes managerial actions aimed at minimizing corporate tax payments through various tax planning strategies, including those that fall within the grey areas of taxation regulations (Frank et al., 2009; Hanlon & Heitzman, 2010). While such strategies may increase corporate profitability and shareholder value, they may also generate negative externalities for society by weakening government fiscal capacity to provide public services.

The phenomenon of tax avoidance has been widely documented in many countries, including Indonesia. Companies operating in the food and beverage sector listed on the Indonesia Stock Exchange (IDX) have also been identified as engaging in various tax planning strategies to reduce their tax burdens. Several studies suggest that firms in this subsector utilize financial mechanisms such as high leverage, transfer

pricing arrangements, capital intensity strategies, and revenue structure optimization to minimize corporate tax payments. These financial strategies enable firms to take advantage of tax deductions, particularly those related to interest expenses from debt financing or other transaction structures that reduce taxable income.

In addition to financial strategies, empirical evidence indicates that internal corporate characteristics also influence tax avoidance behavior. Factors such as profitability, firm size, capital structure, and managerial ownership have been frequently linked to corporate tax planning decisions. Firms with larger assets and more complex operational structures often possess greater opportunities to engage in aggressive tax planning compared to smaller firms with simpler financial structures. Consequently, corporate tax behavior cannot be explained solely through regulatory frameworks, but must also be understood in relation to firm-specific financial and governance characteristics.

The issue of corporate tax avoidance in Indonesia has also attracted public attention due to several high-profile cases involving multinational corporations. One notable example involves the alleged tax avoidance practice conducted by British American Tobacco through its Indonesian subsidiary, PT Bentoel Internasional Investama. According to reports by the Tax Justice Network, the company was suspected of shifting profits through its Indonesian subsidiary, potentially causing tax revenue losses for Indonesia estimated at approximately US$14 million annually. Such cases illustrate how multinational corporations may exploit international financial structures and internal corporate transactions to minimize tax liabilities.

Aggressive tax planning practices are commonly implemented through mechanisms such as profit shifting, debt financing structures, and corporate transaction restructuring, which are designed to reduce corporate tax burdens. From a governmental perspective, these practices represent a serious concern because they reduce the potential tax revenues required to finance public infrastructure, social programs, and economic development. Consequently, corporate tax behavior is increasingly viewed not only as a financial strategy but also as a matter closely related to corporate accountability and social responsibility.

In recent decades, the concept of Corporate Social Responsibility (CSR) has gained increasing prominence within modern business practices. CSR refers to the commitment of firms to integrate social, environmental, and ethical considerations into their operational activities in order to create sustainable value for stakeholders. Companies that adopt CSR principles are expected not only to pursue financial performance but also to consider the broader societal impacts of their business decisions (Carroll, 1999). As stakeholders become more concerned about corporate accountability and ethical business conduct, CSR has become an important mechanism through which companies demonstrate their commitment to responsible business practices.

Within this perspective, corporate tax compliance can also be considered a fundamental component of CSR. Paying taxes fairly represents a direct contribution by corporations to national development and social welfare. Consequently, firms that maintain strong CSR commitments are theoretically expected to avoid aggressive tax strategies that may damage their corporate reputation or undermine stakeholder trust. Previous studies have demonstrated that companies with higher levels of CSR engagement tend to exhibit lower levels of tax aggressiveness because of reputational pressure and the need to maintain legitimacy among stakeholders (Ortas & Gallego-Álvarez, 2020).

However, the relationship between CSR and tax aggressiveness remains empirically inconclusive. While some studies suggest that CSR acts as a deterrent against aggressive tax practices, other studies reveal contradictory findings. In some cases, companies with high CSR disclosure continue to engage in aggressive tax planning strategies in order to maintain financial performance and meet shareholder expectations. Conversely, other studies argue that CSR may function as an internal governance mechanism that restrains opportunistic managerial behavior in corporate taxation practices (Hajawiyah et al., 2022; Issah & Rodrigues, 2021). These inconsistent findings indicate that the relationship between CSR and tax aggressiveness remains complex and requires further investigation.

Beyond CSR considerations, corporate tax behavior is also influenced by firms' financial structures, particularly leverage. Leverage reflects the degree to which firms rely on debt financing within their capital structure. Debt financing plays a significant role in corporate tax planning because interest expenses are generally tax-deductible, thereby providing a tax shield that reduces taxable income. As a result, firms with

higher leverage ratios may have stronger incentives to engage in tax minimization strategies in order to maximize the tax benefits associated with debt financing.

The interaction between leverage, CSR, and tax aggressiveness therefore presents an important research issue. On the one hand, leverage may encourage firms to adopt aggressive tax planning strategies to maximize tax advantages. On the other hand, CSR commitments may serve as a control mechanism that limits such opportunistic behavior by enhancing corporate transparency, accountability, and ethical standards. In this regard, CSR may play a dual role in explaining corporate tax behavior. CSR may function as a mediating mechanism through which financial characteristics such as leverage influence tax aggressiveness, while simultaneously acting as a moderating factor that strengthens or weakens the relationship between leverage and tax aggressiveness.

The increasing public scrutiny of corporate tax practices further highlights the importance of this issue. Governments, investors, regulators, and the general public are paying greater attention to how companies design and implement their tax strategies, particularly when firms simultaneously promote their commitment to CSR. As a result, understanding how CSR interacts with financial characteristics such as leverage becomes increasingly important for explaining corporate tax behavior in modern business environments.

Despite the growing body of literature examining the relationship between CSR and corporate tax aggressiveness, several research gaps remain. First, many prior studies primarily focus on the direct relationship between CSR and tax aggressiveness, while relatively few studies examine the potential mediating and moderating roles of CSR simultaneously. Second, empirical studies investigating the interaction between financial structure variables such as leverage and CSR in shaping tax behavior remain limited, particularly within emerging market contexts. Third, existing research often relies on samples from developed countries, whereas empirical evidence from emerging economies such as Indonesia remains relatively scarce. Moreover, studies focusing specifically on the food and beverage sector are still limited, despite the sector's significant economic contribution and potential exposure to tax planning strategies.

Based on these gaps, this study contributes to the existing literature in several ways. First, this research simultaneously examines the mediating and moderating roles of Corporate Social Responsibility in the relationship between leverage and tax aggressiveness, thereby providing a more comprehensive explanation of how CSR influences corporate tax behavior. Second, this study focuses on food and beverage companies listed on the Indonesia Stock Exchange during the 2019–2023 period, providing empirical evidence from an emerging market context that remains underexplored in previous studies. Third, by integrating financial structure variables with corporate social responsibility perspectives, this research offers a broader understanding of how firms balance financial incentives with ethical considerations in shaping their corporate tax strategies.

Therefore, this study aims to examine the role of Corporate Social Responsibility as both a mediating and moderating variable in the relationship between leverage and tax aggressiveness among food and beverage companies listed on the Indonesia Stock Exchange during the period 2019–2023. The findings of this study are expected to contribute to the literature on corporate taxation, corporate governance, and social responsibility while also providing practical insights for policymakers, investors, and corporate managers in promoting more responsible corporate tax practices.

LITERATURE REVIEW
Corporate Tax Aggressiveness
Corporate tax aggressiveness has become an increasingly important topic in accounting, taxation, and corporate governance research. In general, tax aggressiveness refers to managerial efforts to reduce corporate tax liabilities through tax planning strategies that range from legal tax minimization to actions located in the grey area of tax regulation. Although such practices may improve after-tax profits and enhance shareholder value, they may also reduce government fiscal capacity and generate reputational, ethical, and social costs. This is why tax aggressiveness is frequently discussed not only as a technical tax issue but also as a broader matter of corporate responsibility and accountability.

The growing scholarly interest in the relationship between tax aggressiveness and corporate responsibility is also reflected in the literature review by Issah and Rodrigues (2021), who show that research on CSR and

corporate tax aggressiveness has expanded considerably in recent years. Their study highlights that tax behavior should not be interpreted merely as a financial management decision, but also as a reflection of how firms position themselves toward stakeholders and public legitimacy. In this regard, tax payments are increasingly viewed as part of a corporation's broader social contribution.

From a theoretical standpoint, corporate tax aggressiveness can be explained through **agency theory** and **legitimacy theory**. Agency theory suggests that managers may pursue tax-saving strategies to maximize firm value or improve reported financial outcomes, particularly when such strategies create private or organizational benefits. Meanwhile, legitimacy theory emphasizes that companies seek social approval and public trust by aligning corporate behavior with societal expectations. Because aggressive tax practices may be perceived as socially irresponsible, firms with stronger concern for legitimacy are expected to be more cautious in adopting such strategies.

Corporate Social Responsibility and Tax Aggressiveness
Corporate Social Responsibility (CSR) refers to a firm's commitment to integrating social, environmental, and ethical considerations into its business operations and decision-making processes. In the context of taxation, CSR has increasingly been interpreted as an important ethical lens through which corporate tax behavior can be understood. Firms that claim to be socially responsible are expected to behave consistently with stakeholder expectations, including fulfilling tax obligations fairly and transparently.

Several studies support the argument that CSR is negatively associated with tax aggressiveness. Ortas and Gallego-Álvarez (2020) find that companies with stronger CSR performance, including social, environmental, and governance dimensions, are less likely to engage in aggressive tax practices. Their findings indicate that high CSR performance may serve as a mechanism that constrains firms' incentives to pursue aggressive tax strategies. Similarly, Hajawiyah et al. (2022), using Indonesian listed firms, report a significant negative relationship between CSR and tax aggressiveness. Their study is particularly important because it demonstrates that the relationship may be bidirectional: tax aggressiveness reduces CSR, and CSR, in turn, reduces tax aggressiveness.

The findings of Rehman et al. (2024) also support the idea that CSR is associated with more responsible tax behavior. They report that firms with higher CSR spending are more likely to engage in tax payment activities, implying lower tax avoidance. In a similar vein, the scientometric review by Issah and Rodrigues (2021) suggests that CSR and tax aggressiveness are conceptually intertwined because taxes are increasingly seen as part of a company's social responsibility narrative.

However, the empirical relationship is not always uniform. Some firms may use CSR more as a symbolic tool than as a substantive ethical commitment. This inconsistency creates an important research issue: whether CSR genuinely restrains aggressive tax behavior or instead coexists with managerial opportunism under certain organizational conditions.

Based on legitimacy theory, firms with stronger CSR engagement are expected to avoid overly aggressive tax strategies because such actions may threaten reputation, stakeholder trust, and social legitimacy. Therefore, the first hypothesis is proposed as follows:
H1: Corporate Social Responsibility has a negative effect on tax aggressiveness.

Leverage and Tax Aggressiveness
Leverage reflects the extent to which a company relies on debt financing in its capital structure. From a tax perspective, leverage is highly relevant because interest expenses are generally tax-deductible, thereby creating a **tax shield** that can reduce taxable income. As a result, firms with higher leverage may have stronger incentives to adopt tax-saving strategies and pursue lower effective tax burdens.

The relationship between leverage and tax aggressiveness, however, has produced mixed empirical findings. Lailiyah et al. (2024) find that leverage does not significantly affect tax aggressiveness in Indonesian manufacturing firms. Rehman et al. (2024) similarly report an inverse relationship between leverage and tax avoidance. These findings suggest that debt financing may not always translate into more aggressive tax behavior, possibly because leverage already provides a built-in tax advantage through deductible interest expenses, reducing the need for additional tax avoidance strategies.

Nevertheless, from a theoretical perspective, leverage remains an important determinant of tax behavior. Firms with high debt obligations face stronger pressure to preserve cash flow, improve profitability, and maintain financial performance. Such financial pressure may increase managerial incentives to reduce tax burdens. Therefore, leverage can still be expected to influence tax aggressiveness, even if the direction and magnitude may vary across settings.

In the context of this study, leverage is positioned as the main financial structure variable that may shape corporate tax behavior directly and indirectly through CSR. Accordingly, the following hypothesis is developed:

H2: Leverage affects tax aggressiveness.

Leverage and Corporate Social Responsibility

The relationship between leverage and CSR can be explained from two competing perspectives. On the one hand, firms with high leverage may reduce CSR engagement because debt obligations consume financial resources, leaving less room for social and environmental initiatives. On the other hand, highly leveraged firms may increase CSR disclosure to strengthen legitimacy, reassure stakeholders, and reduce reputational risk associated with financial pressure.

Although direct empirical evidence on leverage and CSR in your uploaded studies is not always the central focus, several papers imply that corporate financial conditions influence the way firms use CSR strategically. Dakhli (2022) shows that governance-related characteristics may affect CSR, which subsequently shapes tax avoidance. Balaskas et al. (2024) also demonstrate that CSR can interact with organizational determinants of tax behavior, indicating that CSR may operate as a strategic response to internal pressures. These studies support the idea that CSR is not purely altruistic, but can also be affected by firm-level characteristics and incentives.

In the present study, leverage is expected to influence CSR because capital structure decisions affect managerial priorities, risk exposure, and stakeholder relations. A highly leveraged firm may either strengthen CSR to maintain legitimacy or weaken CSR because of financial constraints. Thus, the following non-directional hypothesis is proposed:

H3: Leverage affects Corporate Social Responsibility.

Corporate Social Responsibility as a Mediating Variable

The role of CSR as a mediating variable has gained increasing attention in recent literature. Mediation implies that a firm characteristic does not influence tax behavior only directly, but also indirectly through its impact on CSR. In this framework, CSR becomes an explanatory mechanism that translates organizational conditions into corporate tax outcomes.

Dakhli (2022) provides strong support for this perspective by showing that CSR partially mediates the relationship between board gender diversity and tax avoidance. Her findings suggest that governance characteristics influence tax behavior not only directly but also through CSR performance. This study is highly relevant because it demonstrates that CSR can act as a meaningful transmission channel between internal organizational attributes and tax aggressiveness.

Likewise, Balaskas et al. (2024) report mediating mechanisms in the context of tax avoidance intentions, although their mediators are coercive power and digital transformation. Their model is still relevant for the current study because it reinforces the broader view that tax-related behavior is often shaped through indirect pathways rather than only direct effects. The existence of such indirect processes supports the plausibility of CSR functioning as a mediator in the leverage–tax aggressiveness relationship.

In this study, leverage may affect CSR because firms under stronger financial pressure may strategically adjust CSR engagement. Subsequently, CSR may shape tax aggressiveness by either constraining aggressive tax planning through ethical and legitimacy considerations or reflecting managerial attempts to balance financial and reputational objectives. Therefore, CSR is expected to mediate the relationship between leverage and tax aggressiveness.

H4: Corporate Social Responsibility mediates the relationship between leverage and tax aggressiveness.

Corporate Social Responsibility as a Moderating Variable

In addition to its mediating role, CSR may also function as a moderating variable. Moderation implies that CSR changes the strength or direction of the relationship between leverage and tax aggressiveness. In other words, the effect of leverage on tax aggressiveness may become weaker or stronger depending on the level of CSR engagement.

This perspective is supported by several studies in your uploaded PDFs. Balaskas et al. (2024) explicitly examine the moderating effect of CSR and find that CSR mitigates certain determinants of tax avoidance intention. Their findings indicate that CSR may weaken the negative organizational drivers of unethical tax behavior. Elouaer et al. (2022) also investigate moderation, although in the reverse direction, by testing whether gender diversity and CEO experience moderate the relationship between tax aggressiveness and CSR. Their study is still important because it confirms that the interaction between CSR and tax behavior can be contingent on organizational conditions.

Furthermore, Rustandi et al. (2024) show that CSR moderates the impact of business strategy on tax aggressiveness. Their findings suggest that the consequences of strategic corporate decisions on tax aggressiveness depend on the firm's CSR engagement. Rehman et al. (2024) similarly reveal that business strategy moderates the association between CSR and tax avoidance. Collectively, these studies provide strong empirical justification for treating CSR as a moderator in corporate tax research.

From a theoretical standpoint, CSR may weaken the leverage–tax aggressiveness relationship because firms with stronger CSR commitments are more concerned with transparency, legitimacy, and stakeholder trust. Even when firms rely heavily on debt financing, strong CSR may discourage them from engaging in highly aggressive tax planning. However, it is also possible that CSR strengthens the relationship if firms use CSR strategically to legitimize tax-saving behavior. Given these competing possibilities, a non-directional moderating hypothesis is more appropriate.

H5: Corporate Social Responsibility moderates the relationship between leverage and tax aggressiveness.

METHODS

Research Design

This study employed a quantitative research approach with an explanatory design to examine the relationships among leverage, Corporate Social Responsibility (CSR), and tax aggressiveness. The quantitative approach was selected because this study aimed to test causal relationships among variables based on theoretical arguments and prior empirical findings. More specifically, the study investigated the direct effect of leverage on tax aggressiveness, as well as the dual role of CSR as both a mediating and moderating variable in that relationship.

Population and Sample

The population of this study consisted of food and beverage companies listed on the Indonesia Stock Exchange (IDX) during the 2019–2023 period. The food and beverage sector was chosen because it represents one of the most strategic manufacturing subsectors in Indonesia and has substantial relevance to corporate tax behavior due to its large operational scale, extensive market network, and significant contribution to state revenue.

The sample was determined using a purposive sampling technique, in which companies were selected based on specific criteria relevant to the research objectives. The sampling criteria were as follows:

1. The company was classified in the food and beverage subsector and listed on the Indonesia Stock Exchange during the period 2019–2023.
2. The company consistently published annual reports and financial statements for the period 2019–2023.
3. The company presented complete data required to measure leverage, CSR, and tax aggressiveness.
4. The company reported its financial statements in rupiah and had accessible CSR disclosure in either the annual report or sustainability report.

Based on these criteria, the final sample consisted of firms that met all requirements during the five-year observation period, resulting in a set of firm-year observations used for analysis.

Type and Source of Data

This study used **secondary data** in quantitative form. The data were obtained from publicly available sources, including:

- annual reports,
- audited financial statements,
- sustainability reports, and
- the official website of the Indonesia Stock Exchange (IDX) as well as the official websites of the respective companies.

Financial data were used to measure leverage and tax aggressiveness, while non-financial disclosure data were used to construct the CSR index.

Operational Definition and Measurement of Variables

1. Tax Aggressiveness

Tax aggressiveness was the dependent variable in this study. It refers to the company's effort to minimize tax payments through tax planning strategies. In this study, tax aggressiveness was proxied by the Effective Tax Rate (ETR).

$$ETR = \frac{Income\ Tax\ Expense}{Profit\ Before\ Tax}$$

A lower ETR indicates a higher tendency toward tax aggressiveness, while a higher ETR indicates more conservative tax behavior.

2. Leverage

Leverage was the independent variable in this study. It reflects the extent to which a company relies on debt financing in its capital structure. Leverage was measured using the following formula:

$$Leverage = \frac{Total\ Liabilities}{Total\ Assets}$$

A higher leverage ratio indicates a greater proportion of debt in the company's financing structure.

3. Corporate Social Responsibility (CSR)

CSR functioned as both the mediating and moderating variable in this study. CSR was measured using a Corporate Social Responsibility Disclosure Index (CSRDI) based on the extent of CSR information disclosed by the company in its annual report or sustainability report.

The CSR index was calculated using the following formula:

$$CSRDI = \frac{\sum X_i}{N}$$

where:

- X_i= 1 if a CSR item is disclosed, 0 if not disclosed
- N= total number of CSR disclosure items observed

A higher CSRDI indicates broader CSR disclosure by the company.

Data Analysis Technique

The data were analyzed using Partial Least Squares–Structural Equation Modeling (PLS-SEM) with SmartPLS version 3. PLS-SEM was chosen because it is suitable for testing complex relationships involving both mediation and moderation effects simultaneously. In addition, PLS-SEM is appropriate for predictive models, does not require strict normality assumptions, and is suitable for relatively limited sample sizes.

The analysis was conducted in two main stages: measurement model evaluation (outer model) and structural model evaluation (inner model).

1. Measurement Model Evaluation

The outer model evaluation was conducted to assess the validity and reliability of the constructs. The tests included: Convergent validity, assessed using outer loading values and Average Variance Extracted (AVE).

A loading value above 0.70 and an AVE above 0.50 indicate acceptable convergent validity and Composite reliability and Cronbach's alpha, used to evaluate internal consistency reliability, with values above 0.70 considered acceptable.

2. Structural Model Evaluation
The inner model evaluation was conducted to test the proposed hypotheses. This stage included:
- Coefficient of determination (R^2) to assess the explanatory power of the model,
- Path coefficients to examine the direction and magnitude of the relationships among variables,
- Effect size (f^2) to assess the contribution of each exogenous variable, and
- Predictive relevance (Q^2) to evaluate the predictive capability of the model.

Hypothesis Testing
Hypothesis testing was carried out using the bootstrapping procedure in SmartPLS version 3. The significance of the relationships was determined by examining the t-statistics and p-values. A hypothesis was considered supported if the p-value was less than 0.05 and the t-statistic exceeded 1.96 at the 5% significance level.

Mediation Test
To test the mediating role of CSR, the indirect effect of leverage on tax aggressiveness through CSR was examined using the specific indirect effects output generated by SmartPLS version 3. Mediation was considered significant when the indirect path coefficient was statistically significant based on the bootstrapping results.

Moderation Test
To test the moderating role of CSR, an interaction term between leverage and CSR was created in SmartPLS version 3. The moderating effect was considered significant if the interaction path coefficient between Leverage*CSR and Tax Aggressiveness was statistically significant. This procedure allowed the study to determine whether CSR strengthened or weakened the relationship between leverage and tax aggressiveness.

RESULTS AND DISCUSSION
Results
To analyze the relationships among leverage, Corporate Social Responsibility (CSR), and tax aggressiveness, this study utilized Partial Least Squares–Structural Equation Modeling (PLS-SEM) with the assistance of SmartPLS software, are illustrated in Figure 1.
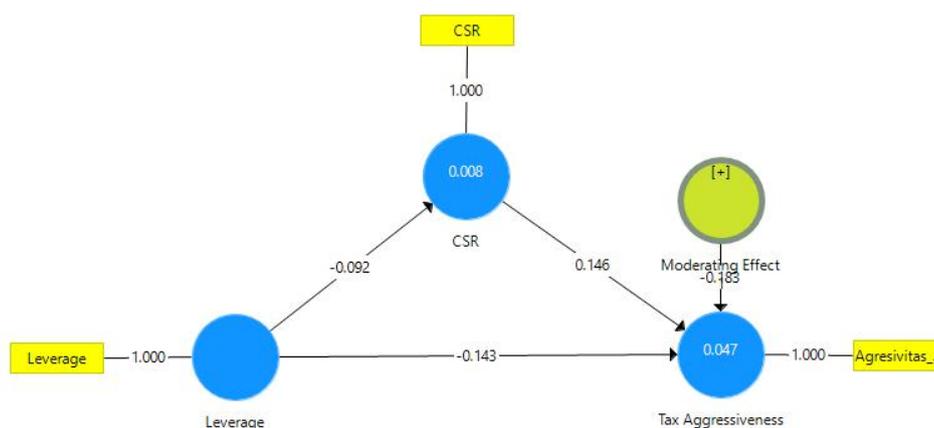

Figure 1. Alghoritm Calculate with SmartPls

The analysis was conducted using Partial Least Squares–Structural Equation Modeling (PLS-SEM) with the assistance of SmartPLS. The proposed model evaluates the direct impact of leverage on tax aggressiveness and the indirect effect through Corporate Social Responsibility (CSR) as a mediating variable.

Table 1. Outer Loadings

	CSR_	Leverage_	Moderating Effect	Tax Aggressiveness _
Agresivitas_Pajak				1.000
CSR	1.000			
Leverage		1.000		
Leverage_ * CSR_			1.090	

The outer loading results presented in Table 1 indicate that all constructs in the model meet the criteria for convergent validity. The loading values for Corporate Social Responsibility (CSR), Leverage, and Tax Aggressiveness are all equal to 1.000, indicating that each construct is strongly represented by its corresponding indicator. In addition, the interaction term Leverage × CSR, which represents the moderating effect, shows a loading value of 1.090, suggesting that the moderating construct is also adequately captured in the model. These results confirm that the measurement indicators have strong correlations with their respective constructs and are suitable for further structural model analysis.

Table 2. Cross Loadings

	CSR_	Leverage_	Moderating Effect	Tax Aggressiveness _
Agresivitas_Pajak	0.140	-0.041	-0.102	1.000
CSR	1.000	-0.092	0.098	0.140
Leverage	-0.092	1.000	-0.580	-0.041
Leverage_ * CSR_	0.098	-0.580	1.000	-0.102

The cross-loading results presented in Table 2 indicate that each indicator has the highest loading on its respective construct compared to other constructs in the model. The indicator of Tax Aggressiveness shows the highest loading on the Tax Aggressiveness construct (1.000), while the CSR indicator loads highest on the CSR construct (1.000). Similarly, the Leverage indicator demonstrates the highest loading on the Leverage construct (1.000), and the interaction term Leverage × CSR shows the highest loading on the Moderating Effect construct (1.000). These findings confirm that each indicator is more strongly associated with its own construct than with other constructs, indicating that the model satisfies the discriminant validity requirement based on cross-loading criteria.

Table 3. Fornell-Larcker Criterion

	CSR_	Leverage_	Moderating Effect	Tax Aggressiveness _
CSR_	1.000			
Leverage_	-0.092	1.000		
Moderating Effect	0.098	-0.580	1.000	
Tax Aggressiveness _	0.140	-0.041	-0.102	1.000

The results of the Fornell–Larcker criterion presented in Table 3 indicate that the square root of the Average Variance Extracted (AVE) for each construct is greater than the correlation values with other constructs in the model. The diagonal values representing the AVE square roots for CSR, Leverage, Moderating Effect, and Tax Aggressiveness are all 1.000, which exceed the corresponding inter-construct correlations. These findings demonstrate that each construct shares more variance with its own indicators than with other constructs, confirming that the model satisfies the discriminant validity requirement based on the Fornell–Larcker criterion.

Table 4. Heterotrait-Monotrait Ratio (HTMT)

	CSR_	Leverage_	Moderating Effect	Tax Aggressiveness _
CSR_				
Leverage_	0.092			
Moderating Effect	0.098	0.580		
Tax Aggressiveness _	0.140	0.041	0.102	

The results of the Heterotrait–Monotrait Ratio (HTMT) presented in Table 4 indicate that all HTMT values among the constructs are below the recommended threshold of 0.90. The highest HTMT value is observed between Leverage and the Moderating Effect (0.580), while the remaining relationships show relatively low values, such as CSR and Leverage (0.092) and CSR and Tax Aggressiveness (0.140). These results confirm that the discriminant validity of the constructs is well established, indicating that each construct in the model is empirically distinct from the others.

Table 5. Path Coefficients

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
CSR_ -> Tax Aggressiveness _	0.146	0.151	0.108	1.359	**0.175**
Leverage_ -> CSR_	-0.092	-0.083	0.100	0.914	**0.361**
Leverage_ -> Tax Aggressiveness _	-0.143	-0.125	0.099	1.444	**0.149**
Moderating Effect -> Tax Aggressiveness _	-0.183	-0.173	0.109	1.680	**0.094**

Table 6. Specific Indirect Effects

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Leverage_ -> CSR_ -> Tax Aggressiveness _	-0.013	-0.010	0.021	0.651	**0.515**

The results of the structural model estimation are presented in Table 5. The analysis shows that Corporate Social Responsibility (CSR) does not have a significant effect on tax aggressiveness ($\beta = 0.146$; $p = 0.175$). Similarly, leverage does not significantly influence CSR ($\beta = -0.092$; $p = 0.361$). The direct relationship between leverage and tax aggressiveness is also found to be statistically insignificant ($\beta = -0.143$; $p = 0.149$). Furthermore, the moderating effect of CSR on the relationship between leverage and tax aggressiveness is not significant ($\beta = -0.183$; $p = 0.094$).

The mediation analysis results presented in Table 6 indicate that the indirect effect of leverage on tax aggressiveness through CSR is not significant ($\beta = -0.013$; $p = 0.515$). These findings suggest that CSR does not function as a mediating variable in the relationship between leverage and tax aggressiveness in this study.

Discussions

The findings of this study provide empirical insights into the relationship between leverage, Corporate Social Responsibility (CSR), and tax aggressiveness among food and beverage companies listed on the Indonesia Stock Exchange during the 2019–2023 period. The results reveal that the direct effect of CSR on tax aggressiveness is statistically insignificant. This finding suggests that the level of CSR engagement undertaken by companies in this sector does not necessarily influence their tax planning behavior. In other words, firms that disclose higher levels of CSR activities do not automatically demonstrate lower levels of tax aggressiveness. This result indicates that CSR disclosure may not always reflect substantive ethical commitment in corporate taxation practices. Instead, CSR activities may function more as a reputational or symbolic mechanism rather than as a genuine constraint on aggressive tax strategies.

From a theoretical perspective, this finding can be explained through legitimacy theory, which suggests that firms may use CSR as a strategy to maintain legitimacy and social acceptance from stakeholders (Suchman, 1995). Companies may disclose CSR information to enhance their public image while simultaneously pursuing tax planning strategies aimed at improving financial performance. Therefore, CSR disclosure does not necessarily guarantee that companies behave more responsibly in terms of taxation. This interpretation is consistent with the argument that CSR initiatives can sometimes serve as a reputational shield rather than a reflection of ethical financial practices.

Empirically, the finding is consistent with several previous studies that report mixed relationships between CSR and tax aggressiveness. For instance, Issah and Rodrigues (2021) argue that although CSR is conceptually associated with ethical corporate behavior, empirical evidence often shows inconsistent relationships between CSR engagement and tax avoidance practices. Some companies may simultaneously

promote strong CSR images while engaging in aggressive tax planning strategies. Therefore, the absence of a significant relationship between CSR and tax aggressiveness in this study indicates that CSR activities in the Indonesian food and beverage sector may not directly influence corporate tax behavior.

The results also show that leverage does not have a significant effect on CSR. This finding indicates that the financial structure of companies, particularly their reliance on debt financing, does not necessarily determine the level of CSR disclosure. In theory, leverage could influence CSR because firms with higher debt levels may either reduce CSR activities due to financial constraints or increase CSR disclosure to maintain legitimacy among stakeholders. However, the results of this study suggest that leverage is not a primary determinant of CSR engagement among firms in the Indonesian food and beverage sector.

This finding is in line with the study by Dakhli (2022), which emphasizes that CSR performance is influenced by broader governance and strategic factors rather than solely by financial characteristics such as capital structure. CSR engagement often reflects managerial commitment, corporate governance quality, and stakeholder pressure rather than short-term financial considerations. Consequently, firms with different levels of leverage may still disclose similar CSR activities depending on their corporate strategies and stakeholder expectations.

Furthermore, the study finds that leverage does not significantly influence tax aggressiveness. This result indicates that the use of debt financing does not necessarily encourage companies to engage in more aggressive tax planning strategies. Theoretically, leverage is often associated with tax aggressiveness because interest expenses from debt financing are tax-deductible and provide tax shields that reduce taxable income. However, when firms already obtain tax benefits from debt financing, they may have less incentive to pursue additional aggressive tax avoidance strategies.

This interpretation is consistent with the findings of Lailiyah et al. (2024), who report that leverage does not significantly affect tax aggressiveness in Indonesian manufacturing firms. Similarly, Rehman et al. (2024) find that leverage may not always lead to higher tax avoidance because firms already obtain tax advantages from interest deductions. Therefore, companies with higher leverage may rely primarily on debt-related tax shields rather than adopting more complex or aggressive tax planning mechanisms.

The moderating analysis also indicates that CSR does not significantly moderate the relationship between leverage and tax aggressiveness. This result suggests that CSR engagement does not strengthen or weaken the impact of leverage on corporate tax behavior. In other words, whether companies disclose high or low CSR activities does not significantly alter the relationship between their capital structure and their tax planning strategies. This finding implies that CSR may not play a strategic role in shaping how financial factors influence tax decisions within the food and beverage sector.

Nevertheless, this finding contrasts with several previous studies that highlight the moderating role of CSR in corporate tax behavior. For example, Balaskas et al. (2024) find that CSR can mitigate certain determinants of tax avoidance intentions by promoting ethical corporate practices. Similarly, Rustandi et al. (2024) report that CSR moderates the relationship between business strategy and tax aggressiveness. The difference between those findings and the results of this study may be explained by contextual factors, such as differences in industry characteristics, institutional environments, or measurement approaches.

Finally, the mediation analysis reveals that CSR does not mediate the relationship between leverage and tax aggressiveness. This result indicates that CSR does not serve as an explanatory mechanism through which leverage influences tax aggressiveness. In other words, leverage does not indirectly affect corporate tax behavior through CSR engagement. This finding suggests that the relationship between financial structure and tax behavior in the Indonesian food and beverage sector may operate through other mechanisms, such as corporate governance, profitability, or managerial incentives.

The findings of this study highlight that CSR does not play a significant mediating or moderating role in explaining the relationship between leverage and tax aggressiveness in the Indonesian food and beverage sector. These results suggest that corporate tax behavior may be driven more strongly by financial incentives and regulatory considerations than by CSR engagement. The findings contribute to the literature on corporate taxation and social responsibility by providing evidence that CSR disclosure alone may not be sufficient to influence corporate tax strategies, particularly in emerging market contexts such as Indonesia.

CONCLUSIONS

This study investigates the role of Corporate Social Responsibility (CSR) as both a mediating and moderating variable in the relationship between leverage and tax aggressiveness among food and beverage companies listed on the Indonesia Stock Exchange during the 2019–2023 period. The empirical results indicate that CSR does not have a significant direct effect on tax aggressiveness. This finding suggests that CSR disclosure in the observed companies does not necessarily reflect responsible corporate tax behavior. Firms that disclose higher levels of CSR activities are not automatically less likely to engage in tax planning practices. The analysis also reveals that leverage does not significantly influence CSR or tax aggressiveness. These results imply that the capital structure of companies in the food and beverage sector does not play a dominant role in determining CSR engagement or corporate tax strategies. Furthermore, the moderating test shows that CSR does not significantly moderate the relationship between leverage and tax aggressiveness. Similarly, mediation analysis confirms that CSR does not function as an intervening variable linking leverage and tax aggressiveness. The findings indicate that CSR does not play a strategic role in explaining corporate tax behavior in this sector. These results highlight the possibility that corporate tax decisions are influenced more by financial and regulatory considerations than by CSR commitments within Indonesian manufacturing firms.

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