



# THE INFLUENCE OF INTANGIBLE ASSETS INTENSITY AND RELATED-PARTY TRANSACTIONS ON TAX AGGRESSIVENESS (Empirical Study of Companies in the Non-Cyclical Consumer Sector Listed on the Indonesia Stock Exchange)

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## Abstract

This study aims to empirically examine and analyze the effect of Intangible Assets and Related Party Transactions (RPT) on tax aggressiveness, using profitability (ROA) and firm size as control variables. The level of tax aggressiveness in this study is measured using the Effective Tax Rate (ETR) proxy, where a lower ETR value indicates a higher level of tax aggressiveness. The research population includes all Consumer Non-Cyclicals sector companies listed on the Indonesia Stock Exchange (IDX) during the 2022–2025 period. Sampling was conducted using the purposive sampling method, resulting in 23 sample companies with a total of 92 panel data observations. Data analysis was performed using the panel data regression method through a Fixed Effect Model (FEM) approach, which was corrected with Cross-section SUR (Panel Corrected Standard Errors/PCSE) estimation to resolve heteroskedasticity issues. The statistical test results prove that simultaneously, Intangible Assets, RPT, profitability, and firm size have a significant effect on tax aggressiveness with the model's explanatory power (Adjusted R-Squared) of 63.81%. Partially, Intangible Assets and firm size are proven to have no significant effect on the level of tax aggressiveness. Conversely, Related Party Transactions (RPT) and profitability (ROA) are proven to have a negative and significant effect on ETR, meaning that an increase in the volume of related party transactions and return on assets tangibly drives an increase in the company's tax aggressiveness practices.

**Keywords:** Effective Tax Rate; Intangible Assets; Profitability; Related Party Transaction; Tax Aggressiveness

## INTRODUCTION

Tax is universally recognized as one of the primary backbones of state revenue, essential for sustaining the continuity of government administration and financing public interests. By definition, tax is a form of fiscal contribution mandated by the state on taxpayers, whether individuals or entities, which is legally compulsory and provides no direct counter-performance or reward (Suksrisno & Agoes, 2023). Nevertheless, efforts to optimize the national tax ratio frequently encounter structural obstacles rooted in the conflict of interest between the state as tax collector and taxpayer corporations. Fiscal authorities aim to extract as much revenue as possible from the taxation sector to meet state expenditure ceilings, while on the other hand, business entities generally view tax as a real burden that directly erodes operating net profit (Al Hasyim et al., 2022). This disparity in economic motivation continuously drives corporate management to seek loopholes in regulations, which in turn gives rise to various tax aggressiveness practices, whether through legitimate regulatory weaknesses (tax avoidance) or through practices that violate legal provisions (tax evasion).

The dynamics of national tax revenue over the past four years (2022–2025) represent a real challenge for fiscal authorities in maintaining the stability of the State Budget (APBN). Tax revenue realization exceeded its target in 2022 (115.61%) and 2023 (102.80%), but this trend reversed in 2024 and 2025, when realization reached only 97.20% and 87.60% of the set targets, respectively (see Table 1). This persistent failure to meet targets over the past two years is a strong indication that, amid challenging economic dynamics, many corporate entities are working hard to aggressively minimize their fiscal obligations.

**Table 1. Tax Revenue Targets and Realizations, 2022–2025**

| <b>Year</b> | <b>Target (IDR Trillion)</b> | <b>Realization (IDR Trillion)</b> | <b>Achievement Percentage</b> |
|-------------|------------------------------|-----------------------------------|-------------------------------|
| 2022        | 1,486.96                     | 1,716.76                          | 115.61%                       |
| 2023        | 1,818.24                     | 1,869.23                          | 102.80%                       |
| 2024        | 1,988.90                     | 1,932.40                          | 97.20%                        |
| 2025        | 2,189.04                     | 1,917.60                          | 87.60%                        |

*Source: APBN KiTa 2022, 2023, 2024, 2025 (Kementerian Keuangan RI, 2026)*

Historically, Indonesia's sectoral tax revenue structure has consistently been dominated by the Manufacturing and Trade sectors. However, the growth trend of tax revenue in both sectors has in fact undergone a sharp deceleration throughout 2022–2025, even contracting negatively in 2024–2025, in contrast to the Finance and Insurance sector, which has shown resilience. This anomalous decline in tax performance becomes even more significant when narrowed down to the Consumer Non-Cyclicals sub-sector, namely companies that provide primary goods and services whose demand is inelastic to economic conditions (Ariani & Asmedi, 2022). The operational resilience and stable cash flow certainty in this sector in fact provide management with greater flexibility to carry out various tax planning schemes, including tax aggressiveness practices.

The two main instruments highlighted in this study are intangible assets intensity and related party transactions (RPT). The contemporary tax avoidance trend in the consumer goods sector has now shifted from conventional practices such as marking up operating costs toward far more complex exploitation through intangible assets, particularly marketing intangibles. This phenomenon is clearly recorded in a series of Tax Court disputes during 2023–2025, in which fiscal authorities rejected royalty expense claims worth hundreds of billions of rupiah from several Fast-Moving Consumer Goods (FMCG) entities in Indonesia. Another empirical piece of evidence that drew public attention is the acquisition of Pinehill Company Limited by PT Indofood CBP Sukses Makmur Tbk (ICBP) in 2020, valued at nearly IDR 45 trillion, which was heavily dominated by the recognition of intangible assets in the form of goodwill — a precedent confirming that affiliate ecosystems in defensive industries can create significant long-term profit shifting opportunities.

The selection of variables and the research object in this study is also driven by the existence of a research gap identified in various prior empirical studies. In the context of related party transactions, the study by Alexander and Indrawan (2023) found that RPT has a positive effect on tax aggressiveness, in line with Handayani et al. (2025), who confirmed the relevance of this determinant in the Consumer Non-Cyclicals sector. Inconsistency, however, occurs in the intangible assets variable, where Fadilla et al. (2023) and Aditya et al. (2023) proved a positive and significant effect on tax avoidance, yet this finding is contradicted by Farhana et al. (2026), who found that intangible assets partially have no significant effect. This divergence in results is presumed to stem from differing characteristics of the industry sectors studied, thereby providing room for novelty in this study to re-examine both variables by focusing observations on the post-pandemic Consumer Non-Cyclicals sector.

Based on the phenomenon of anomalous sectoral tax revenue, the high complexity of operational transactions through the exploitation of intangible assets and related-entity exchanges, as well as the continuing debate over the results of prior studies, this research is formulated to answer three main questions: (1) does intangible assets intensity affect tax aggressiveness; (2) do related party transactions affect tax aggressiveness; and (3) do both variables simultaneously affect tax aggressiveness in Consumer Non-Cyclicals sector



companies listed on the Indonesia Stock Exchange during 2022–2025. In line with this problem statement, this study aims to obtain empirical evidence regarding the effect of intangible assets intensity and related party transactions on tax aggressiveness, both partially and simultaneously, with profitability and firm size as control variables. The results of this study are expected to provide a theoretical contribution to the development of Agency Theory-based tax accounting literature, as well as practical implications for fiscal authorities in mitigating regulatory loopholes, for corporate management in designing compliant tax planning, and for investors in assessing an entity's tax risk.

## LITERATURE REVIEW

### Agency Theory

Jensen and Meckling (1976) explain that an agency relationship is a relationship between the company's owner (principal) and manager (agent), in which the owner grants authority to the manager to run the company and make decisions on the owner's behalf. Both parties are considered to have their own interests, so the manager does not always act in accordance with the owner's interests. Because the agent has more complete information regarding the company's condition, information asymmetry arises between the two parties (Fama & Jensen, 1983), which opens up opportunities for the agent to act in their own self-interest. Eisenhardt (1989) asserts that agency problems arise from differences in goals between the principal and the agent, as well as the principal's limited ability to verify the agent's actions due to information constraints.

In this study, the agency conflict occurs between the tax authority as principal and corporate management as agent. The tax authority has an interest in maximizing state revenue, while the company seeks to maximize profit by reducing its tax burden (Arditra et al., 2025). The tax authority faces limitations in fully accessing and assessing the company's financial information and internal transactions, while the company possesses complete control over that information. This situation can be exploited to set transfer prices or exploit networks of intangible assets and affiliate transactions in order to reduce reported tax expense (Desai & Dharmapala, 2006). This condition is further aggravated by the existence of cross-jurisdictional related party transactions, which intensify the agency conflict between corporate management and the tax authority.

### Tax Aggressiveness

Hanlon and Heitzman (2010) define tax aggressiveness as a continuous tax planning strategy, ranging from fully legal to aggressive. Tax aggressiveness is carried out legally by exploiting loopholes in tax regulations, in contrast to tax evasion, which is illegal (Septiawan et al., 2021). One of the most widely used proxies for measuring tax aggressiveness is the Effective Tax Rate (ETR), which is the ratio between tax expense and pre-tax income. The lower the ETR value, the higher the indication of tax aggressiveness practices carried out by the company (Frank et al., 2009; Chen et al., 2010).

### Intangible Assets

Intangible assets reflect the proportion of a company's non-physical wealth, such as goodwill, patent rights, licenses, trademarks, and know-how, relative to its total assets. Their value characteristics, which are prone to subjectivity and easily transferred across jurisdictions, make their ownership frequently exploited as a profit-shifting instrument to reduce the effective tax rate (Grubert, 2003; Wijaya & Chen, 2022), among others through royalty charges to low-tax affiliated entities as well as material amortization expenses against domestic taxable income (Marbun & Ginting, 2023; Fitriani & Pohan, 2023).



### **Related Party Transactions**

Related party transactions represent any form of transfer of resources, services, or obligations between entities under common ownership control or that have a significant influence on one another (Ikatan Akuntan Indonesia, 2017). Massive intra-group transaction practices create an ecosystem free from pure market price intervention mechanisms, thereby opening opportunities for transfer pricing manipulation to reduce the company's aggregate tax burden (Alexander & Indrawan, 2023; OECD, 2015). Domestic regulations concerning the arm's length principle for related party transactions are governed by Minister of Finance Regulation Number 172 of 2023 and the Directorate General of Taxes' audit guidelines Number PER-22/PJ/2013.

### **Hypothesis Development**

Based on agency theory, the tax authority as principal has an interest in maximizing state revenue, while management as agent seeks to reduce its tax burden. Information asymmetry regarding the company's internal transactions gives management room to exploit intangible assets through amortization expenses or royalty payments to affiliated parties in order to shift profits across jurisdictions and erode the domestic taxable income base. Findings by Fadilla et al. (2023) and Aditya et al. (2023) show that intangible assets intensity affects tax avoidance, while Alexander and Indrawan (2023) proved that related party transactions have a positive effect on tax aggressiveness. Thus, the first hypothesis is formulated as follows.

H1: Intangible Assets Intensity has a positive effect on tax aggressiveness.

The existence of special relationships between entities within a single business group eliminates pure market price intervention, thereby triggering opportunities for transfer pricing manipulation to artificially distribute profits and reduce aggregate tax liabilities. The more intense the volume of related party transactions a company carries out, the greater the opportunity for management to set transfer prices in its own tax interest, in line with the findings of Wijaya and Suryani (2024) and Ardianti, Su'un, and Tjan (2025), who proved a positive effect of related party transactions on tax aggressiveness. Therefore, the second hypothesis is formulated as follows.

H2: Related Party Transactions have a positive effect on tax aggressiveness.

When intangible assets intensity and related party transactions occur simultaneously, the agency conflict between the company and the tax authority becomes increasingly complex: intangible assets provide a substantive instrument for shifting profits, while the network of related transactions provides the technical channel to realize it through transfer pricing schemes. Naruli, Kusumaningarti, and Agustin (2022) show that although intangible assets are not always partially significant, their simultaneous effect together with the affiliate transaction variable remains proven significant on tax avoidance. Thus, the third hypothesis is formulated as follows.

H3: Intangible Assets Intensity and Related Party Transactions simultaneously affect tax aggressiveness.

### **METHODS**

This study uses a quantitative approach with a causal-associative research design aimed at testing cause-and-effect relationships between variables (Sugiyono, 2022). The research population includes all consumer goods (Consumer Non-Cyclicals) manufacturing sub-sector companies listed on the Indonesia Stock Exchange (IDX) during 2022–2025. Sampling was conducted using a purposive sampling technique with the following criteria: (1) the company was consecutively listed on the IDX main board throughout 2022–2025; (2) it published complete audited annual financial statements; (3) it presented explicit data related to intangible assets, related party transactions, and income tax expense; and (4) it consistently recorded



positive pre-tax income throughout the observation period. This screening process resulted in 23 sample companies with 92 panel data observations (4 years × 23 companies), as summarized in Table 2.

**Table 2. Research Sample Selection Criteria**

| No.                                                | Sample Selection Criteria                                                           | Number of Companies | Number of Observations |
|----------------------------------------------------|-------------------------------------------------------------------------------------|---------------------|------------------------|
| 1                                                  | Consumer Non-Cyclicals sub-sector companies listed on the IDX during 2022–2025      | 132                 | 528                    |
| 2                                                  | Companies not listed on the IDX main board                                          | (86)                | (344)                  |
| 3                                                  | Companies that did not publish complete financial statements for 2022–2025          | (0)                 | (344)                  |
| 4                                                  | Companies that incurred losses during 2022–2025                                     | (8)                 | (32)                   |
| 5                                                  | Companies with no related party transactions                                        | (0)                 | (0)                    |
| 6                                                  | Companies that did not report intangible asset values in their financial statements | (15)                | (60)                   |
| <b>Total Companies Meeting the Sample Criteria</b> |                                                                                     | <b>23</b>           | <b>92</b>              |

Source: Processed by the researcher (2026)

The data used is secondary, sourced from the annual financial statements and Notes to the Financial Statements of the sample companies published through [www.idx.co.id](http://www.idx.co.id) as well as each company's official website. The data collection method was carried out through documentation study and literature study. The operationalization of the five research variables is presented in Table 3.

**Table 3. Operationalization of Research Variables**

| Variable                         | Definition                                                                                                                    | Indicator/Formula                                                    |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| Tax Aggressiveness (Y)           | A series of accounting reporting engineering and tax planning measures executed by management to minimize income tax expense. | $ETR = \text{Income Tax Expense} / \text{Pre-Tax Income}$            |
| Intangible Assets Intensity (X1) | The proportion of non-physical assets (patents, trademarks, goodwill) held by the company relative to total assets.           | $X1 = \text{Total Intangible Assets} / \text{Total Assets}$          |
| Related Party Transactions (X2)  | The transfer of resources, services, or obligations between companies with an affiliated relationship or common control.      | $X2 = \text{Total Related Party Transactions} / \text{Total Assets}$ |
| Profitability (X3, control)      | Management's capacity and efficiency in converting total assets into net commercial profit.                                   | $X3 (ROA) = \text{Net Income After Tax} / \text{Total Assets}$       |
| Firm Size (X4, control)          | The scale of operations and economic capacity of the entity based on total                                                    | $X4 (\text{Size}) = \text{Ln} (\text{Total Assets})$                 |



| Variable | Definition                                              | Indicator/Formula |
|----------|---------------------------------------------------------|-------------------|
|          | accumulated assets at the end of the accounting period. |                   |

Source: Processed by the researcher from various theoretical sources (2026)

The data analysis technique uses the panel data regression method with the assistance of EViews software, beginning with descriptive statistical analysis to map the data distribution profile (mean, median, maximum, minimum, and standard deviation) of each variable. Classical assumption tests were then conducted, comprising the normality test (Jarque-Bera), multicollinearity test (correlation matrix among independent variables), and heteroskedasticity test (Glejser test). The selection of the best estimation model among the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM) was carried out through the Chow Test and Hausman Test. The estimated panel data regression model is formulated as follows:

$$ETR = \alpha + \beta1.IA + \beta2.RPT + \beta3.ROA + \beta4.SIZE + \varepsilon$$

where ETR is the level of tax aggressiveness;  $\alpha$  is the constant;  $\beta1$ – $\beta4$  are the regression coefficients; IA is Intangible Assets intensity; RPT is Related Party Transaction intensity; ROA is profitability; SIZE is firm size; and  $\varepsilon$  is the error term.

Hypothesis testing was conducted through the coefficient of determination test (Adjusted R-Squared) to measure the model's explanatory power, the simultaneous significance test (F-Test) to assess the overall feasibility of the model, and the partial significance test (t-Test) at a significance level of  $\alpha = 0.05$  to examine the effect of each independent variable on the dependent variable. If heteroskedasticity symptoms were found in the model during testing, correction was carried out through the Cross-section SUR (Panel Corrected Standard Errors/PCSE) approach developed by Beck and Katz (1995), without altering the value of the main regression coefficients, so that the model's final output remains valid for interpretation.

## RESULTS AND DISCUSSION

### Descriptive Statistics

Descriptive statistics are used to provide an initial overview of the research data through minimum, maximum, mean, and standard deviation values (Sugiyono, 2022). The results of the descriptive statistical test on 92 observations are presented in Table 4.

**Table 4. Descriptive Statistics Test Results**

| Statistic      | X1 (Intangible Assets) | X2 (RPT) | X3 (ROA) | X4 (Firm Size) | Y (ETR)  |
|----------------|------------------------|----------|----------|----------------|----------|
| Minimum        | 0.000100               | 3.00E-05 | 0.018400 | 15.71480       | 0.144166 |
| Maximum        | 0.482186               | 2.278500 | 0.381700 | 33.01543       | 0.469600 |
| Mean           | 0.051051               | 0.256283 | 0.103007 | 24.76330       | 0.247199 |
| Std. Deviation | 0.108053               | 0.504710 | 0.067865 | 6.466502       | 0.057895 |
| Observations   | 92                     | 92       | 92       | 92             | 92       |

Source: EViews output, processed by the researcher (2026)

Based on Table 4, the intangible assets intensity variable (X1) has a relatively small mean value of 0.051051 with a standard deviation of 0.108053. The highest value was recorded by PT Indofood CBP Sukses Makmur Tbk (ICBP) in 2022 at 0.4821, given that the company



holds substantial trademark, patent, and goodwill values, while the lowest value was recorded by PT Palma Serasih Tbk (PSGO) in 2025 at 0.000013.

The Related Party Transaction variable (X2) shows fairly extreme data variation, with a mean of 0.256283 but a standard deviation reaching 0.504710 — exceeding its own mean value. The maximum value was recorded by PT FKS Multi Agro Tbk (FISH) in 2022 at 2.2785, while the minimum value was recorded by PT Prime Agri Resources Tbk (SGRO) in 2025 at 0.000030.

For the control variable profitability (ROA), the sample mean was recorded as positive at 0.103007 (10.30%), with the highest value at PT Unilever Indonesia Tbk (UNVR) in 2025 at 0.3817 and the lowest at PT FKS Multi Agro Tbk (FISH) in 2024 at 0.0184. Firm Size has a mean of 24.763298, with the largest value at PT Indofood Sukses Makmur Tbk (INDF) in 2025 and the smallest at PT Sumber Tani Agung Resources Tbk (STAA) in 2023. The dependent variable ETR has a mean of 0.247199 (24.72%); the highest value was recorded by PT FKS Multi Agro Tbk (FISH) in 2025, while the lowest value — indicating the highest level of tax aggressiveness — was recorded by PT Triputra Agro Persada Tbk (TAPG) in 2023 at 0.1441.

#### Model Selection and Classical Assumption Tests

The selection of the best panel data regression model was carried out through the Chow Test and Hausman Test. The Chow Test produced a Cross-section Chi-square probability value of 0.0000 ( $< 0.05$ ), so  $H_0$  was rejected and the Fixed Effect Model (FEM) was selected over the Common Effect Model (Widarjono, 2018). The Hausman Test subsequently produced a Cross-section random probability value of 0.0013 ( $< 0.05$ ), so FEM was again selected over the Random Effect Model (Baltagi, 2005), and the Lagrange Multiplier test was no longer necessary since both tests consistently pointed to FEM.

Classical assumption tests were then carried out, comprising the normality test (Jarque-Bera), multicollinearity test (correlation matrix), and heteroskedasticity test (Glejser test), which are summarized in Table 5.

**Table 5. Summary of Model Selection and Classical Assumption Test Results**

| Type of Test              | Method             | Result                                                   | Conclusion                                             |
|---------------------------|--------------------|----------------------------------------------------------|--------------------------------------------------------|
| Model Selection (Chow)    | Chow Test          | Prob. Cross-section Chi-square = 0.0000                  | FEM is more appropriate than CEM                       |
| Model Selection (Hausman) | Hausman Test       | Prob. Cross-section random = 0.0013                      | FEM is more appropriate than REM                       |
| Normality                 | Jarque-Bera        | J-B = 1.802683; Prob. = 0.406025                         | Residuals are normally distributed                     |
| Multicollinearity         | Correlation Matrix | Highest correlation X1–X4 = 0.374356 ( $< 0.80$ )        | No multicollinearity present                           |
| Heteroskedasticity        | Glejser Test       | Prob. X1 = 0.2404; X2 = 0.3875; X3 = 0.0003; X4 = 0.0001 | Heteroskedasticity is present in the control variables |

Source: EViews output, processed by the researcher (2026)

The results in Table 5 show that the regression model satisfies the normality assumption and is free from multicollinearity problems. However, significant heteroskedasticity symptoms



(Prob. < 0.05) were found in the control variables profitability (X3) and firm size (X4), while the main variables Intangible Assets (X1) and Related Party Transaction (X2) were free from such symptoms.

The presence of heteroskedasticity does not mean the research data has failed, but rather requires a specific correction method to keep the estimation results consistent and efficient (Gujarati & Porter, 2012). As emphasized by White (1980), heteroskedasticity does not cause bias in the regression coefficients, but only reduces the efficiency of the resulting standard errors. Therefore, the researcher made adjustments to the FEM estimation by applying the Cross-section SUR (Panel Corrected Standard Errors/PCSE) approach developed by Beck and Katz (1995), which is specifically designed to produce robust standard errors for panel data structures whose errors are heteroskedastic or correlated across units, without altering the value of the main regression coefficients. This approach remains relevant to this day, reflected in its status as a standard feature in statistical software such as Stata (xtpcse) and R (the pcse package), and as a reference in the latest edition of panel data analysis textbooks, namely Hsiao (2022).

### Panel Data Regression Analysis and Hypothesis Testing

The final model was estimated using the Fixed Effect Model (FEM) corrected through the Cross-section SUR (PCSE) approach on 92 observations from 23 sample companies during 2022–2025. The regression results are presented in Table 6.

**Table 6. Panel Data Regression Results and Partial Test (t-Test)**

| Variable                      | Coefficient | Std. Error | t-Statistic | Prob.  |
|-------------------------------|-------------|------------|-------------|--------|
| (Constant)                    | 0.730331    | 0.395090   | 1.848520    | 0.0691 |
| X1: Intangible Assets         | 0.383123    | 0.319644   | 1.198595    | 0.2350 |
| X2: Related Party Transaction | -0.175004   | 0.066394   | -2.635827   | 0.0105 |
| X3: Profitability (ROA)       | -0.261234   | 0.078291   | -3.336723   | 0.0014 |
| X4: Firm Size                 | -0.017402   | 0.015762   | -1.104077   | 0.2736 |

Dependent variable: ETR (Effective Tax Rate). Source: EViews output, processed by the researcher (2026)

Based on Table 6, the resulting panel data regression equation is formulated as follows:

$$ETR = 0.730331 + 0.383123 X1 - 0.175004 X2 - 0.261234 X3 - 0.017402 X4 + \varepsilon$$

The Intangible Assets coefficient is positive (0.383123) but not significant (Prob. 0.2350 > 0.05), so H1 is rejected. The Related Party Transaction coefficient is negative and significant with respect to ETR (Prob. 0.0105 < 0.05); given that a decrease in ETR reflects an increase in tax aggressiveness, this result means that RPT has a significant positive effect on tax aggressiveness, so H2 is accepted. Among the control variables, profitability (ROA) is also proven to have a significant negative effect on ETR (Prob. 0.0014), while firm size is not significant (Prob. 0.2736).

**Table 7. Simultaneous Test Results (F-Test) and Coefficient of Determination**

| Model              | Value    |
|--------------------|----------|
| F-statistic        | 7.171593 |
| Prob (F-statistic) | 0.000000 |
| R-squared          | 0.741511 |
| Adjusted R-Squared | 0.638115 |



Source: EViews output, processed by the researcher (2026)

Based on Table 7, the F-statistic value is 7.171593 with a probability of 0.000000 (< 0.05), so H3 is accepted: Intangible Assets Intensity and Related Party Transactions simultaneously have a significant effect on tax aggressiveness, together with the control variables of profitability and firm size. The Adjusted R-Squared value of 0.638115 indicates that 63.81% of the variation in ETR can be explained by the model, while the remaining 36.19% is explained by other factors outside the model, such as executive characteristics, the structure of the independent board of commissioners, or leverage ratios.

#### **Robustness Test: Winsorizing on Related Party Transaction**

Table 4 shows that the Related Party Transaction variable (X2) has a relatively extreme maximum value (2.2785) with a standard deviation (0.504710) that exceeds its own mean value (0.256283), indicating an asymmetric data distribution potentially influenced by extreme observations (outliers). This highest value was recorded at PT FKS Multi Agro Tbk (FISH) in 2022, while PT Enseval Putera Megatrading Tbk (EPMT) also consistently recorded an RPT ratio above 1.0 throughout 2022–2025 — a condition that can be substantively explained by the business model characteristics of both companies, whose majority of merchandise supply and distribution originates from transactions with group entities, causing the annual transaction value (flow) to exceed total assets (stock) at a given point in time.

To ensure that the hypothesis testing results were not solely driven by these extreme observations, a robustness test was conducted by applying a winsorizing technique to variable X2, namely capping values beyond a certain percentile threshold to that percentile value, without removing observations from the sample (Ghozali & Ratmono, 2017). Winsorizing was performed at two thresholds: 1%/99% (capping only the FISH 2022 observation of 2.2785 down to 1.988390) and 5%/95% as a more conservative additional test (capping the five highest observations — including all EPMT observations — down to 1.783881, and the five lowest observations up to 0.000555). The FEM model with Panel Corrected Standard Errors (PCSE) following the Beck and Katz (1995) approach was then re-estimated using the winsorized data, with a model specification identical to the main model. The comparison results are presented in Table 8.

**Table 8. Robustness Test: Comparison of Regression Results Before and After Winsorizing on X2 (RPT)**

| Variable                      | Original Model<br>(Without Winsorizing) | Winsorizing<br>1%/99%    | Winsorizing<br>5%/95%    |
|-------------------------------|-----------------------------------------|--------------------------|--------------------------|
| X1: Intangible Assets         | 0.383123<br>(0.1611)                    | 0.385577<br>(0.1546)     | 0.398797<br>(0.1384)     |
| X2: Related Party Transaction | -0.175004<br>(0.0042)**                 | -0.218965<br>(0.0005)*** | -0.245129<br>(0.0003)*** |
| X3: Profitability (ROA)       | -0.261234<br>(0.0006)***                | -0.268819<br>(0.0007)*** | -0.287369<br>(0.0011)*** |
| X4: Firm Size                 | -0.017402<br>(0.1953)                   | -0.016535<br>(0.2431)    | -0.011706<br>(0.4262)    |

*Values in parentheses are probabilities (p-values); \*\*\* $p < 0.01$ , \*\* $p < 0.05$ . Standard errors were calculated using the Panel Corrected Standard Errors approach (Beck & Katz, 1995) consistently across all three specifications. Source: Processed by the researcher (2026).*

The results in Table 8 show that the Related Party Transaction (X2) coefficient remains negative and statistically significant across all specifications — both in the original model and



after winsorizing at 1%/99% and 5%/95% — even with an increasingly stronger level of significance after the extreme observations were capped (p-value decreasing from 0.0042 to 0.0005 and 0.0003). This pattern indicates that the negative effect of RPT on ETR is not a statistical artifact driven by one or two extreme observations, but rather a consistent pattern across the entire sample, thereby strengthening confidence in the H2 finding. Variables X1 and X4 also remain insignificant across all specifications, while X3 remains consistently significant, so that the conclusions for all of this study's hypotheses (H1–H3) are proven robust to outlier treatment in the RPT variable.

### **The Effect of Intangible Assets on Tax Aggressiveness**

The test results show that Intangible Assets do not have a significant effect on tax aggressiveness, so H1 is rejected. The magnitude of intangible assets intensity recorded on a company's balance sheet is not the main determinant of tax aggressiveness practices in the Consumer Non-Cyclicals sector; its amortization value may not yet be material enough to significantly erode taxable income, and the tax authority's strict oversight of intangible asset valuation also makes companies more conservative. This finding is in line with Farhana et al. (2026) and Naruli, Kusumaningarti, and Agustin (2021), who also proved that intangible assets partially have no significant effect on tax avoidance, although their simultaneous effect together with other variables remains significant.

### **The Effect of Related Party Transactions on Tax Aggressiveness**

The test results prove that Related Party Transactions have a significant effect on tax aggressiveness, so H2 is accepted. This finding is consistent with Agency Theory: management as agent has an opportunistic tendency to maximize personal utility by exploiting information asymmetry against the tax authority through RPT loopholes, generally realized through transfer pricing schemes to relocate profits toward entities that enjoy tax incentives. This result is consistent with Wijaya and Suryani (2024) and Ardianti, Su'un, and Tjan (2025), who proved that related party transactions have a positive effect on tax aggressiveness.

### **The Effect of Control Variables on Tax Aggressiveness**

Beyond the two main variables, the model also includes profitability (ROA) and firm size as control variables to isolate the effect of the company's basic financial characteristics on ETR, so that the estimated effects of Intangible Assets and RPT are not biased by differences in scale or financial performance across sample companies. The test results show that profitability (ROA) has a statistically significant negative effect on ETR (Prob. 0.0014), while firm size is not significant (Prob. 0.2736). This significance of ROA is consistent with the general pattern in the tax avoidance literature, including Amiah (2022), who also found an effect of profitability on the tendency toward tax avoidance, and it is theoretically sound: companies with high profitability generally have more flexible cash flow to finance tax planning.

Although tax aggressiveness can provide short-term financial benefits, there are a number of risks that companies need to consider. The main risk is legal risk, where aggressive transfer pricing practices may face fiscal corrections, administrative sanctions, and even disputes in the Tax Court. In addition, amid increasingly higher demands for transparency, such practices can diminish the trust of investors and business partners. Overall, these findings indicate that tax aggressiveness in Consumer Non-Cyclicals sector companies occurs through a combination of managerial opportunistic motives and the technical means available through networks of related party transactions.

## **CONCLUSION**

Based on the results of the research on the effect of Intangible Assets Intensity and Related Party Transactions on Tax Aggressiveness in Consumer Non-Cyclicals sector companies listed on the Indonesia Stock Exchange during 2022–2025, it can be concluded that



Intangible Assets Intensity does not have a significant effect on tax aggressiveness, meaning that the magnitude of the proportion of intangible assets held by the sample companies has not become a determinant factor in tax aggressiveness practices during the research period. Related Party Transactions are proven to have a positive and significant effect on tax aggressiveness, meaning that the more intense the volume of related party transactions carried out by a company, the greater its tendency to reduce its effective tax burden — a finding proven robust to the winsorizing treatment of extreme RPT observations. Furthermore, Intangible Assets Intensity and Related Party Transactions simultaneously have a significant effect on tax aggressiveness, with the model's explanatory power (Adjusted R-Squared) of 63.81%.

This study has a number of limitations. First, this study uses only two main independent variables, potentially overlooking other factors that also influence tax aggressiveness, such as leverage, executive characteristics, or the quality of corporate governance. Second, this study focuses only on the Consumer Non-Cyclicals sector over a four-year period (2022–2025) with 23 sample companies, so the results cannot necessarily be generalized to other industry sectors or different observation periods. Third, tax aggressiveness in this study is proxied through only one indicator, namely the Effective Tax Rate (ETR), so it does not yet fully capture the overall dimension of tax aggressiveness, which could actually be measured through other proxies such as the Cash Effective Tax Rate (CETR) or Book-Tax Difference (BTD).

### Recommendations

For future researchers, it is recommended to add other independent or control variables that potentially influence tax aggressiveness, such as leverage, capital intensity, executive characteristics, or the proportion of independent commissioners; to expand the sample coverage to other sectors and extend the observation period; and to consider alternative tax aggressiveness proxies such as CETR or BTD to strengthen the generalizability of the research findings.

For corporate management, given that Related Party Transactions are proven to have a significant effect on tax aggressiveness, management is advised to ensure that every transaction with related parties is carried out in accordance with the arm's length principle and is supported by adequate transfer pricing documentation, in order to avoid the risk of disputes or tax penalties in the future.

For tax authorities and regulators, the high variation in the volume of Related Party Transactions among the sample companies indicates the need to strengthen oversight of affiliate transaction practices in the Consumer Non-Cyclicals sector, particularly in ensuring compliance with the arm's length principle to minimize the potential for base erosion. For investors, a company's Related Party Transaction intensity can serve as one indicator in assessing governance quality and tax risk prior to making investment decisions.

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