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DETERMINANT OF THE AMOUNT OF RELATED PARTY TRANSACTION: INFLUENCES TAX EXPENSE AND INSTITUTIONAL OWNERSHIP

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Abstract:

The main purpose of this research is to investigate the impact of related party transactions (RPT) which is related to sales and expenses and institutional ownership on tax expenses. The sampling technique is purposive sampling and the amount of population is 227 consumer goods companies Based on this research population is the listed company of consumer the industry on the Indonesia Stock Exchange with a total sample of 48 and the period of observation years in 2017-2020. This study method uses quantitative methods with a hypothesis test panel data regression analysis tools using IBM SPSS Statistics 26 and the proceeds exhibit that tax expenses of the previous year do not have an influence on the amount related party transactions to sales expense (RPTSE) Related party transactions are comparatively complex on the other side of that, institutional ownership ensures inspections of these transactions then shows institutional variables have an influence on related party transactions related to sales and expense (RPTSE).

Keywords: Related Party Transaction, Tax Expense, Institutional Ownership.

1. Introduction

A crucial issue concerning every establishment of the company is the choice of its capital structure, whereby any misstep can affect substantial costs. A particular debt blend for a particular company can reduce agency costs. Papers by (Jensen, M., & Meckling, 1976) produce an image of an establishment with a separation of power from the operation. Where clash of interests of two groups (possessors and directors) demands control mechanisms to reduce performing agency costs. (Hayat et al., 2018). All companies actively operating in Indonesia have focused on profit and other goals. The way to maximization of profit seen being the main objective of firms today in complex and highly competitive businesses in the world. From that statement possibility, the important role of the capital market cannot be rejected. Based on PSAK No.7 effective from January 1, 2018, which is according to financial reporting it is not clear the practice that will harm an entity or another party. Related The purpose of financial reporting from the International Accounting Standards Board (IASB) is to provide useful information to investors, creditors, and others on activity investment (Sovaniski, 2020). Financial reporting will enhance and administrators are agreed to work out judgment by adopting reporting techniques that shape the firm's economics. Somehow this generates possibilities for them to govern their income as much as possible. Companies try to take conscious steps to take the accounting principles (GAAP). That will be close to reported profits for desired profit level (Salehi et al., 2020). (Madyan et al., 2019).

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The company's goals are to maximize profits that ultimately prosper the company owner. In maximizing profit, the company faces constraints regarding the expense paid with the aid of using the company. Especially taxes to authorities that affect earnings earned with the company's assistance. Therefore, businesses are searching out methods to make taxes paid to reduce each legally and illegally (Putra et al., 2018; Yahaya & Yusuf, 2020). The high tax expense of the previous year may encourage companies to engage in related party transactions in the current year. The company's tax expense has to pay the company's return for more profit. So, if the company tends to conduct related party transactions, this is often done by the case of transfer pricing through reducing the income from deals by dealing below the fair prices so that it will affect the small company gains that will be taxed (Soraya & Rachmawati, 2020). Related Party Transaction is recognized as a company's commitment to more efficiently coordinate and allocate resources among its subsidiaries, so Related Party Transaction is expected to yield results with better company performance (Pratama, 2018).

Focusing on ownership can play an important role in reducing agency issues that result from the conflict of interest. Stakeholders are linked between principals (shareholders) and agents (administrators) (Jensen, M., & Meckling, 1976). The agency's problem is alleviated because it comes from the shareholders who manage the business management operating which is the company with the aims expected by the shareholders (Soraya & Rachmawati, 2020).

Case about take transfer pricing advantage of tax rates differences in per country. The main goal is to manipulate transfer prices by adding the purchase price and bringing down the selling price between companies are related and transferring gains to companies in countries with low tax rates (tax heaven) to reduce the levies. This will be mischievous to adolescent shareholders because the impact of the company becomes a loss so it affects the value of the shares of adolescent shareholders because the gains are transferred to related party transactions. It was also mischievous to state for levies entered are reduced (Soraya & Rachmawati, 2020).

The Indonesian capital markets are different from the US capital markets and most other developed markets, so it is an interesting place to study the impact of institutional ownership on corporate value. The landscape is different because most Indonesian companies are registered and managed by families, individuals, and related stakeholders (Ahmad, H., Mappatompo, A., Muslim, 2018; Mira, 2020).

Grounded on the preface and background exploration, the main goal of this study is to examine the correlation between the tax expense and institutional ownership on the amount of related party transactions empirically. This study develops (Soraya & Rachmawati, 2020) about determinants of the amount of related party transaction on effect tax expense and institutional ownership. So, the result of this research determines the amount of related party transactions in a company contains tax expense factors and institutional ownership, especially for general companies or using consumer of goods companies.

It takes advantage of the different tax rates in every country to make transactions with employees or related companies of countries that decrease tax rates. However, the wording as an excuse is irrelevant, as this study does not examine whether the relevant party's transaction is a domestic or cross-border transaction. To solve this problem, we use year over year using the previous year's tax expense to show the actions management takes in the face of the high ETR by the previous year tend to engage in abusive related party transactions. Based on this section and explanation, the first hypothesis is based on research by (Soraya & Rachmawati, 2020).

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 H_1 : The previous year's tax expense positively influences related party transactions.

This indicates that institutional ownership can affect the conduct of control due to the fact excessive debt rules make the business enterprise supervised with the aid of using debt holders. Thus, the stern manipulation of the business enterprise makes the supervisor will act as the preferred debt holder and shareholder. Then the amount of related party transactions could be decreased with the controlling completed with the aid of using the institution. Based on that statement causes by the reason why institutional investor ownership variables do not affect this study. This is because it is not just about financial companies, but generally companies. Therefore, surveillance tends to be lower than other companies that only use financial companies as institutional investors (Soraya & Rachmawati, 2020). So, the second hypothesis is:

H₂: Institutional Ownership negatively influences related party transactions.

2. Research Method

This study's descriptive explanation used quantitative secondary data based on the financial reports and annual reports of consumer industry companies. The sub-sector consists of consumer non-cyclical and consumer cyclical listed on the Indonesia Stock Exchange (IDX) from 2017 to 2020. From that used, a hypothesis test the way to indicate the effect of independent variables tax expense and institutional ownership on dependent variables related to party transactions. The technique of sampling used purposive sampling for the systematic elimination sample as follows criteria with the study requirement:

Table 1. Criteria Sample

Requirement	Enterprise
All listed companies on the Indonesia Stock Exchange (IDX)	227
Companies are not registered on the IDX before 2018 during the observation period 2017-2020 in the form of financial reports and annual reports	(73)
Companies reported that during the observation period consecutive	(17)
Companies that do not have losses during the study observation period	(84)
Companies there are not obtained complete data related to observation data	(42)
The remaining companies	12

Operational Definition and Variable Measurements

The study research explains the variable measurement which is related to supported criteria as follows:

Table 2. Measurements Variable

Variable	Label	Formula			
Related Party Transaction	RPTSE _{it}	the the RPTSE _{it} = $\frac{RPT \ Sales_{it} + RPT \ Expense_{it}}{Equity_{it}}$			
Tax Expense	ETR_{it-1}	$ETR_{it-1} = \frac{total\ income\ tax\ expense\ i,t}{profit\ before\ tax\ i,t}$			
Institutional Ownership	OWN_{it}	$OWN_{it} = \frac{\text{Number of shares owned by institutional i,t}}{\text{total number of shares i,t}}$			
		total number of shares i,t			
Control Variables:					
Leverage	LEV _{it}	$DER_{it} = \frac{Total\ debt\ i,t}{Total\ equity\ i,t}$			
Firm Size	$SIZE_{it}$	$Size_{it} = Ln(Total \ aset \ i, t)$			

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Related Party Transaction

In this study, related party transaction focuses on only using one measurement that looks at RPT sales and expenses as a percentage of book value or the ratio of sales. The company expenses which is related to related party transactions. It is included the financial statement then be compared to the company's all total capital. Compare the relative size of the RPT with total capital to determine the impact of transactions with the parties on shareholders and uses RPTSE only in Indonesia. More related party transaction sales and expenses are used only due to the high number of RPT in Indonesia during the survey year (Utama, 2015).

Tax Expense

One way to measure how well a firm manages taxes is to look at the effective tax rate. That explained if the effective tax rate is usually counted from the ratio of total tax expense and pre-tax profit. The lowly the ETR value, the better for the firm. The effective tax rate value indicates how well the firm implements its tax plan. That happens because the survey does not consider whether the parties are trading only domestically or across national borders, that is, the exchange rate. It will be irrelevant when used as an excuse. In order to complete this research using the previous year's tax expense. (Alfandia, 2018) ETR is measured using the total ratio by comparing total income tax expense to the pre-tax profit or we can describe for the previous year. Total income tax expense is the sum of current tax expense and deferred tax expense (Soraya & Rachmawati, 2020).

Institutional Ownership

The description of this variable study about institutional ownership is the ownership by a bank, company, or other institution that can oversee the company. Organizational ownership is a type of ownership structure that is a good corporate governance mechanism that can affect a company's performance (Soraya & Rachmawati, 2020).

Institutional ownership is part of the ownership of a company that plays an important role in manager oversight, discipline, and influence so that managers can enforce control investors usually have a great deal of control over the operation of the company, so it is advisable to monitor tax planning activities closely. This can reduce the opportunistic behavior of business owners (Jamei, 2017). Institutional ownership is measured using the proportion ratio between the number of shares owned by the institution and the number of outstanding shares (Darsani & Sukartha, 2021).

Control Variables:

The study literature clearly shows each of them when it comes to controlling variables. That is related to the company's financial performance (Grzegorz Zimon, 2021). Firm Size is used measurement the natural logarithm of a company's total assets, that size of the company is variable to control this effect selected (Raguseo, 2020).

The second control variable is leverage which is used debt-equity ratio calculated from the long-term debt scale of total assets (Salehi, 2018). Then the Leverage is a control variable and the interest rate on debt is fixed, regardless of the company's return on investment. The financial leverage that a company exercise is aimed at earning more from finance. Uses the money rather than the cost. Financial leverage and liabilities move in the same direction. In other words, as debt increases, so does financial leverage. Financial leverage's main aim is to maximize shareholder profits in good economic conditions. Debt is expected to have a fixed interest rate that can be realized at cost. It is lower than the rate of the return on net assets.

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When a company has more debt compared to stocks and preferred capital, the company is said to be more leveraged (Tagi, 2020).

Converted to log (1 + RPT) to account for fluctuations in RPT volume from each company. In that case, the equation looks like this:

$$Log (1+RPT)_{it} = \alpha + \beta 1ETR_{it-1} + \beta 2OWN_{it} + \beta 3LEV_{it} + \beta 3SIZE_{it} + e_{it}$$

Component description:

RPT_{it} = Related Party Transaction ETR_{it-1} = Previous year's tax expense OWN_{it} = Institutional Ownership

LEV_{it} = Leverage $SIZE_{it} = Firm Size$ $e_{it} = error$

3. Results and Discussion

3.1. Results

Descriptive Statistics

The analysis of descriptive statistics was performed to determine the properties of the values, including the mean, standard deviation, minimum and maximum value of each study variable as follows:

Table 3. Descriptive Statistics

Tuble of Descriptive Statistics							
Variable	N	Minimum	Maximum	Mean	Std. Deviation		
RPTSE _{it}	48	0.000	0.603	0.104	0.176		
ETR _{it-1}	48	0.023	0.470	0.218	0.070		
OWN _{it}	48	0.049	0.925	0.464	0.222		
LEV _{it}	48	0.171	3.171	0.896	0.828		
SIZE _{it}	48	27.178	31.560	29.383	1.277		

Based on this study's result of the descriptive statistical analysis in the table, for the first variable is the mean of log(1+RPTSE_{it}) is 0.104 and the standard deviation is 0.176 then we can see that if the data is quite high and the minimum value is 0.000 and the maximum value is 0.603.

ETR_{it-1} has a mean value of 0.218 and the standard deviation is 0.070, the minimum value is 0.023 and the maximum value is 0.470 which is the indication ETR_{it-1} between 2.36% for Indorama Synthetics Tbk 2018 to 47% for Catur Sentosa Adiprana Tbk 2019. Institutional ownership has a mean value of 0.049 so, for 4.96% from total observation if this thing still showing low institutional participation in the system finance as supervisor management continuity company and the standard deviation is 0.222, the minimum value is 0.049 and the maximum value is 0.925 which is the indication OWN_{it} between 4.96% for Wilmar Cahaya Indonesia Tbk 2020 to 92.5% for H.M. Sampoerna Tbk 2020.

Leverage has a mean value of 0.896 and the standard deviation is 0.8282818, the minimum value is 0.171 and the maximum value is 3.171 which is the indication LEV_{it} is 17.14% for Delta Djakarta Tbk 2017 to 317.16% for Sumber Alfaria Trijaya Tbk. That can conclude if consumer goods companies have various levels of equity value.

The firm size has a mean value of 29.383 and the standard deviation is 1.277, the minimum value is 27.178 and the maximum value is 31.560 which is the indication SIZE_{it} is a

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value the distance is not too far and close to the mean value. From by firm size interpret if that has a large asset value of good consumer companies.

3.2. Discussion

Table 4. The Model Measured by RPTSE

Variables	В	t	Sig	MULTICOLLINEARITY		SPEARMAN RHO
				Tolerance	VIF	Sig
Constant	-0.478	-0.735	0.466			
ETR _{it-1}	0.136	0.397	0.694	0.988	1.012	0.825
OWN _{it}	-0.378	-3.015	0.004	0.746	1.340	0.057
LEV _{it}	-0.058	-1.812	0.077	0.828	1.207	0.138
SIZE _{it}	0.027	1.154	0.255	0.670	1.493	0.853

Run Test : 0.662 R- Square (R^2) : 0.203 F : 0.041

The panel data regression result analysis in table 4 aims to determine the effect of tax expense and institutional ownership on the amount related to party transactions.

One of the normality tests used the Kolmogorov Smirnov test for unstandardized residual the result is not normal distribution but we use Central limit theorems (CLT). Multicollinearity test shows tolerance value > 0.1 and VIF value less than 10. So that there are no signs of multicollinearity. The heteroscedasticity test uses the spearman rho test, which correlates the value to the independent variable and unstandardized residuals show the result > 0.05. Autocorrelation test use run test which is the result shows more than 0.05 so that, indicates there is no autocorrelation symptom.

The panel data regression equation model as follows:

$$Log (1+RPT)_{it} = -0.478 + 0.136_{it-1} - 0.078_{it} - 0.058_{it} + 0.027_{it} + e_{it}$$

The coefficient determination test's purpose determines how much the ability variable tax expense and institutional ownership will explain the amount of related party transactions. Based on table 4, it can be shown the R Square value is 0.203. That shows the ability of the variable tax expense and institutional ownership as independent variables and leverage and firm size as control variables can explain the RPTSE amount of 20.30%. Other variables outside the equation explain the remaining 79.70%. The F test aims to test the significance of the coefficients as a whole or simultaneously. Based on the study result of the hypothesis test in that table, the probability value of 0.041 is less than 0.05. This shows that the previous year's tax expense and institutional ownership and leverage and size variables have a significant impact on the amount of related party transactions.

Tax Expense to The Amount of Related Party Transactions

Based on the result of the t-test from panel data regression analysis in that table, the previous year's tax expense on the amount of related party transactions shows a significance of 0.694 > 0.05. That can be concluded if the previous year's tax expense doesn't significantly affect the amount of related party transactions in the current year. Although the high tax expense of the previous year can encourage companies to conduct related party transactions in the current year. Then the total tax expense that the firm must pay is the company's consideration to get more profit. The amount of related party transactions here is related to sales and costs.

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That shows one attempt to reduce the tax expense and engage in sales transactions with related parties. In this case of transfer pricing, this is often done by reducing revenue from sales by selling goods below the fair price, thereby affecting the taxable profits. Because the result of the previous year's tax expense has not influenced the amount of related party transactions the reason is the effective tax rate of the entity and is calculated as the tax expense divided by the pre-tax profit. The lower the effective tax rate value, the better the effective tax rate value for the company, and the effective tax rate value indicates that the company has successfully implemented tax planning. Individuals, corporations, and permanent establishments are taxable. On the other hand, taxable income can be accepted or generated by the increased economic power acquired in Indonesia and abroad that can be used for consumption or to intensify taxpayers' wealth (Abbas & Eksandy, 2020). Therefore the results can conclude whether or not it is affected by the company's tax planning and company condition so that the result is related to the statement.

Institutional Ownership to the Amount of Related Party Transactions

Next, the results of the t-test of the second hypothesis of panel data regression analysis in the table show that the institutional ownership of the number of related party transactions has a significant value of 0.004 there is less than 0.05. This study proves this effect as it can be concluded that institutional ownership influences the number of related party transactions. The theory from the last research (Soraya & Rachmawati, 2020) said that the ownership of an organization should be able to play a role in overseeing by management's behavior in conducting abusive related party transactions so that proves that according to practice.

4. Conclusion

Based on the existing research study, well-known RPT impacts the capital market and one of them is the value of the share. This study research is more detailed in testing the effect of Related party transactions on the market, especially for stock investment scope. RPT is recognized as a company's commitment to coordinate and allocate resources among its subsidiaries more efficiently, so RPT is expected to yield results with better company performance. From the outcome of the statistical check and dialogue of outcomes, we will conclude that if the previous year's tax expense does not influence the number of related party transactions in sales and expense (RPTSE). However, the institutional ownership hypothesis shows the impact from that statement because institutional ownership influences the amount of related party transactions.

The limitation of this research is that only use the consumer goods companies are used as a sample. For further observation, it is proposed to add the sample and variable to measure tax expenses from the previous year to focus solely on all sectors.

References

- Abbas, D. S., & Eksandy, A. (2020). The effect of effective tax rate, tunneling incentive, and exchange rate on company decisions to transfer pricing: Food and consumption sub-sector companies listed on the Indonesia evidence. *PalArch's Journal of Archaeology of Egypt/ Egyptology*, 17(7), 14430–14442. https://archives.palarch.nl/index.php/jae/article/view/5486
- Ahmad, H., Mappatompo, A., Muslim, M. (2018). Capital Ownership Structure And Decision On Financial Market Reaction And Corporate Value. *International Journal of Innovative Science and Research Technology*, *3*(9), 395–406.

Peer Reviewed – International Journal

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E-ISSN: 2614-1280 P-ISSN 2622-4771

https://jurnal.stie-aas.ac.id/index.php/IJEBAR

- Alfandia, N. S. (2018). Pajak dan Struktur Modal Perusahaan Manufaktur di Indonesia. *Berkala Akuntansi Dan Keuangan Indonesia*, 3(1), 17. https://doi.org/10.20473/baki.v3i1.6822
- Darsani, P. A., & Sukartha, I. M. (2021). The Effect of Institutional Ownership, Profitability, Leverage and Capital Intensity Ratio on Tax Avoidance. *American Journal of Humanities and Social Sciences Research (AJHSSR)*, 5(1), 13–22. https://www.ajhssr.com/wp-content/uploads/2021/01/C215011322.pdf
- Grzegorz Zimon , Andrea Appolloni , Hossein Tarighi, S. S. and E. D. (2021). Earnings Management, Related Party Transactions and Corporate Performance: The Moderating Role of Internal Control. *SSRN Electronic Journal*, *9*(146). https://doi.org/10.2139/ssrn.612234
- Hayat, M., Jebran, K., Yu, Y., & Wang, M. (2018). Impact of Managerial and Institutional Ownership on Capital Structure: A Comparison Between China & USA. *European Journal of Business and Management Www.Iiste.Org ISSN*, 10(24), 69–80. https://www.researchgate.net/publication/328990396
- Jamei, R. (2017). International Journal of Economics and Financial Issues Tax Avoidance and Corporate Governance Mechanisms: Evidence from Tehran Stock Exchange. *International Journal of Economics and Financial Issues*, 7(4), 638–644. http://www.econjournals.com
- Jensen, M., & Meckling, W. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure.
- Madyan et al. (2019). Family Control, Institutional Ownership, Dan Kebijakan Dividen Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia. *Jurnal Reviu Akuntansi Dan Keuangan*, 9(1), 87–95. https://doi.org/10.1093/nq/s1-ix.228.217a
- Mira. (2020). Does the Institutional ownership, Return On Asset and Leverage affect Company Value. *Point of View Research Accounting and Auditing*, *1*(3), 88–94. https://doi.org/10.47090/povraa.v1i3.44
- Pratama, A. (2018). Do Related Party Transactions and Tax Avoidance Affect Firm Value? *Review of Integrative Business and Economics ResearchOnlineCDROM*, 7(1), 2304–1013.
- Putra, P. dwi, Syah, D. husrizal, & Sriwedari, S. (2018). Tax Avoidance: Evidence of As a proof of Agency Theory and Tax Planning. *International Journal of Research & Review*, 5(9), 52–60.
- Raguseo, Elisabetta, Claudio Vitari, and F. P. (2020). Profiting from big data analytics: The moderating roles of industry concentration and firm size. *International Journal of Production Economics*, 229.
- Salehi, Mahdi, Hossein Tarighi, and S. S. (2018). The relation between corporate governance mechanisms, executive compensation and audit fees. *Management Research Review*, 41(47), 939.
- Salehi, M., Lari DashtBayaz, M., Hassanpour, S., & Tarighi, H. (2020). The effect of managerial overconfidence on the conditional conservatism and real earnings management. *Journal of Islamic Accounting and Business Research*, 11(3), 708–720. https://doi.org/10.1108/JIABR-03-2017-0030
- Soraya, L. R., & Rachmawati, N. A. (2020). Determinats Of The Amount Of Related Party Transaction: Tax Expense And Institutional Ownership. *Jurnal Reviu Akuntansi Dan Keuangan*, 10(3), 30–39. https://doi.org/10.22219/jrak.v10i3.13651
- Sovaniski, T. (2020). Influencing of International Accounting Reporting Standards on

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Vol-6, Issue-2, 2022 (IJEBAR)

E-ISSN: 2614-1280 P-ISSN 2622-4771

https://jurnal.stie-aas.ac.id/index.php/IJEBAR

- Quality of Financial Reports. *SSRN Electronic Journal*, 1–16. https://doi.org/10.2139/ssrn.3665457
- Taqi. (2020). Financial Leverage and Profitability: Evidence from Oil and Gas Sector of India. *GIS Business*, 15(4), 665–687.
- Utama, C. A. (2015). Penentu Besaran Transaksi Pihak Berelasi: Tata Kelola, Tingkat Pengungkapan, dan Struktur Kepemilikan. *Jurnal Akuntansi Dan Keuangan Indonesia*, 12(1), 37–54.
- Yahaya, K. A., & Yusuf, K. (2020). Impact of Company Characteristics on Aggressive Tax Avoidance in Nigerian Listed Insurance Companies. *Jurnal Administrasi Bisnis*, 9(2), 101–111. https://doi.org/10.14710/jab.v9i2.30512