Does Capital Intensity And Profitability Affect Tax Aggressiveness?

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Abstract: This study aims to determine the effect of capital intensity and profitability on tax aggressiveness. The research method used in this research is explanatory. The data analysis method used is panel data regression analysis. Sources of data for this study are data in the form of annual financial statements of mining sector companies listed on the Indonesia Stock Exchange (IDX) in 2017-2019. The population in this study was 141 observations. The sampling technique used in this study was purposive sampling, the total sample is 30. The results show that capital intensity and profitability partially affect tax aggressiveness.

Keywords*:* capital intensity, profitability, tax aggressiveness

1. Introduction

The tax function for the State is a source of state revenue. For companies, taxes are considered as costs or burdens that will reduce company profits. This has led many companies to try to find ways to reduce the cost of taxes to be paid by planning and regulating the taxes that must be paid. In business practice, companies generally identify tax payments as an expense so that they will try to minimize this burden in order to optimize profits (Suandy, 2011).

Many companies are currently engaging in tax aggressiveness with tax avoidance practices, one of which is the coal company PT. Adaro Energy Tbk with a transfer pricing scheme through a subsidiary located in Singapore. Adaro is taking this step through one of its subsidiaries in Singapore called Coaltrade Services International. Adaro sells coal mined in Indonesia at a low price to Coaltrade which the subsidiary can then resell at a higher price. According to the Coal trade Account analyzed by Global Witness, the increases made when buying and selling coal fell from an average of 15%, before the intervention of the tax office, to 4% after the intervention of the tax office. Hence Coaltrade's profits, which were taxed in Singapore in 2009-2017, averaged 10.7%. This figure is much lower than the annual average that Adaro pays for profits in Indonesia, which is 50.8%. The main analysis of Global Witness is that the commission selling Adaro's Indonesian coal is taxable in Indonesia at a higher annual average rate than Singapore. Global Witness discovered the potential for paying lower-than-expected taxes of $ 125 million or nearly $ 14 million per year to the Indonesian government. This means that each year Indonesia experiences a potential loss of tax revenue of up to $ 14 million per year. (https://tirto.id/)

Some factors influence aggressiveness, including capital intensity and profitability. Ownership of fixed assets can reduce tax paid by the company because of the depreciation costs attached to fixed assets. The company's performance will increase due to a reduction in the tax expense. Profitability describes a company's ability to use its assets to generate profits. In this study, profitability is measured by ROA. The higher the ROA value, the higher the profit the company gets, and this indicates that the company is getting better at managing its assets. Agency theory will spur agents to increase company profits. When profits get bigger, the amount of income tax will increase according to the increase in company profits so that the tendency to tax aggressiveness by the company will increase.

Previous research on tax aggressiveness has shown different results. Research conducted by Richardson et al. (2016), Natalya (2018), Santini and Indrayani (2020), Lestari, et al. (2019), Adyani and Astika (2019) state that capital intensity affects tax aggressiveness. Meanwhile, research conducted by Pratama and Suryarini (2020), Rojas et al., (2017), and Irian¬to et al., (2018) stated that capital intensity did not affect tax aggressiveness. Research conducted by Noor et al., (2010), Andhari & Sukartha (2019), Rodriguez and Arias (2012), Santini & Indrayani (2020) stated that profitability affects tax aggressiveness. But research results Natalya (2018), Setyowati, et al., (2018). Kraft (2014) states that profitability does not affect tax aggressiveness.

2. Literature review

Agency Theory

Agency theory explains the relationship between the principal and the agent. This is because on the one hand management want to increase compensation with high profit while shareholders want to reduce tax expense with low profits.So in order to bridge the agency problem, tax agressivness behavior arises in order to optimize both interests.

Tax Aggressiveness

Tax aggressiveness as the last level of the spectrum of tax planning behavior (Hanlon and Heitzman, 2010; Nel, 2019). (Balakrishnan, K., Blouin, J., & Guay (2011) that companies are involved in various forms of tax planning to reduce tax obligations that are estimated by every company that takes tax aggressive actions, of course, must get sanctions because of their actions. very detrimental to the public. Rodriguez and Arias (2012) state that tax aggressiveness can occur because big corporate have more space for tax planning to lower their effective tax rate

Tax avoidance is related to the regulation of an event in such a way as to minimize or eliminate the tax expense by paying attention to the presence or absence of the tax consequences it causes (Halioui, Neifar & Abdelaziz,2016). Tax planning refers to legal remedies for tax payment using tax aggressiveness. Measurements related to tax avoidance are carried out using the effective tax rate (ETR) as a measuring tool. Effective tax rate is the ratio of tax expense to company profit before income tax which is sacrificed to pay corporate tax expense

Capital Intensity

Capital intensity ratio can be defined as how many companies invests its assets in fixed assets and inventories. The intensity of fixed assets is how big the proportion of the company's fixed assets is in the total assets owned by the company (Siregar and Widyawati, 2016). Through capital intensity, companies can carry out tax aggressiveness by increasing the company's capital in fixed assets so that a greater depreciation cost of fixed assets can arise so that it can be deducted as a deduction from the amount taxes that must be paid by the corporate (Rahmawati, 2016) Thus the higher the intensity capital will cause the lower the ETR value, which means that the greater the tax aggressiveness.

H1: Capital intensity affects tax aggressiveness

Profitabilitas

Munawir (2010) explains that profitability is a ratio that shows a company's ability to generate profits. Sartono (2012) states that profitability is the company's ability to earn profits about sales, total assets, and own capital. Munawir (2010) explains that profitability shows the ability to generate profits. Sartono (2012) states that profitability is the firm's ability to gain profit from sales, total assets, and own capital. And this ratio is reflected in the Return On Assets (ROA), which shows the efficiency of asset management.

ROA is one of the profitability ratios to measure the extent to which the firm's ability to generate profits from the assets used in the firm. This ratio is used for a measure of management effectiveness in managing its investment. The higher the ROA value, the better the firm's performance. With the high ROA value, careful tax planning will be carried out so that it produces optimal taxes and tends to decrease tax avoidance activities (Prakosa, 2014). This shows that the higher the profitability, the higher the tax aggressiveness.

H2: Profitability affects tax aggressiveness

3. Method

This study uses an explanatory method. The data source for this study is the annual financial statements of mining companies listed on the Indonesia Stock Exchange (IDX) in 2017-2019. The total data observation was 141. The sampling technique used in this study was purposive sampling, the total sample is 30. The data analysis method used panel data regression analysis.

The variables in this research are:

Independent variable (X)

The independent variable (X1) is the Capital intensity with the formula:

$$Capint = \frac{\text{Total Fixed Asset}}{\text{Total Asset}}$$

(Ayu W &Aryani .M, 2018)

The independent variable (X2) is the profitability. Profitability was measured using Return On Asset with the formula:

ROA = Earning after tax (EAT)
Total Asset

(Kasmir, 2017)

Dependent variable (Y)
The dependent variable (Y) is tax aggressiveness. Tax aggressiveness was measured using ETR with formula:

ETR = Tax Expense
Pretax expense

(Bouassidi & Hamed, 2015).

The smaller the ETR value means the greater the tax aggressiveness and vice versa, the greater the ETR value means the smaller the tax aggressiveness.

4. DISCUSSION AND CONCLUSION

HYPOTHESIS TEST

Testing will be carried out through the following stages; (1) Chow test, (2) Langrange Multiplier (LM) test, (3) classical assumption test, (4) interpretation of regression model estimation results, (5) coefficient of determination, and (6) hypothesis testing. The complete results are presented below.

1. Chow-Test (*Fixed* Model vs *Common* Model)

Table 4.1
Chow-Test Model Test Results

Prob	Conclusion
1.00	*Common* model

Source: Eviews 9 Output Appendix

The Chow-test result shows a probability value of 1.00, so the Chow-test result is not significant at the 5% level (probability value> 0.05). Therefore, it can be concluded that it is more appropriate to use the Common Model. So that the Hausman test does not need to be carried out and the direct testing is continued using the Lagrange multiplier test

2. Lagrange Multiplier (*Common* vs *Random*)

The langrage multiplier (LM) test is conducted to determine which common effect model and random effect model are the most appropriate in panel data testing (Gujarati & Porter, 2009: 605). The results of the langrage multiplier (LM) are presented in table 4.2 as follows:

Table 4.2
Langrage Multiplier Test Results

Breusch-Pagan	Prob.	Conclusion
0.187	0.665	*common* model

Source: Eviews 9 Output Appendix

The results of the Lagrange Multiplier (LM) test show that the common model is the right choice for estimating the regression equation, this is indicated by the results of the LM test which are not significant at the 5% level (probability value> 0.05). Thus, from the results of the two model tests, the common model is the most appropriate choice for estimating the regression model.

CLASSIC ASSUMPTION TESTING

1. Normality Test

The results of the prob. value obtained from the Jarque-Bera test for residual data are 0.084, then the prob. value in the Jarque-Bera test is greater than the 5% error rate (0.05), then the regression model is normally distributed

2. Multicollinearity Test

The VIF value of the two independent variables is 1.00, still less than 10, and a tolerance value greater than 0.1, so it can be concluded that there is no multicollinearity between the two independent variables.

3. Heteroscedasticity Test

The heteroscedasticity test showed a probability value of 0.2161. When compared with a significant level of 0.05, 0.2696> 0.05, so it can be concluded that there are no symptoms of heteroscedasticity in the regression model

4. Autocorrelation Test

The Durbin-Watson statistical value (DW) = 1.917, then from the table for the number of independent variables = 2 and the number of observations n = 30, the lower limit of the table value (dL) = 1.2837 and the upper limit (dU) is obtained. = 1.5666. Because the Durbin-Watson regression model value of 1.917 is between dU (1.5666) and 4-dU (2.4334), which is in an area where there is no autocorrelation, then there are no autocorrelation symptoms in the regression model.

PANEL DATA REGRESSION ANALYSIS

Panel data regression model estimation uses Eviews 9 software and the following output results are obtained:

Table 4.3
Panel Data Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.432873	0.018682	23.17014	0.0000
Capint	-0.816931	0.109107	-7.487459	0.0000
Profitability	-0.065713	0.012263	-5.358684	0.0000

Through the processing results obtained as presented in table 4.3 above, a panel data regression equation can be formed as follows:

$Y = 0{,}433 - 0{,}817\ X_1 - 0{,}066\ X_2$

Y = Tax Aggressiveness
X_1 = Capital Intensity
X_2 = Profitability

The coefficients contained in the above equation are defined as follows:

1) A constant value of 0.433 indicates the average tax aggressiveness if capital intensity and profitability are equal to zero.
2) Capital intensity has a negative coefficient of 0.817, meaning that every 1 increase in the company's capital intensity will reduce the ETR value by 0.817. Then it increases the tax aggressiveness by 0.817.
3) Profitability has a negative coefficient of 0.066, M every time there is an increase in the company's profitability of 1 will decrease the ETR value of 0.066. Then it increases the tax aggressiveness of 0.066

Coefficient of Determination

The results of the Adjusted R Square coefficient test:

Table 4.4
The Result Of The Coefficient Of Determination

R-squared	0.167935	Mean dependent var	0.302267
Adjusted R-squared	0.162332	S.D. dependent var	0.122449
S.E. of regression	0.112070	Akaike info criterion	-1.529436
Sum squared resid	3.730227	Schwarz criterion	-1.492398
Log likelihood	232.4154	Hannan-Quinn criter.	-1.514614
F-statistic	29.97174	Durbin-Watson stat	1.917565
Prob(F-statistic)	0.000000		

Source: Output Eviews 9

In table 4.4, the R-Squared value is 0.1679 or 16.79%. This means that capital intensity and profitability simultaneously contribute or influence as much as 16.79% on tax aggressiveness. While the remaining 82.21% is the influence of other factors not examined in this study.

PARTIAL TESTING

1. The Effect of Capital Intensity on Tax Aggressiveness

The results of testing the effect of capital intensity on tax aggressiveness are presented in table 4.5 below:

Table 4.5
Test Results of the effect of Capital Intensity on Tax Aggressiveness

Regression coefficient	T_{count}	*Prob.*	t_{table}
-0.817	7.487	0.000	2,048

Source: Eviews 9 Output Appendix

The test results in table 4.5, the t-count value of the capital intensity variable is 7,487 with a probability value of 0,000. Because the value of tcount (7,487)> ttable (2,048), at a 5% error level it was decided that capital intensity had an effect on tax aggressiveness.

Tax aggressiveness is proxied ETR, the smaller the ETR value means the greater the corporate 's tax aggressiveness, and vice versa, the greater the ETR value, the smaller the corporate's tax aggressiveness. The intensity capital variable has a negative value, which means that the higher the intensity capital, the lower the ETR. This means that the higher the capital intensity, the higher the tax aggressiveness of a company.

Fixed assets owned by the firm allow the firm to minimize tax payments due to depreciation of fixed assets each year. Through capital intensity, companies can carry out tax aggressiveness by increasing the company's capital in the form of fixed assets so that a greater depreciation cost of fixed assets can arise so that it can be deducted as a deduction from the amount of tax that must be paid by the firm (Rahmawati, 2016). Thus the higher the intensity capital will cause the lower the ETR value, which means that the greater the tax aggressiveness.

The results of this study are the same as research by Richardson et al. (2016), Natalya (2018), Santini & Indrayani (2020), Lestari, et al. (2019), Adyani and Astika (2019) which state that capital intensity affects tax aggressiveness

2. The Effect of Profitability on Tax Aggressiveness

The results of testing the effect of profitability on tax aggressiveness are presented in table 4.6 below:

Table 4.6
Test Results of the effect of Profitability on Tax Aggressiveness

Regression coefficient	T_{count}	*Prob.*	t_{table}
-0.066	5.358	0.000	2,048

Source: Eviews 9 Output Appendix

The test results in table 4.6 obtained the tcount value of the profitability variable is 5,358 with a probability value of 0,000. Because the valu e of tcount (5,358)> ttable (2,048), at a 5% error level it was decided that profitability had an effect on tax aggressiveness.

Profitability is proxied by ROA. Tax aggressiveness is proxied by the ETR, the smaller the ETR value means the greater the corporate's tax aggressiveness, and vice versa, the greater the ETR value, the smaller the corporate's tax aggressiveness. The profitability variable has a negative value, which means that the higher the profitability, the lower the ETR. This means that the higher the profitability, the higher the tax aggressiveness of a corporate.

Profitability is the firm's ability to generate profits from the activities the firm carries out. Rodriguez and Arias (2012) state that the firm's fixed assets will reduce the tax expense that must be paid due to the depreciation of fixed assets. Liu and Cao (2007) state that the asset depreciation method is driven by tax law so that depreciation costs can be deducted from profit before tax. Thus the higher the profitability, the lower the ETR value, which means the greater the tax aggressiveness.

The results of this study are the same as research by Noor et al., (2010), Andhari & Sukartha (2019), Rodriguez and Arias (2012), Santini & Indrayani (2020) which state that profitability affects tax aggressiveness.

5. Conclusions

Capital intensity and profitability partially affect tax aggressiveness. The higher the capital intensity, the higher the tax aggressiveness. The higher the profitability, the higher the tax aggressiveness.

6. SUGGESTION

Suggestions from this research, for mining sector companies to be able to fulfill taxation virtue in accordance with applicable tax regulations. For the Directorate General of Taxes, it is necessary to better supervise the obligations of the company, and to make more efficient regulations so that taxpayers are obedient to tax regulations.

References

1. Adyani, Ni Kadek Ari, Ida Bagus Putra Astika. 2019. Pengaruh Profitabilitas, Capital Intensity, dan Ukuran Perusahaan Pada Tax Aggressive. E-Jurnal Ekonomi dan Bisnis Universitas Udayana 8.6 (2019): 594-621. ISSN : 2337-306.
2. Agus Sartono. 2012. Manajemen Keuangan Teori dan Aplikasi. Edisi4. BPFE. Yogyakarta.
3. Andhari, P. A. S., & Sukartha, I. M. 2019. Pengaruh Pengungkapan Corporate Sosial Responsibility, Profitabilitas, Inventory Intensity, Capital Intensity, dan Leverage Pada Agresivitas Pajak. E-Jurnal Akuntansi Universitas Udayana, 18(2017), 2115–2142.
4. Balakrishnan, K., Blouin, J., & Guay, W., 2011. Does Tax Aggressiveness Reduce Financial Reporting Transparency. University of Pennsylvania
5. Boussaidi, A., & Hamed, M. S. 2015. The impact of governance mechanisms on tax Aggressiveness: Empirical evidence from Tunisian context. Journal of Asian Business Strategy, 5(1), 1-12.
6. Bursa Efek Indonesia. Laporan Keuangan Perusahaan Manufaktur. Quoted from: https://www.idx.co.id. Accessed in Januri 2021.
7. Chen, S., Chen, X., Cheng, Q. & Shevlin, T.2010. Are family firms more tax aggressive than non-family firms? Journal of Financial Economics, 95, 41–61.
8. Dunbar, A., Higgins, D. M., Phillips, J. D., & Plesko, G. A. 2010. What do measures of tax aggressiveness measure? In National Tax Association Proceedings (pp. 18–26)
9. Gujarati, Damodar N. and Porter, Dawn C. 2009. Basic Econometrics 5th edition. McGraw.Hill New York

10. Hanlon, M., & Heitzman, S. 2010. A review of tax research. Journal of Accounting and Economics, 50(2–3), 127–178.
11. Halioui, K., Neifar, S., & Abdelaziz, F. B. 2016. Corporate governance, CEO compensation and tax aggressiveness: Evidence from American firms listed on the NASDAQ 100. Review of Accounting and Finance, 15(4), 445–462
12. Irianto, D. B. S., Sudibyo, Y. A., & S.Ak, A. W. 2018. The Influence of Profitability, Leverage, Firm Size and Capital Intensity Towards Tax Avoidance. International Journal of Accounting and Taxation, 5(2), 33–41.
13. Kamarudin, F., Sufian, F., Nassir, A.M., Anwar N.A.M., Hussain, H.I., (2019) Bank Efficiency in Malaysia a DEA Approach, Journal of Central Banking Theory and Practice, 8 (1), 133–162.
14. Kraft, A. 2014. What Really Affects German Firms Effective Tax Rate? International Journal of Financial Research, 5(3), 1–19.
15. Liu, X., & Cao, S. 2007. Determinants of Corporate Effective Tax Rates: Evidence from Listed Companies in China. The Chinese Economy.
16. Richardson, G., Taylor, G., & Lanis, R. 2016. Women on the board of directors and corporate tax aggressiveness in Australia An empirical analysis. Accounting Research Journal, 29(3), 313-331.
17. Munawir. 2010. Analisis laporan Keuangan Edisi keempat. Cetakan Kelima Belas. Yogyakarta: Liberty
18. Natalya. 2018. Pengaruh Capital Intensity Leverage Dan Profitabilitas Terhadap Tax Agresivitas Dengan Kinerja Pasar Sebagai Variabel Moderating. Media Akuntansi Perpajakan. Vol. 3, No. 1, Januari - Juni 2018 : 37-55
19. Nel, D. (2019). Sustainable Independent Power Production In Middle-Income African Countries. The International Journal of Social Sciences and Humanity Studies, 11(2), 1-19.
20. Noor, R., Fadzillah, N. S. M., & Mastuki, N. A. 2010. Corporate Tax Planning: A Study
21. On Corporate Effective Tax Rates of Malaysian Listed Companies. International Journal of Trade, Economics and Finance, 1(2), 189–193
22. Pohan, & Anwar, C. 2016. Manajemen Perpajakan Strategi Perencanaan Pajak dan Bisnis. Jakarta: PT Gramedia
23. Prakosa, K. B. 2014. Pengaruh Profitabilitas, Kepemilikan Keluarga, dan Corporate Governance terhadap Penghindaran Pajak di Indonesia. Simposium Nasional Akuntansi XVII.
24. Rodriguez, Elena Fernandez, dan A. M. Arias. 2012. Do Business Characteristics Determinean Effective Tax Rate? Chinese Economy,45: 60-8
25. Rojas, J. M., Rodríguez, M. R. G., & Samper, R. C. M. 2017. Determinants Of The Effective Tax Rate In The Tourism Sector : A Dynamic Panel Data Model. Tourism & Management Studies, 13(3), 31–38.
26. Salaudeen, Y. M., & Ejeh, B. U. 2018. Equity ownership structure and corporate tax aggressiveness: The Nigerian context. Research Journal of Business and Management, 5(2), 90-99.
27. Santini, Adilah Layung, Emmy Indrayani. 2020. The Effect Of Profitability, Liquidity, Leverage, Capital Intensity And Firm Size On Tax Aggressiveness With Market Performance As An Intervening Variable. Jurnal Ilmiah Ekonomi Bisnis Volume 25 No 3, Desember 2020.
28. Setyowati, E., Hendra Titisari, K., & Rachmawati Dewi, R. 2018. The Effect of Profitability, Leverage, Liquidity, and the Company Size on Aggressiveness Tax the Sector Companies Consumer Goods Industry That Listed On The Indonesia Stock Exchange Year 2014-2016. The 2nd International Conference on Technology, Education, and Social Science: 374–382. Surakarta, 5 Mei 2018: Universitas Slamet Riyadi.
29. Siregar, R. dan Widyawati, D. 2016. Pengaruh Karakteristik Perusahaan Terhadap Penghindaran Pajak pada Perusahaan Manufaktur di BEI. Jurnal Ilmu dan Riset Akuntansi, Vol. 5, (No. 2), hal 1-1
30. Suandy, E. 2011. Perencanaan Pajak. Jakarta: Salemba Empat.
31. Pratama, Indriyani, Trisni Suryarini. 2020. The Role of Independent Commissioners in Moderating the Effect of Capital Intensity, Inventory Intensity, and Profitability on Tax Aggressiveness. Accounting Analysis Journal 9(3) (2020) 208-214.