

The Influence of Capital Intensity, Inventory Intensity, and Profitability on Tax Aggressiveness with Debt Levels as a Moderating Variable

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ABSTRACT: This study's objective was to analyze the impact of capital intensity, inventory intensity, and profitability on tax aggressiveness, with debt level serving as a moderator. This study includes three independent factors, namely Capital Intensity, Inventory Intensity, and Profitability; one dependent variable, namely Tax Aggressiveness; and one moderating variable, namely Debt Level or Leverage. In this study, 17 firms out of a total observation of 45 companies with research objects on the LQ45 company index listed on the Indonesia Stock Exchange (IDX) from 2017 to 2021 met the inclusion requirements. According to the findings of this study, capital intensity has a beneficial effect on tax aggression. The variable inventory intensity has no positive impact on tax aggression. The unpredictable profitability has a favorable impact on tax aggressiveness. The association between capital intensity and tax aggression cannot be moderated by the variable of leverage. The association between inventory intensity and tax aggression cannot be moderated by the variable of leverage. The variable of leverage moderates in a positive way the association between profitability and tax aggression. This research can also be used to encourage investors and shareholders to receive financial statement information offered by companies with greater care when making investment decisions. For companies to be able to determine positive policies that can maintain business continuity and can meet the expectations of shareholders will carry out tax aggressiveness.

Keywords: Capital Intensity; Inventory Intensity; Profitability; Tax Aggressiveness; Debt Level.



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INTRODUCTION

One of the sources of state finance is taxes, where taxes are one of the most important supports for state financing. Tax contribution to state revenue reaches 80%. Even though tax revenue has increased every year, there are always deficiencies so that the tax target is not achieved like the current Covid-19 pandemic. According to data (www.bps.go.id, 2022) state tax revenue has

The Influence of Capital Intensity, Inventory Intensity, and Profitability on Tax Aggressiveness with Debt Levels as a Moderating Variable

Fitriani and Indrati

decreased. In 2019-2021 the Covid-19 pandemic occurred which caused many companies to go bankrupt, so that the amount of company income will affect the payment of income tax to the company. In order to reduce the income tax paid to the government, companies usually carry out tax aggressiveness by reducing the profits earned by the company. That way people's economic activities are also very limited during the Covid-19 pandemic. Meanwhile, tax performance and economic recovery have started to increase from the impact of the co-19 pandemic since 2021.

A firm will make an investment in the form of fixed assets, and the company will do depreciation to calculate the amount of tax that must be paid and how the funds will be utilized to generate a profit ([Ratnawati & Utomo, 2022](#)). A high inventory intensity of a company can help reduce the amount of tax payments. ([Oktaviani et al., 2021](#)) states that when inventory intensity results in an increase in profit due to additional costs, as a result it will cause an increase in tax payments so that companies will carry out tax aggressiveness.

([Suhendar et al., 2022](#)) said the effectiveness of a company's work processes in identifying a company's ability to seek profit can use profitability. Company profits will be used to pay shareholders. The company will carry out tax aggressiveness if the level of profit earned by the company increases ([Kasmir, 2017](#)). Leverage is used to increase a company's ability to achieve its goals, both small and large. Companies that are in debt do not carry out tax aggressiveness because companies have interests with creditors, so companies must maintain their profits ([Santini & Indrayani, 2020](#)).

([Iswari et al., 2019](#)) emphasized that tax aggressiveness refers to tax payment schemes implemented by management, both legally and criminally, with the intent of manipulating corporate income as the basis for tax collection.

According to research ([Ahdiyah & Triyanto, 2021](#)) and ([Nugrahadi & Rinaldi, 2021](#)), capital intensity has a beneficial effect on tax aggression. In addition, inventory intensity has a good impact on tax aggressiveness ([Sumiati & Ainniyya, 2021](#)) ([Sormin, 2021](#)). And the positive effect of profitability on tax aggressiveness (Hidayat & Dewi, 2022) ([Gunawan & Resitarini, 2019](#)). Several studies have found a positive relationship between leverage moderating several independent variables on research tax aggressiveness ([Isa et al., 2019](#)) ([Marlina et al., 2022](#)).

There are several things that distinguish this research from previous research by changing the independent commissioners' moderation variable to leverage moderation on the LQ45 company index for 2017-2021. The reason the authors chose the leverage variable in this study is because companies with high debt ratios have a high level of tax aggressiveness. This occurs because corporate debt increases interest expense, which in turn reduces company profits.

This study's objective was to investigate the impact of capital intensity, inventory intensity, and profitability on tax aggressiveness, with debt level serving as a moderating variable, for the LQ45 firm index from 2017 to 2021. This research has benefits for companies for contributing thoughts and references for company owners, managers, regulators, and investors in decision-making actions regarding tax aggressiveness.

Positive Accounting Theory

The purpose of positive accounting theory is to provide an overview of the accounting process running from the beginning to the present and accounting information to be presented so that it can be communicated to related parties. This theory is based on the fact that stakeholders, shareholders and tax authorities try to be persistent in maximizing their activities, which from time to time can also affect the compensation and welfare received. According to Watts & Zimmerman, (1986) there are 3 hypotheses that can be a reference for explaining and predicting events in accounting. Of the three existing hypotheses, this study uses the positive cost hypothesis.

If the conditions don't change, then the profit is relatively large, so it's the same as the company returning current profits to the future. Regarding tax aggressiveness, companies with higher profits in the current period will pay higher tax payments. The bigger the company, the more resources it will require and the company will carry out tax planning with the aim of saving tax payments. To reduce the number of current profit periods, company management has made preparations to move the current profit period to the next period ([Amalia, 2021](#)).

Tax Aggressiveness

([Balakrishnan et al., 2019](#)) stated that various forms of tax planning are used by the business world to monitor their own tax obligations, so companies take tax aggressive actions which of course must be sanctioned because their actions are very detrimental to society. The effective tax rate (ETR) is the calculation used in this study. ([Iswari et al., 2019](#)) states that tax evasion is an act in which illegal tax planning is carried out. Usually companies that carry out tax aggressiveness have the goal of reducing the burden of paying taxes. This action is carried out to minimize or reduce tax costs ([Sunarto et al., 2021](#)).

The company will carry out a plan or scheme to avoid paying taxes. Companies that have a savings plan in paying taxes will tend to be tax aggressive, this needs to be considered in fulfilling taxes by looking at the regulations set by the government ([Putri Malinda et al., 2022](#)).

Capital Intensity

Capital intensity is a form of company fixed assets invested from the company's principal amount. According to ([Afiana & Mukti, 2020](#)), capital intensity is a type of investment activity carried out by business actors in the form of fixed assets such as buildings, machinery, land, etc. ([Christina & Wahyudi, 2022](#)) state that capital intensity is debt and equity which companies usually use for company capital policies to ensure that the company's debt and equity are maximized.

Capital intensity relates to business investment in assets that increases as the cost of assets decreases. Because this will have an impact on the company's profit growth, the need for tax obligations will decrease. When capital intensity increases, corporate tax aggressiveness will also increase ([Ratnawati & Utomo, 2022](#)). Total net fixed assets to total assets is the most widely used indicator to measure capital intensity.

Inventory Intensity

If the intensity of invested capital in the form of fixed assets is different from the intensity of inventories that invest in the company's inventory. ([Oktaviani et al., 2021](#)) states that companies that invest a lot in inventory are referred to as inventory intensity. ([Meylina & Manalu, 2022](#)) states that inventory is a company's current current assets that are used to produce goods to be sold or used in the future.

Any business that invests in inventory will incur costs for growing and managing inventory. This can lead to reduced company profits and increase company costs. Companies with high inventory intensity will tend to do tax aggressiveness. Companies can increase company profits by making cost savings when inventory intensity increases. That way the company can allocate current year's profit to the next period when inventory is high. Therefore, the company will reduce profits so that it will also cause a smaller tax burden to be paid ([Ahdiyah & Triyanto, 2021](#)).

Profitability

([Jumono et al., 2019](#)) stated that profitability is a tool used to evaluate a company's internal operations. With this profitability will help the company to achieve its final goal. According to ([Mauren & Purwaningsih, 2022](#)) profitability is the main key to the long-term success and survival of the company, which is reflected in the return on company assets. Increased company profits can show an increase in profitability ratios as well. The greater the profitability value, the greater the company's performance in terms of profit generation.

An increase in profitability will result in a rise in tax value; hence, corporations tend to engage in tax aggression. A corporation use a profitability ratio to measure its capacity to make profits. Profitability ratios can indicate the efficiency of a company's management ([Sari et al., 2021](#)). Additionally, revenue is utilized to evaluate the location of the company's earnings in the prior year and in the current year.

Leverage

According to ([Nilmawati et al., 2021](#)), leverage is the ratio that compares corporate assets to company debt and measures the company's usage of debt in relation to the cost of company assets. The ratio is used to measure leverage, which is a liability possessed by the company. Leverage can improve a company's ability to achieve both modest and broad objectives ([Gunawan & Resitarini, 2019](#)). It indicates the company's ability to meet its commitments with its assets, or how much of its assets must be liquidated in order to settle all of its liabilities. It illustrates the company's total debt burden ([Tahir et al., 2020](#)).

([Vijayakumaran & Vijayakumaran, 2019](#)) state that with leverage, companies can finance assets with borrowed funds and describe the company's financial risks. Companies that finance their assets using debt borrowed from third parties or creditors will usually incur interest costs that must be paid.

The Relationship between Capital Intensity and Tax Aggressiveness

Fixed assets show the wealth shown by the companies because the more companies invest their fixed assets, the more companies bear depreciation costs. This utilization will have an impact on decreasing company profits. Companies that invest their capital in the form of fixed assets can take advantage of depreciation costs which are a deduction from the tax burden. This provides a choice of accounting theory when companies invest in assets, allowing them to choose the depreciation method they deem appropriate to increase company profits, and positive accounting theory exists to increase profits according to ([Santini & Indrayani, 2020](#)).

So when the company's capital intensity ratio increases, tax aggressiveness will increase. Thus, to manage the company, it will use unused funds to invest in fixed assets and get profits from depreciation which will later be used for corporate tax deductions ([Marlina et al., 2022](#)). So along with the increasing intensity of activity in a company, the tax aggressiveness practices carried out by the company will also increase as well. Thus, the hypothesis is as follows:

H₁: Capital intensity is positively related to tax aggressiveness.

The Relationship between Supply Intensity and Tax Aggressiveness

According to ([Ahdiyah & Triyanto, 2021](#)), inventory intensity represents how much a company invests in its own inventory. Companies with a high level of inventory intensity are typically tax aggressive. Companies with large inventories will also have large inventory costs. Maintenance and inventory costs will also help break down profits and tax payments that companies will make to the state. Managers will try to minimize the tax burden by having a large inventory so that profits will decrease. Therefore, companies apply positive accounting theory in choosing profitable jobs, with the assumption that companies will succeed in making high investments in the future and enjoy lower tax payments.

Consequently, if a company's inventory intensity is high, its tax aggressiveness will increase. This is consistent with the findings of ([Sumiati & Ainniyya, 2021](#)) that inventory intensity positively affects tax aggression. Thus, the following is the hypothesis:

H₂: Inventory intensity is positively related to tax aggressiveness.

The Relationship between Profitability and Tax Aggressiveness

Researchers use ROA to measure company profitability, according to ([Aksoy Hazir, 2019](#)) profitability has a relationship between company profits and income tax burden for companies. High profits can trigger tax aggressiveness for companies with high profitability values that can be described as company efficiency, high tax costs due to the high profits that the company has. It is viewed as an attempt to engage in tax aggression. Profitability can be accomplished by supplying information about the company's profits, and tax aggressiveness can be attained if the company's profits are increasing. There are substantial political consequences, including high taxation. The larger the attained profitability, the bigger the company's profitability.

The results are consistent with research ([Dianawati & Agustina, 2020](#)) and ([Hidayat & Dewi, 2022](#)) indicating that the ROA ratio influences the amount of tax aggression. Therefore, the hypothesis is the following:

H₃: Profitability is positively related to tax aggressiveness.

Leverage Moderation on the Relationship between Capital Intensity and Tax Aggressiveness

Leverage compares the company's assets to its debt and gauges the company's utilization of its debt in relation to the cost of its assets. In assessing the company's ability to meet its long-term obligations, the leverage ratio might be utilized (Suyono, 2018). Companies with significant levels of debt will incur substantial interest costs. In addition, these expenses can affect the firm's profitability. Decreasing company profits causes the effectiveness of companies in managing the company's tax burden to decrease and shows an increase in tax aggressiveness.

So when the company's leverage ratio increases, the tax aggressiveness will increase. If the amount of leverage used to invest in the form of fixed assets so that it can take advantage of high depreciation costs to reduce the tax burden on the company. Positive accounting theory explains the decline in corporate earnings reports. Conflicts between managers and government may arise due to political costs when viewed as sharing responsibility for the social good of society. Tax obligations are the guidelines for the state regarding this matter. Management will report low profits in order to avoid paying high taxes, that is because the company's income is high, the taxes paid will also be high.

So the results are in line with research (Afiana & Mukti, 2020) which states that if capital intensity increases, tax aggressiveness will also increase, this will be strengthened by leverage, but not supported by (Ratnawati & Utomo, 2022). Thus, the hypothesis is as follows:

H₄: Leverage positively moderates the relationship between Capital Intensity and Tax Aggressiveness.

Leverage Moderation on the Relationship between Inventory Intensity and Tax Aggressiveness

The level of debt or leverage is typically represented by the company's obligation to repay debt. Inventory intensity is a measure of how much a firm invests in inventory; if a company has a large inventory, it will incur a greater burden in managing that inventory. The positive theory of accounting shows that conflicts generally occur in companies due to fund allocation problems. (Gita et al., 2021) explains that the leverage exercised by the entity will be able to provide additional funds to purchase inventory for the entity concerned, even though it must bear the interest expense on this obligation.

This is in line with the idea (Marlina et al., 2022) that there is a close influence between leverage, inventory intensity, and tax aggressiveness. Thus, the hypothesis is as follows:

H₅: Leverage positively moderates the relationship between Inventory Intensity and Tax Aggressiveness.

Leverage Moderation on the Relationship between Profitability and Tax Aggressiveness

(Kasmir, 2017) states that a company's profitability indicates the period in which it will create money. Taxes paid by the company will be directly proportional to its income, so a rise in profits will result in a greater tax burden for the company.

The Influence of Capital Intensity, Inventory Intensity, and Profitability on Tax Aggressiveness with Debt Levels as a Moderating Variable

Fitriani and Indrati

In order for businesses to profit from these tax benefits, they must increase their overall debt, resulting in a high total debt to asset ratio. According to (Alexander & Minnema, 2018), for this indicator to be theoretically more beneficial for the organization, it must have a high level of total debt, implying a positive association between total debt and profitability.

According to the research of (Hidayat & Dewi, 2022), there is a close relationship between leverage, profitability, and tax aggression. Thus, the following is the hypothesis:

H₆ : Leverage positively moderates the relationship between Profitability and Tax Aggressiveness

From the hypothesis above, the following is the research model framework:

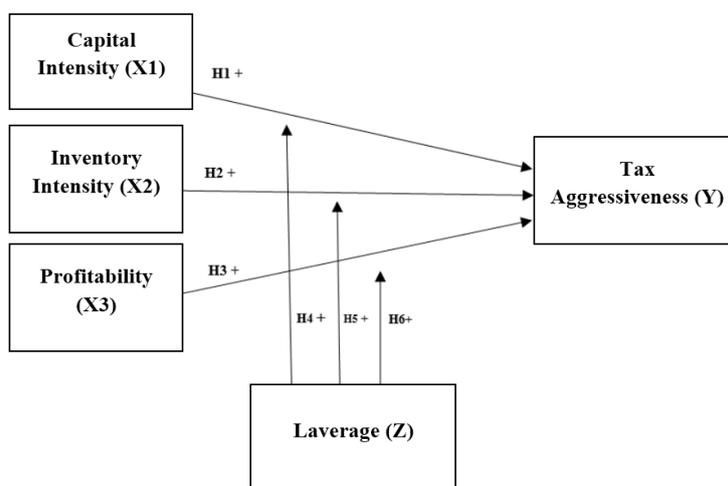


Figure 1. Research Framework

Source: data proceed

METHOD

This research was conducted using ETR. ETR is determined by dividing total income tax expense by total pre-tax profit. The Tax Aggressiveness Measurement utilizing ETR can address the existence of issues and constraints. This quantitative research employs secondary data acquired from a variety of sources. This research requires information from the annual financial report (annual report) of the LQ45 company index for 2017-2021, which includes 45 companies listed on the Indonesia Stock Exchange. The technique of purposive sampling utilized in this study yielded the following results: 45 LQ45 companies listed on the Indonesia Stock Exchange (IDX) in 2017-2021, 28 companies that present incomplete annual financial report data, 28 companies that do not generate profits, and 17 companies multiplied by 5 years. Therefore, the collected sample data is 85.

Using the econometric views software, this study employed the panel data regression analysis technique (Eviews 12). This study's data analysis includes descriptive statistical tests (mean,

The Influence of Capital Intensity, Inventory Intensity, and Profitability on Tax Aggressiveness with Debt Levels as a Moderating Variable

Fitriani and Indrati

median, maximum, minimum, and standard deviation), analysis and selection of panel data regression using the Chow and Hausman tests, and descriptive statistics (mean, median, maximum, minimum, and standard deviation). In statistical testing, Gujarati and Porter (2009) state that the Hausman test follows the Chi-square statistical distribution. Then, execute the classical assumption testing, which includes the multicollinearity test and the heteroscedasticity test, followed by the hypothesis testing, which includes the simultaneous significance test (F test), the partial significance test (T test), and the coefficient of determination (adjusted R-squared) at a significance level of 0.05 (5%).

RESULT AND DISCUSSION

Descriptive Statistics Test

Using the minimum value, maximum value, average (mean), and standard deviation for each independent variable and the dependent variable, descriptive statistical analysis is utilized to provide an overview of the distribution and behavior of the research sample data. The descriptive test results are shown in the table below:

Table 1. Statistical Analysis Test Results

Variable	N	Min	Max	Mean	Median	Std. Deviation
CAPINT	85	0.044000	2.351000	0.393365	0.339000	0.342227
IP	85	0.008000	3.184000	0.216388	0.111000	0.474544
ROA	85	0.004000	0.723000	0.125424	0.098000	0.16531
DER	85	0.041000	3.413000	0.873565	0.643000	0.763282
ETR	85	0.146000	0.718000	0.255176	0.243000	0.086196
Valid N	85					

Source: data proceed

This study has 85 reliable data obtained from the financial reports of the LQ-45 companies listed on the Indonesia Stock Exchange BEI from 2017 to 2021.

It can be seen that Erajaya Swasembada Ltd (ERRA) had the lowest capital intensity value of 0.044000 in 2018 and Sumber Alfaria Trijaya Ltd (AMRT) had the highest capital intensity value of 2.351000 in 2021. The median value is 0.339000 and the standard deviation (level of data distribution) is 0.342227. It is anticipated that the average capital intensity of the LQ45 companies from 2017 to 2021 will be 0.393%, or 39.9%.

Inventory intensity variable or proxied by IP has the lowest value of 0.008000 indicated by the company Mitra Keluarga Karyasehat Ltd (MIKA) and the highest value of 3.184000 indicated by the company Sumber Alfaria Trijaya Ltd (AMRT) in 2021, the median value is 0.111000 and the standard deviation (data distribution level) is 0.474544. It can be assumed that the average value of inventory intensity on the LQ45 company index from 2017 to 2021 is a value of 0.216 or 21.6%.

The Influence of Capital Intensity, Inventory Intensity, and Profitability on Tax Aggressiveness with Debt Levels as a Moderating Variable

Fitriani and Indrati

The profitability variable or proxied by ROA has the lowest value of 0.004000 which is owned by Aneka Tambang Ltd (ANTM) and the highest value of 0.723000 indicated by the company Sumber Alfaria Trijaya Ltd (AMRT) in 2021, the median value is 0.098000 and the standard deviation (level of data distribution) is 0.116531. It can be assumed that the average value of profitability on the LQ45 company index from 2017 to 2021 is 0.125 or 12.5%.

The leverage variable or proxied by DER has the lowest value of 0.041000 indicated by the company Charoen Pokphand Indonesia Ltd (CPIN) in 2021 and the highest value of 3.4113000 indicated by the company Unilever Indonesia Ltd (UNVR) in 2021, the middle value 0.643000 and the standard deviation (level of data distribution) is 0.763282. It can be assumed that the average leverage value on the LQ45 company index from 2017 to 2021 is 0.873 or 87.3%.

The tax aggressiveness variable or proxied by ETR has the lowest value of 0.146000 which is owned by Astra International Ltd (ASII) in 2020 and the highest value of 0.718000 indicated by the company Aneka Tambang Ltd (ANTM) in 2019, the middle value 0.243000 and the standard deviation (level of data distribution) is 0.086196. It can be assumed that the average value of tax aggressiveness on the LQ45 company index from 2017 to 2021 is 0.255 or 25.5%

Panel Data Regression Model Selection

Chow Test

In the Chow test of the two models that have been carried out, both have a prob value. Cross-Section F and Chi-Square which is smaller than 0.05, with these results means that the hypothesis is rejected. So it was concluded that the Fixed Effect model was the best and data testing continued to Hausman.

Hausman Test

Based on the Hausman test of the two models that have been tested, the value in model 1 is $p = 0.2259 > 0.05$ and the value in model 2 is $p = 0.7131 > 0.05$, meaning that the Random Effect Model is the best model. The Lagrange Multiplier (LM) test must be continued because the Random Effect Model (REM) was selected by the Chow test and the Hausman test.

Lagrange Multiplier Test

After the Chow test and Hausman test were carried out with the best model results, namely REM, then proceed to the LM test. Based on the two models that have been tested, the probability values of the Cross-Section are $0.0000 < 0.05$ and $0.0001 < 0.05$, meaning that the best method is the Random Effect Model.

Best Panel Data Regression Model

The following table summarizes the results of the panel data regression model selection test performed on each model.

Table 2. The Best Panel Data Regression Model

Test	Model 1	Model 2	Result
Chow test	CEM VS FEM	CEM VS FEM	Fixed Effect Model
Hausman Test	REM VS FEM	REM VS FEM	Random Effect Model
Lagrange Multiplier Test	CEM VS REM	CEM VS REM	Random Effect Model

Source: data proceed

From the results of testing the best model for all equations except the first model is the Random Effect Model.

Classic assumption test

Multicollinearity Test

Based on the sample data that has been tested, the results of all variables are below 0.80. It can be concluded that the independent and dependent variables in this study are free from multicollinearity.

Heteroscedasticity Test

Based on the tested sample data, the probability value is more than 0.05. It may be stated that heteroscedasticity does not exist between the independent and dependent variables in this study.

Panel Data Regression Analysis

Based on the findings of the panel data regression analysis test, the equation model between variables can be formed as follows:

$$ETR = -1.518 + 0.111CAPINT + 0.062IP + 0.182ROA - 0.066DER - 0.093 \\ DER \times CAPINT - 0.024DER \times IP + 0.372DER \times ROA + \epsilon$$

The constant value in this study is -1.518, meaning that the independent variable has a value of 0. Then the tax aggressiveness of the LQ45 company index for the period 2017 to 2021 is predicted to be -1.518. Based on the research sample data, the results of capital intensity are related to tax aggressiveness with a value of 0.111, meaning that the capital intensity variable has an increase in value of 0.111 to tax aggressiveness, which indicates that the coefficient is positive.

Inventory intensity variable has an impact on tax aggressiveness with a value of 0.062, meaning that the inventory intensity variable has an increase in value of 0.062 on tax aggressiveness, indicating that the coefficient is positive. The Profitability variable is related to tax aggressiveness with a value of 0.182, meaning that the profitability variable has an increased value of 0.182 to tax aggressiveness, which indicates that the coefficient is positive.

Leverage and tax aggressiveness variables with a value of -0.066, meaning that the leverage and tax aggressiveness variables have decreased in value -0.066. Leverage variable can moderate the relationship between capital intensity and tax aggressiveness with a value of -0.093, meaning that

The Influence of Capital Intensity, Inventory Intensity, and Profitability on Tax Aggressiveness with Debt Levels as a Moderating Variable

Fitriani and Indrati

leverage moderation has decreased the value of -0.093 on capital intensity and tax aggressiveness, which indicates that the coefficient is negative.

The leverage variable moderates the relationship between inventory intensity and tax aggressiveness with a value of -0.024, meaning that leverage moderation has decreased by -0.024 on inventory intensity and tax aggressiveness, indicating that the coefficient is negative. The leverage variable moderates the relationship between profitability and tax aggressiveness with a value of 0.372, meaning that leverage moderation has increased by 0.372 on profitability and tax aggressiveness, which indicates that the coefficient is positive.

Panel Data Hypothesis Test

T-Test (Partial)

The t (partial) statistical test has measurement provisions, namely the prob value. on Eviews research < 0.05 then the variable is accepted or significant, conversely if the value is > 0.05 then the variable is rejected or not significant to Y or ETR. Based on the results of the T test with a significance level of 0.05, this table displays the t-statistic value and the Prob value for the capital intensity variable. ETR yields a value of 0.0330 < 0.05 with T count (2.170185) $>$ T table (1.19900), so H1 is acceptable, i.e. capital intensity has a positive effect on tax aggression. In the Inventory Intensity t-statistic and Probability values. ETR yields a value of 0.1277 > 0.05 with t count (1.539236) t table (1.9900), hence H2 is rejected, i.e. inventory intensity has no significant effect on tax aggressiveness. Then, based on the value of the t-statistic variable, profitability and probability are determined. ETR produces a result of 0.000 < 0.05 with t count (4.991810) $>$ T table (1.9900), so H3 is acceptable, i.e. Profitability has a favorable influence on tax aggression.

Table 3. Research Model Hypothesis Test Results

Hypothesis	Statement	Results	Positive/Negative	Decision
H ₁	Capital intensity has a positive effect on tax aggressiveness	T Compute $>$ T Table 2.170185 $>$ 1.9900 Prob Value $<$ 0.05 0.0330 $<$ 0.05	Positive	Hypothesis Accepted
H ₂	Inventory intensity has a positive effect on tax aggressiveness	T Count $<$ T Table 1.539236 $<$ 1.9900 Prob Value $>$ 0.05 0.1277 $>$ 0.05	Negative	Hypothesis Rejected

The Influence of Capital Intensity, Inventory Intensity, and Profitability on Tax Aggressiveness with Debt Levels as a Moderating Variable

Fitriani and Indrati

Hypothesis	Statement	Results	Positive/Negative	Decision
H ₃	Profitability has a positive effect on tax aggressiveness	T Compute > T Table 4.991810 > 1.9900 Prob Value < 0.05 0.000 < 0.05	Positive	Hypothesis Accepted
H ₄	Leverage positively moderates the relationship between Capital Intensity and Tax Aggressiveness	T Compute > T Table -1.863317 < 1.9900 Prob Value > 0.05 0.0660 > 0.05	Negative	Hypothesis Rejected
H ₅	Leverage positively moderates the relationship between Inventory Intensity and Tax Aggressiveness	T Compute > T Table -0.761014 < 1.9900 Prob Value > 0.05 0.4489 > 0.05	Negative	Hypothesis Rejected
H ₆	Leverage positively moderates the relationship between Profitability and Tax Aggressiveness	T Compute > T Table 2.492821 > 1.9900 Prob Value < 0.05 0.0147 < 0.05	Positive	Hypothesis Accepted

Source: Data proceed

Test Views for Moderation

Moderation can be examined by searching for significant interactions between the moderating variable (Z) and the independent variable (IV) (X). Notably, it is essential to mean-center both your moderator and your dependent variable in order to reduce multicollinearity and facilitate interpretation.

Table 4. Moderation Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.194476	0.114916	-10.39434	0.0000
CAPINT	0.116600	0.069411	1.679846	0.0968
DER	0.073294	0.044547	1.645329	0.1038
DER1	-0.093096	0.049962	-1.863317	0.0660

Source: Data proceed

The results from the eview table above show that the prob of the calculation between capital intensity and leverage or proxied in DER1 has a value of 0.0660 > 0.05, so according to the calculation results it is concluded that the Leverage relationship (Z) cannot moderate Capital Intensity (X1) on Tax Aggressiveness (Y). Thus the H4 hypothesis is rejected and the data does not support the model.

Table 5. Moderation Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.375613	0.114425	-12.02191	0.0000
IP	0.001836	0.046450	0.039532	0.9686
DER	0.033813	0.042786	0.790269	0.4317
DER2	-0.024104	0.031673	-0.761014	0.4489

Source: Data proceed

The results from the eview table above show that the prob of the calculation between inventory intensity and leverage or proxied in DER2 has a value of 0.4489 > 0.05, so according to the calculation results it is concluded that the Leverage relationship (Z) cannot moderate Inventory Intensity (X2) on Tax Aggressiveness (Y). Thus the H5 hypothesis is rejected and the data does not support the model.

Table 6. Moderation Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.963638	0.142355	-13.79394	0.0000
ROA	-0.201696	0.045278	-4.454613	0.0000
DER	-0.048730	0.045083	-1.080913	0.2829
DER3	0.372003	0.149230	2.492821	0.0147
Cross-section random			0.157870	0.4622
Idiosyncratic random			0.170278	0.5378

Source: Data proceed

The results from the eview table above show that the prob of the calculation between profitability and leverage or is proxied in DER3 which has a value of 0.0147 < 0.05, then according to the

calculation results it is concluded that the relationship Leverage (Z) can moderate Profitability (X3) on Tax Aggressiveness (Y). Thus the H5 hypothesis is accepted and the data supports the model.

Simultaneous Significance Test F

Simultaneous results of research sample data show the results of the prob value (F-statistic) of 0.000282 less than 0.05 so that it can be interpreted that capital intensity, inventory intensity, profitability are simultaneously related to tax aggressiveness.

Coefficient of Determination

Based on the sample data that has been tested, it shows that the Adjusted R-Squared value is 0.192428 (19.2%) which means that the overall ETR ratio has an impact on the Capint, IP and ROA ratios. While the remaining 80.8% is explained by other variables outside the research model.

Discussion

Effect of Capital Intensity Relationship and Tax Aggressiveness

Capital intensity is positively associated to tax aggression on the LQ45 company index on the Indonesia Stock Exchange (IDX) from 2017 to 2021, according to the study's findings, so H1 is acceptable. These results are consistent with research ([Ahdiyah & Triyanto, 2021](#)) and ([Afiana & Mukti, 2020](#)) which states that capital intensity is positively related to corporate tax aggressiveness. So when the company's capital intensity ratio increases, tax aggressiveness will increase. Thus, to manage the company, it will use unused funds to invest in fixed assets and get profits from depreciation which will later be used for corporate tax deductions ([Marlina et al., 2022](#)). So the higher the tendency of the intensity of the company's fixed assets, the higher the tax aggressiveness practices will be carried out.

The Influence of Supply Intensity and Tax Aggressiveness Relationship

Inventory intensity has a positive correlation with tax aggressiveness for the LQ45 company index on the Indonesia Stock Exchange (IDX) for the period 2017 to 2021, hence H2 can be disregarded. Research ([Sormin, 2021](#)) and ([Sumiati & Ainniyya, 2021](#)) indicates that inventory intensity has a beneficial influence on tax aggression.

This is consistent with the research of ([Sugeng et al., 2020](#)), which argues that inventory as an investment is not the best strategy for minimizing the tax burden because companies with higher levels of inventory are viewed as being at a disadvantage due to inventory that has been stored for an extended period of time expiring or having been damaged. ([Oktaviani et al., 2021](#)) states that low additional inventory costs will increase company profits with lower additional inventory costs and company profits will increase, which indicates that the company will not be able to take advantage of additional inventory costs to reduce tax payments.

The Influence of Profitability Relationship and Tax Aggressiveness

According to the findings of the study, profitability is positively correlated with tax aggressiveness for the LQ45 company index on the Indonesia Stock Exchange (IDX) from 2017 to 2021, therefore H3 is acceptable. These findings are consistent with research ([Dianawati & Agustina, 2020](#)) indicating that profitability influences the amount of tax aggression.

The Influence of Capital Intensity, Inventory Intensity, and Profitability on Tax Aggressiveness with Debt Levels as a Moderating Variable

Fitriani and Indrati

As a result of being able to engage in tax planning, companies with a high profit margin will be able to minimize their overall tax burden. When a corporation's profits are greater, its income tax liability and tax aggressiveness also grow. As a result, the company will be more aggressive in avoiding its tax obligations. When the company receives high profits in the current period, the amount of tax paid will be higher. This condition can increase the tendency of companies to carry out taxes ([Suhendar et al., 2022](#)).

The Effect of Leverage Moderation on the Relationship between Capital Intensity and Tax Aggressiveness

Therefore, H4 can be refused. According to research ([Afiana & Mukti, 2020](#)) and ([Marlina et al., 2022](#)), if capital intensity increases, tax aggression will also increase and will be increased by leverage.

In accordance with the research of Ratnawati and Utomo, companies do not use leverage to provide fixed assets and reduce the tax burden in manufacturing companies. Instead, leverage is used to finance company operations, so that the depreciation profit that should be used as a large corporate tax deduction for corporate tax payments cannot be reduced or the company cannot be tax aggressive.

The Effect of Leverage Moderation on the Relationship of Inventory Intensity to Tax Aggressiveness

The study's findings indicate that leverage positively moderates the association between inventory intensity and tax aggression for the LQ45 company index on the Indonesia Stock Exchange (IDX) from 2017 to 2021, hence H5 can be rejected. This contradicts scientific findings ([Marlina et al., 2022](#)) which states that there is a strong influence between leverage, inventory intensity, and tax aggressiveness. This is in line with Research of ([Suyono, 2018](#)).

The company does not use leverage to own inventory and additional costs to reduce its tax burden, so the company chooses not to carry out tax aggressiveness or pay the tax burden according to the company's situation. Most companies prefer to use leverage to maximize profits for shareholders. The company will increase profits and reduce the tax burden if the intensity of the company is higher ([Pasaribu & Mulyani, 2019](#)).

The Effect of Leverage Moderation on the Profitability Relationship Against Tax Aggressiveness

Therefore, H6 is okay. This is consistent with the findings of Hidayat and Dewi's research from 2022, which indicates a close relationship between leverage, profitability, and tax aggression.

Taxes paid by the company will be directly proportional to its income, so a rise in profits will result in a greater tax burden for the company. In order for businesses to profit from these tax benefits, they must increase their overall debt, resulting in a high total debt to asset ratio. According to ([Alexander & Minnema, 2018](#)), for this indicator to be theoretically more beneficial for the organization, it must have a high level of total debt, implying a positive association between total debt and profitability.

CONCLUSION

Based on the results of the author's research, it can be stated that the purpose of this study was to examine the impact of capital intensity, inventory intensity, and profitability on tax aggressiveness, with leverage as a moderating variable, for the LQ45 companies listed on the Indonesia Stock Exchange (IDX) from 2017 to 2021. Capital intensity, inventory intensity, and profitability are simultaneously associated to tax aggressiveness, and all independent variables modulated by leverage are simultaneously connected to tax aggressiveness. The link between capital intensity and tax aggressiveness is positive, suggesting that as capital intensity rises, corporations tend to be more tax aggressive. There is no substantial association between inventory intensity and tax aggressiveness, therefore a company's inventory intensity has little effect on its ability to reduce tax payments. Significantly positive correlation exists between profitability and tax aggressiveness, indicating that an increase in the profitability of a company will result in an increase in company profits, so that the company will use positive accounting methods to reduce profits, thereby reducing the amount of tax paid by the company. And leverage does not modify the link between capital intensity and inventory intensity and tax aggressiveness. In the meantime, leverage can dramatically decrease the connection between profitability and tax aggression.

REFERENCE

- Afiana, N., & Mukti, I. (2020). The Effect of Capital Intensity and Leverage against Tax Aggressiveness (The Empirical Studies at Mining Companies which have been registered on Indonesia Stock Exchange during the Period of 2014-2018). *International Journal of Innovative Science and Research Technology*, 5(3), 1024–1032.
- Ahdiyah, A., & Triyanto, D. N. (2021). Impact of Financial Distress, Firm Size, Fixed Asset Intensity, and Inventory Intensity on Tax Aggressiveness. *Journal of Accounting Auditing and Business*, 4(2), 1–11.
- Aksoy Hazır, Ç. (2019). Determinants of Effective Tax Rates in Turkey. *Journal of Research in Business*, 1(4), 35–45. <https://doi.org/10.23892/jrb.2019453293>
- Alexander, A., & Minnema, J. (2018). The relationship between leverage and profitability: A quantitative study of consulting firms in Sweden. *Sweden: Umea School of Business, Economics and Statistics*, 1–83.
- Amalia. (2021). EFFECT OF LIQUIDITY, LEVERAGE AND ASSET INTENSITY AGAINST TAX AGGRESSIVITY. *International Journal of Accounting & Finance in Asia Pasific*, 12(232–240).
- Balakrishnan, K., Blouin, J. L., & Guay, W. R. (2019). Tax aggressiveness and corporate transparency. *Accounting Review*, 94(1), 45–69. <https://doi.org/10.2308/accr-52130>
- Christina, M. W., & Wahyudi, I. (2022). Pengaruh intensitas modal, intensitas persediaan, pertumbuhan penjualan dan profitabilitas terhadap agresivitas pajak. *Fair Value: Jurnal Ilmiah Akuntansi Dan Keuangan*, 4(11), 5076–5083. <https://doi.org/10.32670/fairvalue.v4i11.1858>
- Dianawati, & Agustina, L. (2020). The Effect of Profitability, Liquidity, and Leverage on Tax Aggressiveness With Corporate Governance As a Moderating Variable. *Accounting Analysis Journal*, 9(3), 166–172. <https://doi.org/10.15294/aaj.v9i3.41626>

The Influence of Capital Intensity, Inventory Intensity, and Profitability on Tax Aggressiveness with Debt Levels as a Moderating Variable

Fitriani and Indrati

- Gita, I. A. M. A., Partika, I. D. M., & Suciwati, D. P. (2021). Effect Firm Size, Profitability and Inventory Intensity Against Effective Tax Rate (ETR). *Journal of Applied Sciences in Accounting, Finance, and Tax*, 4(1), 9–15. <https://doi.org/10.31940/jasafint.v4i1.2410>
- Gunawan Hidayat, I., & Dewi, F. O. S. (2022). Effect of Liquidity, Leverage, and Working Capital Turn on Profitability. *APTISI Transactions on Management (ATM)*, 7(1), 60–68. <https://doi.org/10.33050/atm.v7i1.1832>
- Isa, M., Lubis, H. A., & Chaniago, M. (2019). Pengaruh Kualitas Pelayanan Terhadap Kepuasan Penumpang Menggunakan Jasa Angkutan Penyeberangan PT. ASDP Indonesia Ferry (Persero) Cabang Sibolga. *Jesya (Jurnal Ekonomi & Ekonomi Syariah)*, 2(2), 164–181. <https://doi.org/10.36778/jesya.v2i2.90>
- Iswari, P., Sudaryono, E. A., & Widarjo, W. (2019). Political connection and tax aggressiveness: A study on the state-owned enterprises registered in Indonesia stock exchange. *Journal of International Studies*, 12(1), 79–92. <https://doi.org/10.14254/2071-8330.2019/12-1/5>
- Jumono, S., Sugiyanto, & Mala, C. M. F. (2019). Determinants of profitability in banking industry: A case study of Indonesia. *International Journal of English Language and Literature Studies*, 9(1), 91–108. <https://doi.org/10.18488/journal.aefr.2019.91.91.108>
- Kasmir. (2017). *Analisis Laporan Keuangan* (Edisi Pert).
- Marlina, E., Hasanudin, I. A., & Mulyasari, W. (2022). Tax Aggressiveness: The Role of Capital Intensity and Inventory Intensity with Leverage as Intervening. *Journal of Applied Business, Taxation and Economics Research*, 1(6), 614–632. <https://doi.org/10.54408/jabter.v1i6.97>
- Mauren, J., & Purwaningsih, E. (2022). PENGARUH PROFITABILITAS, UKURAN PERUSAHAAN, DAN KOMPETENSI KOMITE AUDIT TERHADAP PENGHINDARAN PAJAK. *Jurnal Ilmiah Indonesia*, 7(2541–0849), 2–16.
- Meylina, & Manalu, M. (2022). THE EFFECT OF DEFERRED TAX EXPENSE , CAPITAL INTENSITY AND FIRM SIZE ON TAX AGGRESSIVENESS (Case Study on BUMN20 IDX Company for the 2019-2021 Period). 11(2), 105–116.
- Nilmawati, N., Untor, W., Hadinugroho, B., & Atmaji, A. (2021). The Relationship Between CEO Characteristics and Leverage: The Role of Independent Commissioners. *Journal of Asian Finance, Economics and Business*, 8(4), 787–796. <https://doi.org/10.13106/jafeb.2021.vol8.no4.0787>
- Nugrahadi, E. W., & Rinaldi, M. (2021). The Effect of Capital Intensity and Inventory Intensity on Tax Avoidance at Food and Beverage Subsector Companies Listed on the Indonesia Stock Exchange (IDX). *Proceedings of the International Conference on Strategic Issues of Economics, Business and, Education (ICoSIEBE 2020)*, 163(ICoSIEBE 2020), 221–225. <https://doi.org/10.2991/aebmr.k.210220.039>
- Oktaviani, R. M., Pratiwi, Y. E., Sunarto, S., & Jannah, A. (2021). The Effect of Leverage, Earning Management, Capital Intensity, and Inventory Intensity on Tax Aggressiveness of Manufacturing Companies in Indonesia. *Journal of Asian Finance, Economics and Business*, 8(7), 501–508. <https://doi.org/10.13106/jafeb.2021.vol8.no7.0501>

The Influence of Capital Intensity, Inventory Intensity, and Profitability on Tax Aggressiveness with Debt Levels as a Moderating Variable

Fitriani and Indrati

- Pasaribu, D. M., & Mulyani, S. D. (2019). The Effect of Leverage and Liquidity on Tax Avoidance with Inventory Intensity as a Moderating Variable. *Jurnal Akuntansi Maramatha*, 11(2), 211–217. <https://doi.org/10.28932/jam.v11i2.1996>
- Putri Malinda, K., Sintha, L., Munandar, A., & Bertuah, E. (2022). The Influence of Political Connections, and Good Corporate Governance on Tax Aggressiveness. *American International Journal of Business Management (AIJBM)*, 5(04), 106–110.
- Ratnawati, J., & Utomo, D. C. (2022). Leverage as A Mediating Variable on Tax Avoidance. *Akuntansi Keuangan Dan Bisnis*, 15(1), 430–439.
- Santini, A. L., & Indrayani, E. (2020). The Effect of Profitability, Liquidity, Leverage, Capital Intensity and Firm Size on Tax Aggressiveness With Market Performance As an Intervening Variable (Banking Companies Listed on Indonesia Stock Exchange in 2014 - 2018). *Jurnal Ilmiah Ekonomi Bisnis*, 25(3), 290–303. <https://doi.org/10.35760/eb.2020.v25i3.2853>
- Sari, D., Wardani, R. K., & Lestari, D. F. (2021). The Effect of Leverage, Profitability and Company Size on Tax Avoidance. *Turkish Journal of Computer and Mathematics Education*, 12(4), 860–868.
- Sormin, F. (2021). The Influence of Inventory Intensity, Profitability and Leverage on Tax Aggressiveness. *International Journal of Management Studies and Social Science Research*, 3(1), 144–148.
- Sugeng, S., Prasetyo, E., & Zaman, B. (2020). Does capital intensity, inventory intensity, firm size, firm risk, and political connections affect tax aggressiveness? *JEMA: Jurnal Ilmiah Bidang Akuntansi Dan Manajemen*, 17(1), 78. <https://doi.org/10.31106/jema.v17i1.3609>
- Suhendar, D., Nurfatimah, S., Rahmawati, T., Syarifudin, S., & Rully, R. (2022). *The Effect of Profitability, Leverage, and Inventory Intensity on Tax Aggressiveness with Majority Ownership as Moderating Variables*. <https://doi.org/10.4108/eai.2-12-2021.2320326>
- Sumiati, A., & Ainniyya, S. M. (2021). Effect of Profitability, Leverage, Size, Capital Intensity, and Inventory Intensity Toward Tax Aggressiveness. *Journal of International Conference Proceedings (JICP)*, 4(3), 245–255.
- Sunarto, S., Widjaja, B., & Oktaviani, R. M. (2021). The Effect of Corporate Governance on Tax Avoidance: The Role of Profitability as a Mediating Variable. *Journal of Asian Finance, Economics and Business*, 8(3), 217–227. <https://doi.org/10.13106/jafeb.2021.vol8.no3.0217>
- Suyono, E. (2018). External Auditors' Quality, Leverage, and Tax Aggressiveness: Empirical Evidence From The Indonesian Stock Exchange. *Media Ekonomi Dan Manajemen*, 33(2), 99–112. <https://doi.org/10.24856/mem.v33i2.711>
- Tahir, H., Masri, R., & Rahman, M. (2020). Corporate board attributes and dividend pay-out policy: Mediating role of financial leverage. *Journal of Asian Finance, Economics and Business*, 7(1), 167–181. <https://doi.org/10.13106/jafeb.2020.vol7.no1.167>
- Vijayakumaran, S., & Vijayakumaran, R. (2019). Debt maturity and the effects of growth opportunities and liquidity risk on leverage: Evidence from Chinese listed companies.

The Influence of Capital Intensity, Inventory Intensity, and Profitability on Tax Aggressiveness with Debt Levels as a Moderating Variable

Fitriani and Indrati

Journal of Asian Finance, Economics and Business, 6(3), 27–40.

<https://doi.org/10.13106/jafeb.2019.vol6.no3.27>