



Analysis of the Effect of Liquidity, Income Tax Expense, and Leverage on Profitability

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ABSTRACT

Purpose – This study examines the effect of liquidity, income tax expense, and leverage on profitability.

Methodology/approach – The test uses panel data with a population of 103 companies. The research period for 5 years is from 2019 to 2023. The purposive sampling method was used, so the sample data was 170 observations. The data uses a combination of time series data and panel data.

Findings – The results showed that liquidity has no effect on profitability and has a negative direction. Income tax expense has a significant positive effect on profitability. Leverage has a significant negative effect on profitability.

Novelty/value – This research contributes to making a practitioner reference for decision-making in increasing profitability and becoming a theoretical reference for further research. The relevance of these results helps financial managers make strategic decisions to manage the company's financial resources. High liquidity indicates an accumulation of unproductive assets. Financial managers can plan tax strategies. The relevance of the results helps financial managers determine the optimal level of leverage. High leverage can increase the risk of default. While low leverage can indicate a heavy dependence on equity.

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INTRODUCTION

Financial statements are a form of accountability at the end of each period. Financial statements include information to decide the next steps in the form of decisions within an organisation. Financial statement analysis is necessary to carry out measurements. Financial statements, particularly the income statement, contain components that serve as benchmarks, namely profit. Performance measurement in an organisation can encompass various aspects, namely trends, customer satisfaction, environment, and profit. The second aspect of performance measurement is trends, which refer to movements over a specific period. For example, sales trends and sales growth trends. The third aspect of performance measurement is customer satisfaction. Customer satisfaction is assessed by assessing the extent to which the products or services provided meet the expectations and needs of the customers. Another measure is the environment, which is an environment focused on operational sustainability policies.

One aspect of performance measurement can be interpreted using profit. Profit is an important measurement; management performance is categorised as good when profits increase. Performance is considered poor when management is unable to generate profit, which is often referred to as a loss. Profit or loss is reflected in the financial statements presented over several periods. The reporting periods generally conducted by organisations are monthly and annual in companies listed on the Indonesia Stock Exchange (IDX). Parties interested in financial reporting can be categorised into two. The first party is for internal interests, and the second for external parties. The internal party has an interest in assessing the organisation's performance, which can indicate a decline or improvement. This is used as a benchmark for budgeting for the following year and the evaluation steps that need to be taken.

Meanwhile, for external parties, it is used by investors and creditors to assess the organisation's ability to generate profits using all the capital provided by the investors and creditors. Investors and creditors evaluate to obtain returns. Investors receive returns in the form of dividends, while creditors receive returns in the form of interest on the capital provided. The phenomenon occurring in 2024 for companies listed on the IDX is to pay attention to their liquidity and profitability levels. The basic materials sector, in particular, requires the development of organisational performance to be enhanced through profitability. For example, companies with good prospects include PT Semen Indonesia Tbk (SMGR) and PT Barito Pacific Tbk (BRPT). Good prospects in these companies instill confidence in investors to entrust their funds for investment. Additionally, good prospects attract creditors to pay attention to these companies.

Liquidity is the organisation's ability to pay off short-term debts fully, measured using the current ratio. The current ratio is the comparison between current assets and short-term liabilities. This ratio assesses the ability to pay off short-term debts if settled using current assets. Current assets are assets that can be easily converted into cash. A high ratio indicates a good CR because it can help increase the confidence of investors and creditors. In addition, it will also increase profitability (Sinta, Firza, and Loman, 2024).

Leverage is an analysis used to determine the capital structure. Leverage uses the Debt-to-Equity Ratio (DER). This ratio compares the debt with the equity owned by the organisation. The DER ratio is used by shareholders/investors to determine the level of debt usage against equity. It is a measure to analyse financial performance regarding the amount of funds provided by creditors (Kusnanto and Gulo, 2022).

Income tax expense is one of the important elements in costs. Income tax expense plays a role in an organization's profit (earnings). The higher the recorded income tax burden, the higher the profit amount. The income tax burden has a direct influence on income. Every year, income is taxed according to the applicable rates, based on the amount of revenue generated (Anggraeni and Arief, 2022). Therefore, profitability is an essential factor in assessing the performance of an organisation. Thus, in this research, the author chose the topic of profitability. The author titled the study "Analysis of the Influence of Liquidity, Income Tax Expense, and Leverage on Profitability".

LITERATURE REVIEW

Agency Theory

Based on the theory of Jensen and Meckling, agency theory is a theory that explains the relationship between the principal and another party in order to achieve goals. The principal is the party that



entrusts its assets/funds to another party, often referred to as the agent. The goal is for the party to provide the assets or funds to increase its prosperity. Prosperity is achieved through cooperation between both parties. The activity was established in the form of a contract so that management (the principal) could provide information and make various good decisions for the investor. In addition, the responsibility to the investor is to ensure a return (Jayne, 2010).

Profitability is a critical analysis used by investors. Profitability is the result of the principal's performance, which has been entrusted to manage funds from the agent. This theory relies on one party, namely the investor. Therefore, an independent report in the form of independent financial statements is required, which can be accessed through the Indonesia Stock Exchange (IDX) website.

Signalling Theory

Michael Spence developed signal theory, which explains how parties in an information-asymmetric relationship can send signals to reduce uncertainty. In the context of a company, management uses financial statements as a tool to convey information about the company's performance to stakeholders. The information conveyed includes historical data, the current condition, and the prospects of the company. Thus, the financial statements become an important signal regarding the condition and potential of the company. This signal allows investors, creditors, and other parties to assess the health and direction of the company more accurately. When the financial statements show positive results, this can be an indication that the company has good prospects ahead.

On the other hand, poor financial reports can serve as a warning for stakeholders to be cautious. Therefore, financial statements play a strategic role in the decision-making process for external parties. The signalling theory explains that transparency and clarity of information will help reduce uncertainty and increase stakeholder trust in the company (Subramanyam & Wild, 2010).

Profitability

Profitability is the ability of a company to generate profit from operational activities within a given period using its owned assets. Profitability is used to determine the ability to return assets after they have been used in activities. If profits increase, then the company can manage its assets effectively (Miswanto, Abdullah, and Suparti, 2017).

Profitability indicates how efficiently a company uses its resources. These resources are expected to generate revenue that exceeds all expenses. In this study, profitability is measured using the return on assets (ROA) ratio. Return on assets is the ratio of net profit to the total assets of the company. The profit used is the net profit after tax (Utami and Anggoro, 2022).

Liquidity

Liquidity is the ability of a company to meet its short-term obligations using current assets or assets that can easily be converted into cash. Liquidity is essential because it reflects the short-term financial health of a company. Current assets include cash, receivables, and inventory that can be used to pay debts in the near future. One of the most commonly used indicators to measure liquidity is the current ratio. This ratio is calculated by dividing total current assets by total current liabilities. If the ratio is more than 1, it means the company has enough current assets to cover its short-term liabilities. A ratio that is too low indicates a risk of default, while a ratio that is too high may indicate inefficient use of assets. This study uses the current ratio as the primary measurement tool to assess the company's liquidity. By using this ratio, the researcher can determine whether the company is in a healthy short-term financial condition or not (Supriyanto, Wardhani, Wulandari, & Kusumawati, 2010).

Income Tax Expense

Income tax expense is the obligation that the company must pay the government on the income earned during a specific period. Income tax expense is imposed according to the applicable rates based on tax laws. Based on the income tax burden, which consists of current and deferred tax expenses, it is regulated in Article 4 paragraphs (1) and (2) of the Income Tax Law (PPh) in Indonesia, which is part of the regulations regarding PPh Article 25 and PPh Article 29.

1. Current Tax Expense: Current tax expense relates to the amount of tax that must be paid for the current tax period based on the income earned and the applicable tax rate. This is usually recorded in the company's income statement.
2. Deferred Tax Expense: Deferred tax expense arises due to temporary differences between accounting profit and taxable income. In more detail, the regulations regarding deferred tax also refer to PSAK 46 on income tax, which governs the recognition, measurement, and presentation of current and deferred taxes. Income tax expense can be found in the company's income statement. Income tax expense can be calculated using the ratio of income tax expense to total revenue.

Leverage

Leverage is the company's ability to meet its long-term obligations using its owned assets. These assets generally come from two primary sources, namely equity and debt, which together are referred to as the capital structure. The capital structure reflects how the company finances its operations, whether it relies more on its funds or borrowed funds. One of the measures used to assess leverage is the Debt-to-Equity Ratio. DER shows the proportion of debt borne by the company compared to its equity. The higher the DER value, the greater the financial risk borne by the company because its debt burden is also higher. However, the wise use of debt can also provide benefits, as it can increase shareholder profits as long as the company is able to meet its obligations. Therefore, leverage analysis is essential to assess the company's financial stability and long-term risk (Nahak & Giri, 2023).

Hypothesis Development

The Effect of Liquidity on Profitability.

This study uses the current ratio—the ratio of comparison between current assets and current liabilities. High liquidity indicates the company has many current assets, such as cash and receivables. The causes of high liquidity are internal and external factors. One internal factor includes large sales, but the sales have not been allocated their funds for investment or expansion. External factors that can increase liquidity are when the economy grows, and the growth ends, increasing the amount of current assets in the form of cash (Miswanto, Christiana, et al., 2022).

High liquidity indicates that the company has a greater ability to meet short-term obligations. However, if liquidity is too high, it reflects inefficient use of resources or idle funds. Idle funds are not used for investment or expansion, so profit potential decreases and profitability decreases. Supported by the theory presented by Horne Wachowicz (2009), liquidity hurts profitability. The greater the funds in current assets to meet liquidity, the more it will affect profitability (Afrinda, 2015).

This study is in line with the agency theory that was discussed in the previous sub-chapter. In creditors who provide short-term debt. Creditors who offer trust and provide funds to improve their welfare from the profit. Related theories are also included in signal theory. The company provides information in the form of financial reports to interested parties, especially creditors and investors.

This research uses the current ratio as a tool to measure the company's liquidity, which is the ratio between current assets and current liabilities. This ratio reflects the company's ability to meet its short-term obligations. High liquidity indicates that the company has many current assets, such as cash and receivables. Factors causing high liquidity can stem from internal factors, such as high sales that have not yet been used for investment or expansion, or from external factors, such as economic growth that drives an increase in current assets. Although high liquidity reflects the company's ability to pay its debts, if it is too high, it actually indicates inefficient use of resources. Idle funds that are not used for business development can lead to a decrease in the company's profitability. This is in line with the opinion of Horne and Wachowicz (2009), which states that liquidity negatively affects profitability. The larger the funds tied up in current assets to maintain liquidity, the lower the profit



that can be generated (Afrinda, 2015). These findings are also relevant to agency theory and signalling theory, where companies provide information through financial statements to external parties such as creditors and investors as a form of accountability and transparency.

Previous research supporting this is Sinta, Firza, & Loman (2024) and Vidyasari, Mendra, & Saitri (2021), which positively affects profitability. Research conducted by Afrinda (2015) & Ekinanda (2020) has a significant negative influence on profitability. Then the first hypothesis can be formulated:

H1: Liquidity has a negative effect on profitability.

The Impact of Income Tax Expense on Profitability

The amount of Tax Expense can be obtained by comparing the components of income Tax Expense with total income. Income tax is a cost that affects the profit. greatprofit. The income Tax Expense the greater when the profit value; it will impact profitability. Increased profitability will affect the amount of tax according to the amount of increase in income (Anggraeni & Arief, 2022).

Theories related to this study are signal theory and agency theory; if the Tax Expense and income increase, then the current year's profit will increase. This company can give a signal to investors at the level of return, especially investors. Agency theory is related to the level of investor confidence in trusting the resources that have been provided to the company. Research conducted by Anggraeni & Arief (2022) found that income Tax Expense has a positive effect on profitability. The higher the Tax Expense, the greater the profit received. Another study conducted by Sitorus, Purba, & Budianto (2023) found that Tax Expense and income have a negative effect on profitability.

Income tax expense is a cost component that directly affects the company's profit value. The tax expense can be calculated by comparing the amount of tax paid with the total revenue of the company. High income tax generally indicates that the company generates significant revenue, leading to an increase in net profit. In this context, the tax burden becomes an indirect indicator of the company's profitability level. When profits increase, the tax obligations will automatically increase in accordance with the applicable tax regulations. This indicates a positive relationship between profit and income tax. The research by Anggraeni & Arief (2022) found that the greater the tax burden borne, the greater the profit obtained, indicating that the company is in good financial condition. This view supports the hypothesis that income tax expense has a positive effect on profitability. Therefore, the analysis of tax expenses becomes essential in assessing a company's financial performance.

From a theoretical perspective, this study is closely related to signalling theory and agency theory. In signalling theory, an increased tax burden can be a positive signal that the company has high revenues and profits, which can then attract investor interest. This signal reflects the potential for high returns on their investment. Meanwhile, agency theory explains how the relationship between managers as agents and investors as principals is influenced by trust and transparency of financial information. Investors who see an increase in profits and income tax tend to have higher trust in management's ability to manage the company's resources. However, not all studies find a positive relationship; Sitorus, Purba, & Budianto (2023) actually found that tax burden and revenue have a negative impact on profitability. These differing results indicate that the relationship between taxes and profitability is not always linear and can be influenced by other factors such as operational efficiency and cost structure. The second hypothesis is formulated as follows:

H2: Income Tax Expense has a positive effect on profitability.

The Effect of Leverage on Profitability

The subsequent hypothesis development is on leverage as an independent variable. The leverage variable is used to measure the level of a company's debt. The debt-to-equity ratio can measure leverage. The debt-to-equity ratio is the ratio used to determine the use of debt in operational activities. A large amount of debt can increase operational costs, such as raising interest expenses or other costs. The increase in these burdens has an impact on profitability. The higher the ratio of the trade, the lower the profitability (Qurays, Susyanti, & Rachmat, 2018).

This research is in line with signal theory and agency theory. This company can give a signal to investors on the next step after considering using this ratio. If the leverage level is high, it will provide investors a signal about the reliability of the condition and whether the use of funds from the creditor can be effective. This is because the debt is higher than the capital owned. Agency theory is related to the level of trust of investors and creditors to entrust the resources that have been given (Hendratno & Laela, 2019).

The development of the following hypothesis relates to the independent variable, namely, leverage. Leverage is measured using the debt-to-equity ratio (DER), which indicates the extent to which the company uses debt in its operational activities. This ratio becomes an important indicator for seeing the proportion of debt to the equity owned. The larger the amount of debt, the higher the operational costs that the company must bear, such as interest expenses and other costs. The increase in this burden can impact the company's profitability. Therefore, the higher the DER ratio, the more likely it is to decrease the level of profitability. In other words, excessive use of debt can become a burden if not balanced with efficient financial management. This research is in line with signaling theory and agency theory. In signaling theory, a high leverage ratio can signal to investors about the company's financial condition and the effectiveness of fund usage from creditors. If the company is able to manage its debt well, then the signal can be considered positive. However, if the debt is too large compared to the equity, then investors will consider the company to be in a risky condition.

Meanwhile, agency theory emphasizes the importance of trust between investors and management in the use of the resources provided. Several previous studies support this hypothesis, such as the research by Qurays, Susyanti, & Rachmat (2018) and Afrinda (2015), which found that leverage has a significantly positive effect on profitability. However, the study by Hendratno & Laela (2019) showed different results, indicating that leverage has a significantly negative effect on profitability. These differing results suggest that the impact of leverage on profitability highly depends on the context of debt management in each company.

Several previous studies have findings that can support this hypothesis. Research by Qurays, Susyanti, & Rachmat (2018) and Afrinda (2015) found that leverage has a significant positive influence on profitability. In Hendratno & Laela (2019), it has a significant negative influence on profitability. So the third hypothesis can be formulated as follows:

H3: Leverage has a negative effect on profitability.

METHOD

The method used in this study is part of quantitative research, and the financial reports were downloaded from the Indonesia Stock Exchange website. Pengujian penelitian ini menggunakan teknik analisis kuantitatif. Teknik analisis kuantitatif yaitu teknik yang menganalisis permasalahan dengan menggunakan bantuan angka. The financial reports analyzed in this study cover the years 2019 to 2023, which is five years. The total number of companies in the basic materials sector that were considered part of the population was 103. However, the sample size used in the study was 34 companies. Data is processed using a combination of time series data and panel data. The research method uses purposive sampling. The purposive sampling method is carried out by selecting based on specific criteria. Several requirements can be detailed as follows:

1. Companies in the basic materials sector are listed on the Indonesia Stock Exchange (IDX).
2. Companies that provide complete financial statements for 5 consecutive years from 2019 to 2023.
3. Companies whose financial condition is stable and not affected by other events (losses).

The research data in this test uses secondary data that has been documented. The documentation takes the form of financial statements reported periodically. The period used is the annual period.



The research model can be detailed as follows:

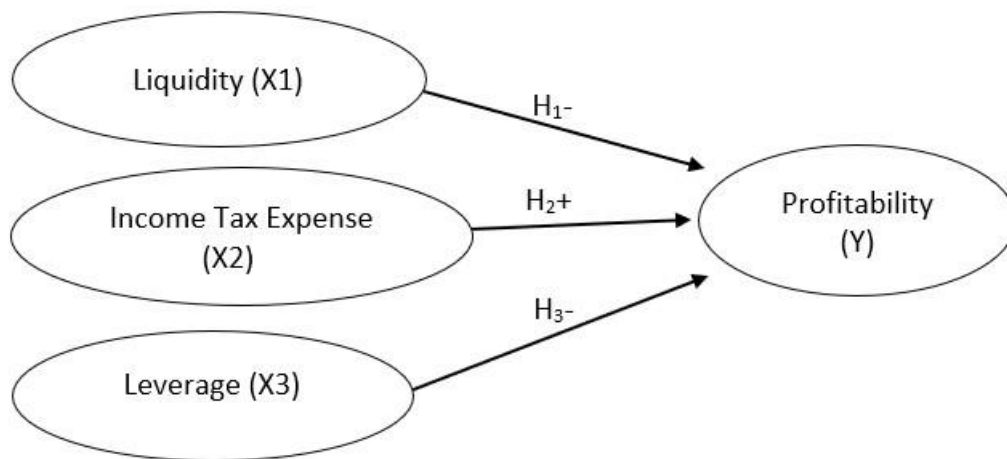


Figure 1. Research Model

RESULT

Descriptive Statistics

The results from the EViews test for the independent and dependent variables can be explained like this:

1. Profitability (Y) has the highest value of 0.170 and the lowest value of -0.050. The standard deviation is 0.015, the average is 0.0511, and the middle value, or median, is 0.0400.
2. Liquidity (X1), which is the current ratio, has the highest observation of 11.04 and the lowest of 0.68. The standard deviation is 2.33, the average is 3.04, and the median is 2.16.
3. Income tax burden (X2) has the smallest value of 0.000 and the largest of 0.06. The standard deviation is 0.015.
4. Leverage (X3) has the highest observation of 2.26 and the lowest of 0.09. The standard deviation for leverage is 0.48, and the average is 0.64. The middle value, or median, of this leverage variable is 0.51.

Classical Assumption Test

Table 1. Normality Test

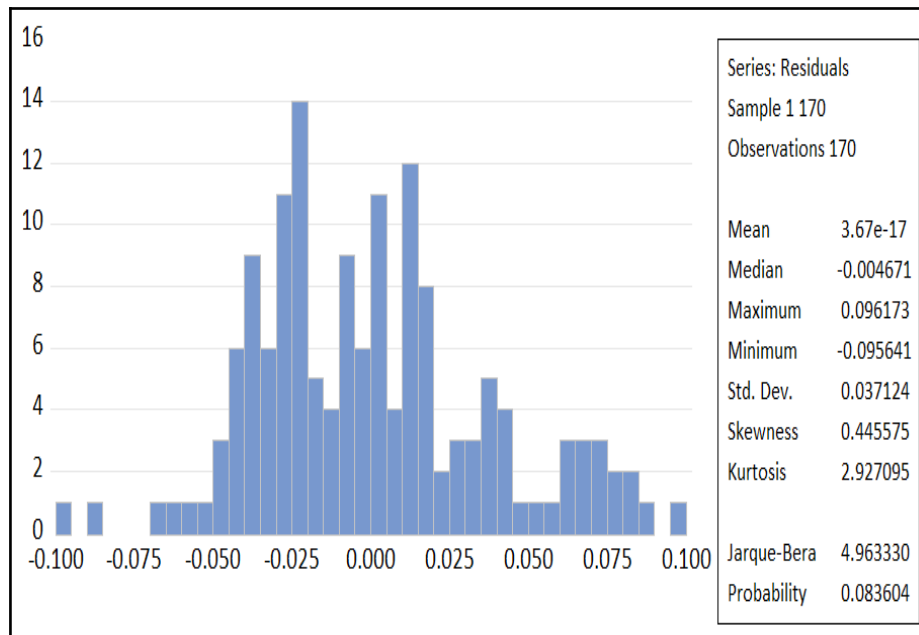


Table 1 presents the results of the normality test using the Jarque-Bera method. The probability value obtained from the test is 0.083604, which is equivalent to 8.36%. This value is compared to the commonly used significance level of 5% ($\alpha = 0.05$). Since the probability value is greater than 5%, it indicates that the residuals are normally distributed. In statistical analysis, a higher p-value than the significance level suggests that the null hypothesis cannot be rejected. The null hypothesis in this context assumes that the data follows a normal distribution. Therefore, based on the Jarque-Bera test result, it can be concluded that the data used in this study is normally distributed. This supports the validity of further regression analysis using this dataset.

Multicollinearity Test

The Variance Inflation Factor (VIF) test was conducted to detect the presence of multicollinearity among the independent variables. A commonly accepted rule of thumb is that VIF values should be less than 10 to indicate no serious multicollinearity. In this analysis, all VIF values fall well below that threshold. The VIF value for variable X1 is 1.095, which is clearly less than 10. Similarly, the VIF value for X2 is 1.071, also indicating no multicollinearity issue. The VIF for X3 is slightly higher at 1.158, but still comfortably below the critical value of 10. These values suggest that each independent variable contributes unique information to the model. In addition, the correlation coefficients between the independent variables are all below 0.8. Based on these results, it can be concluded that the model does not suffer from multicollinearity problems.

Heteroscedasticity Test

The EViews output displays a value of 0.849 or 84.9% under the Prob. Chi-Square (9) column, which is located next to the Obs*R-squared statistic. This value represents the probability associated with the Breusch-Pagan-Godfrey test for heteroscedasticity. A key threshold in interpreting this value is the significance level of 5% or 0.05. Since the probability value of 0.849 is significantly greater than 0.05, we fail to reject the null hypothesis of homoscedasticity. This indicates that the variance of the residuals is constant across observations. In other words, there is no substantial evidence to suggest the presence of heteroscedasticity in the model. A heteroscedasticity problem, if present, would indicate that the error terms vary systematically, which could bias standard errors and inference. However, in this case, the high p-value suggests that the model satisfies the assumption of homoscedasticity. Therefore, the regression results can be considered reliable in terms of variance consistency.

Test of Determination Coefficient



The determination coefficient test in this study shows that the adjusted R-squared value obtained from the EViews output is 0.6491. This value indicates that 64.91% of the profitability variable can be explained by the three independent variables used in the study, namely liquidity, income tax burden, and leverage. In other words, most of the changes or variations in profitability can be explained by the combination of these three variables. This value falls into the strong category, meaning that the regression model used has a reasonably good ability to explain the relationship between the variables studied. These results indicate that the influence of liquidity, tax burden, and leverage on profitability is indeed statistically significant. This reinforces the importance of these three factors in assessing and managing the company's financial performance.

Meanwhile, the remaining 35.09% of the profitability variation is explained by other variables not included in this research model. These variables could stem from internal factors such as operational efficiency, cost management, or marketing strategies, as well as external factors like macroeconomic conditions, government policies, and market competition. This shows that a company's profitability is not only influenced by liquidity, taxes, and leverage, but also by various other interrelated factors. Therefore, to obtain a more comprehensive picture of what influences profitability, future research can add other variables to the model. Thus, the financial analysis will become more comprehensive and can provide more accurate recommendations for managerial decision-making. In conclusion, although this model is already quite robust, there is still room for improvement in the future.

F-Test

The F-test in this study yielded a probability value of 0.000, which is smaller than the 5% significance level ($\alpha = 0.05$). This value indicates that the regression model used is simultaneously significant, meaning that all independent variables in the model—namely liquidity, income tax burden, and leverage—together influence the dependent variable, which is profitability. In other words, these three variables collectively explain the changes occurring in the company's profitability. These results provide evidence that the regression model used is relevant and worthy of further analysis. The smaller the significance value, the more substantial the proof that the independent variables truly affect the dependent variable. In the context of decision-making, the results of this F-test are essential because they show that not just one but all independent variables in the model need to be considered in managing and improving the company's profitability. This also indicates that financial managers or management need to consider liquidity, tax strategies, and debt management in an integrated manner. If only one aspect is considered and the others are neglected, then efforts to improve profitability may not proceed optimally. Therefore, the results of the F-test provide a strong foundation that a holistic and comprehensive approach to various financial factors is essential in managerial practice. With this understanding, the company can design more effective and sustainable financial policies and strategies.

T-test

Before conducting the T-test, the first step that needs to be taken is to determine the most suitable regression model to be used in the analysis. There are three types of commonly used panel regression models, namely the common effect model, fixed effect model, and random effect model. Each model has different characteristics and uses depending on the data and the purpose of the analysis. Two types

of tests are used to choose the most appropriate model, namely the Chow test and the Hausman test. The Chow test is used to compare the common effect and fixed effect, while the Hausman test is used to determine whether the fixed effect or random effect model is more suitable. Choosing the right model is very important so that the analysis results are more accurate and can be interpreted well. After the model is determined, the T-test is conducted to see the influence of each independent variable on the dependent variable. This process ensures that the analysis is performed based on a correct and accountable statistical approach.

Table 2. T-Test Model Common Effect

Dependent Variable: ROA
Method: Panel Least Squares
Date: 12/28/24 Time: 08:42
Sample: 2019 2023
Periods included: 5
Cross-sections included: 34
Total panel (balanced) observations: 170

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.050178	0.008679	5.781766	0.0000
CR	-0.000443	0.001079	-0.410391	0.6820
TAX	0.732570	0.214939	3.408279	0.0008
DER	-0.017886	0.004701	-3.804573	0.0002
R-squared	0.175813	Mean dependent var	0.050765	
Adjusted R-squared	0.160918	S.D. dependent var	0.049195	
S.E. of regression	0.045063	Akaike info criterion	-3.338259	
Sum squared resid	0.337093	Schwarz criterion	-3.264476	
Log likelihood	287.7520	Hannan-Quinn criter.	-3.308319	
F-statistic	11.80355	Durbin-Watson stat	0.659562	
Prob(F-statistic)	0.000000			

Test results using the EViews T-test with the common effect (CE) model produce a constant of 0.0502. The level of probability significance across all independent variables is above the significance level of 5%. The probability level of variable X1 is 0.6820 or 68.20%, variable X2 is 0.0008 or 0.08%, and variable X3 is 0.0002 or 0.02%. In the T-test of the common effect model, the liquidity variable does not have a significant effect on profitability. The liquidity variable has a negative direction, the income tax expense variable has a positive direction, and leverage has a negative direction.

The test results using the EViews T-test with the Fixed Effect (FE) model produced a constant of 0.0498. In the independent variables, the coefficients have positive and negative directions. Liquidity and leverage variables have negative directions. The income tax burden has a positive direction. The significance level for variable X1 is 0.9181, which means it's not statistically significant. Both X2 and X3 have a significance level of 0.0000, meaning they are highly significant. In the T-test for the Fixed Effect model, the liquidity variable does not have a significant impact on profitability. However, income tax burden and leverage do have a significant effect on profitability.

Table 3. Model T Test Fixed Effect



Dependent Variable: ROA
 Method: Panel Least Squares
 Date: 12/28/24 Time: 08:41
 Sample: 2019 2023
 Periods included: 5
 Cross-sections included: 34
 Total panel (balanced) observations: 170

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.049795	0.009766	5.098605	0.0000
CR	-0.000126	0.001220	-0.103044	0.9181
TAX	1.291589	0.216796	5.957618	0.0000
DER	-0.034421	0.007058	-4.876535	0.0000

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.723859	Mean dependent var	0.050765
Adjusted R-squared	0.649113	S.D. dependent var	0.049195
S.E. of regression	0.029141	Akaike info criterion	-4.043508
Sum squared resid	0.112942	Schwarz criterion	-3.361011
Log likelihood	380.6982	Hannan-Quinn criter.	-3.766558
F-statistic	9.684365	Durbin-Watson stat	1.842974
Prob(F-statistic)	0.000000		

Table 4. T-Test of Random Effect Model

Dependent Variable: ROA				
Method: Panel EGLS (Cross-section random effects)				
Date: 12/28/24 Time: 08:43				
Sample: 2019 2023				
Periods included: 5				
Cross-sections included: 34				
Total panel (balanced) observations: 170				
Swamy and Arora estimator of component variances				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.047533	0.010382	4.578607	0.0000
CR	-0.000477	0.001081	-0.441001	0.6598
TAX	1.166884	0.198952	5.865146	0.0000
DER	-0.026534	0.005615	-4.725716	0.0000
Effects Specification				
			S.D.	Rho
Cross-section random			0.034338	0.5813
Idiosyncratic random			0.029141	0.4187
Weighted Statistics				
R-squared	0.309270	Mean dependent var		0.018013
Adjusted R-squared	0.296787	S.D. dependent var		0.035296
S.E. of regression	0.029599	Sum squared resid		0.145430
F-statistic	24.77514	Durbin-Watson stat		1.433450
Prob(F-statistic)	0.000000			
Unweighted Statistics				
R-squared	0.124421	Mean dependent var		0.050765
Sum squared resid	0.358112	Durbin-Watson stat		0.582127

The Random Effect model shows a constant of 0.0475. Among the independent variables, some have positive effects and others have negative effects. Both the liquidity and income tax burden variables have negative effects. Leverage also has a negative impact. The probability of significance for variable X1 is 65.98%, which means it is not significant. Variables X2 and X3 have a probability of 0.00%, meaning they are significant. In the T-test for the Random Effect model, liquidity does not significantly affect profitability. However, income tax burden and leverage do have a significant effect on profitability.

Table 5. Chow Test



Redundant Fixed Effects Tests

Equation: Untitled

Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	7.998756	(33,133)	0.0000
Cross-section Chi-square	185.892240	33	0.0000

Cross-section fixed effects test equation:

Dependent Variable: ROA

Method: Panel Least Squares

Date: 12/28/24 Time: 09:23

Sample: 2019 2023

Periods included: 5

Cross-sections included: 34

Total panel (balanced) observations: 170

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.050178	0.008679	5.781766	0.0000
CR	-0.000443	0.001079	-0.410391	0.6820
TAX	0.732570	0.214939	3.408279	0.0008
DER	-0.017886	0.004701	-3.804573	0.0002

R-squared0.175813

Adjusted R-squared0.160918

S.E. of regression0.045063

Sum squared resid0.337093

Log likelihood287.7520

F-statistic11.80355

Prob(F-statistic)0.000000

Mean dependent var0.050765

S.D. dependent var0.049195

Akaike info criterion-3.338259

Schwarz criterion-3.264476

Hannan-Quinn criter.-3.308319

Durbin-Watson stat0.659562

The probability cross-section F value produces a value of 0.000. The probability cross-section F value is less than 5%. So, the decision was to use the fixed effect model approach. The second selection test is the Hausman test. The Hausman test is carried out to compare which model estimate is the best between the Fixed Effect and Random Effect model estimates.

Hausman Test

The Hausman Test was conducted to determine the most appropriate panel data model. The test produced a probability value of 0.0410 for the cross-section random effect. This value is less than the standard significance level of 5% ($\alpha = 0.05$). Since the p-value is below the threshold, the null hypothesis, which suggests that the Random Effect model is appropriate, is rejected. Consequently, the Fixed Effect (FE) model is considered more suitable for this study. In addition to the Hausman Test, the Chow Test was also performed to support model selection. The results of the Chow Test

similarly pointed to the Fixed Effect model as the better choice. Based on the outcomes of both the Hausman and Chow Tests, the Fixed Effect model was consistently favored. Therefore, this study proceeds using the Fixed Effect model approach for further analysis.

So that a multiple linear regression model can be compiled as follows:

$$ROA = 0,049795 - 0,000126CR + 1,291589TAX - 0,034421DER + ei$$

Information:

Y = Profitability

X 1 = Liquidity

X 2 = Income Tax Expense

X 3 = Leverage

ei = Other variables that are not researched

DISCUSSION

The Effect of Liquidity on Profitability

The first hypothesis in this study shows significant results with a value of 91.81% based on the output from EViews. The t-test results indicate that the probability value is greater than the 5% significance level ($H1 > \alpha$). This means that the null hypothesis, which states that liquidity does not affect profitability, is rejected. Thus, liquidity and profitability are influenced, although the impact is negative. The negative regression coefficient indicates that the higher the liquidity, the more profitability tends to decrease. This finding is in line with previous research by Afrinda (2015) and Ekinanda (2020), which concluded that liquidity has a negative impact on profitability. This indicates that excess current assets, such as cash or receivables, do not always provide maximum benefits for the company. Funds that are not immediately utilized can become a burden because they do not generate additional income. Liquidity itself is the company's ability to meet short-term obligations, such as paying trade debts or daily operational expenses. Profitability reflects the company's ability to generate profit from its primary activities.

In practice, a company with very high liquidity does not necessarily have high profitability as well. This can happen because funds stored in the form of current assets are not used for productive activities such as investment or business expansion. Idle assets do not directly contribute to the increase in revenue or profit. Therefore, having excessive liquidity can actually reduce the financial efficiency of the company. This condition highlights the importance of management in maintaining a balance between liquidity and the use of funds to generate profits. With proper financial planning, the company can maximize liquid funds to drive growth. Although companies need to maintain a level of liquidity to meet their obligations on time, focusing too much on this without a clear investment strategy can have negative consequences. Some companies maintain high liquidity as a form of caution against future risks. However, if this strategy is implemented excessively, the company loses the opportunity to grow assets and increase profits. The decision to hold too much cash often overlooks investment opportunities that could provide higher returns. Therefore, it is essential for management not only to focus on short-term stability but also to consider long-term growth. In this context, the efficiency of fund usage becomes a key factor in increasing profitability. Good liquidity management does not mean hoarding cash but instead using funds appropriately. With that balance, the company can maintain financial health while also increasing profits.

The Impact of Income Tax Expense on Profitability

The second hypothesis in this study yielded a significance value of 0.00, which means $H2 < \alpha$ or less than the 5% significance level. Based on these results, the decision made is to accept the hypothesis that the income tax burden affects the company's profitability. These results indicate that there is a positive and significant relationship between the tax burden and the level of profitability. The positive regression coefficient (B) indicates that the higher the tax burden borne by the company, the higher its profitability. This means that companies that pay a large amount of taxes also tend to earn a significant profit. This research is supported by the findings of the study by Anggraeni & Arief (2022), which shows a similar relationship, namely a positive and significant influence between tax burden and profitability. The similarity of these results indicates that the trend can be consistently



observed in different research contexts. Therefore, the tax burden can serve as an indirect indicator of a company's financial performance.

High taxes can signal that a company is in good condition and generating significant revenue. Income tax is a cost component that a company pays to the government based on its profits. This tax is proportional to profits, so the higher the profit, the higher the tax payable. When a company's revenue increases, net profit automatically increases. This increase in profit will directly impact the company's tax burden. Therefore, the tax burden reflects the company's financial performance and success in generating revenue. Although taxes are an expense, high taxes can actually indicate that the company is capable of generating significant profits. In this case, the company is not disadvantaged by high taxes because they are proportional to the increase in profits. A high tax burden indicates that the company operates on a large scale and efficiently. Therefore, this can be interpreted as a reflection of high profitability. In addition, the high tax burden can also be viewed theoretically as a positive signal for investors.

From the perspective of signaling theory, companies that pay high taxes demonstrate transparency and strength in generating profits. Investors will assess that the company has good performance and is capable of surviving in the business competition. This also supports investors' confidence that the funds they have invested are being managed well and generating profits. On the other hand, agency theory is also relevant in explaining this relationship, as managers, acting as agents, are responsible for optimally managing the capital owners' funds. When management is able to generate high profits that result in high tax burdens, the trust relationship between the agent and the principal will become even stronger. Thus, information about the tax burden can be used as a communication tool between the company and its stakeholders. In the long term, this can enhance the company's reputation and value in the eyes of the public. Tax burden is not just an obligation but also a form of responsibility and proof of operational success. However, not all studies yield uniform findings regarding the relationship between taxes and profitability. Some previous studies have shown different results, including findings that indicated a negative or insignificant impact. Various factors, such as industry characteristics, company size, and financial management strategies, could cause these differences. Therefore, the results of this research need to be viewed contextually according to the conditions of the company being studied. In some instances, a high tax burden can become a financial burden if the company is unable to manage its revenue efficiently. However, when management can balance income, expenses, and tax obligations, the result will actually increase profitability. Therefore, the managerial role is significant in ensuring that the tax burden does not become a burden but rather an indicator of success. In the future, similar research can be conducted by considering additional variables so that the relationship between taxes and profitability can be analyzed more deeply. With this approach, companies can make tax management a part of their financial performance improvement strategy.

The Effect of Leverage on Profitability

The third hypothesis in this study yielded a probability significance value from the EViews results of 0.00% ($H3 < \alpha$). This value indicates that the hypothesis is accepted, meaning there is a significant influence between leverage and profitability. In this case, leverage negatively impacts company profitability. The negative regression coefficient (B) indicates that higher leverage tends to decrease profitability. This finding is supported by research by Hendratno & Laela (2019), which also found

that leverage has a significant and negative influence on profitability. Therefore, using large amounts of debt does not always benefit a company in terms of profit. Although debt can increase working capital, if not managed efficiently, it can actually become a burden. Therefore, companies need to align the amount of debt with their operational capabilities.

High leverage means a company uses a lot of borrowed funds in its capital structure. After obtaining funds from creditors, the company uses them to finance various operational activities. However, the use of large amounts of funds often leads to a significant increase in operational costs. Examples of these operational costs include rent, raw material purchases, employee salaries, and loan interest costs. This increase in costs will put pressure on the company's net profit margin. Consequently, net profit declines and directly impacts profitability. In the long term, this condition can worsen a company's financial health if not addressed promptly. Therefore, although leverage can increase working capital, its risks to profitability must also be considered. The negative relationship between leverage and profitability suggests that companies need to be cautious when making debt financing decisions. Excessive reliance on debt can burden the company with fixed obligations such as interest and principal payments. If the company's revenues are unable to cover these expenses, financial performance will suffer.

Furthermore, in unstable economic conditions, companies with high leverage are at risk of liquidity pressures. Therefore, a balanced capital structure between debt and equity is crucial for maintaining stable profitability. Companies should align their financing strategies with their production capacity and revenue potential. With careful financial planning, companies can minimize the risks of high leverage. The goal is to maintain healthy and sustainable growth.

Theoretically, this finding can be explained through agency theory and signaling theory. From an agency theory perspective, high debt use can create conflict between managers and capital owners due to high financial risk. Meanwhile, according to signaling theory, high leverage can send a negative signal to investors regarding a company's ability to manage debt. Investors will consider the potential risks arising from a significant debt burden before making investment decisions. Therefore, information regarding a company's leverage level is crucial in assessing its stability and future profit prospects. If a company is able to manage its debt effectively, leverage can be a growth driver. However, if not handled carefully, leverage can actually be a significant cause of declining profitability. Therefore, a balanced financial strategy and information transparency are essential. This allows investors and creditors to objectively understand the company's financial condition and make informed decisions.

CONCLUSION

The study used panel data from 103 companies over 5 years, from 2019 to 2023. Purposive sampling was used to ensure the sample matched a size of 170. The data combined time series and panel data. Observational research and model estimation showed that liquidity does not affect profitability and has a negative impact. The income tax burden has a strong positive effect on profitability. Leverage has a strong negative impact on profitability.

Relevance of Results

In this study, the relevant results can be detailed as follows:

1. The relevance of these results helps financial managers make strategic decisions to manage the company's financial resources.
2. High liquidity indicates an accumulation of unproductive assets.
3. Financial managers can plan tax strategies.
4. The relevance of the results helps financial managers determine the optimal level of leverage. High leverage can increase the risk of default. While low leverage can indicate a heavy dependence on equity.

Implications of Results

1. Theoretical: The theory that is used as a reference is supported because the significant variables apply to liquidity and leverage.



2. Practical (reference research): For practitioners, this research can be used as a reference for financial managers' decision-making in increasing profitability. So that profitability can be improved through income tax burden and leverage.

Limitations and Suggestions

After this research was completed, the limitations and suggestions that can be built and developed in future research are as follows:

1. This study tests the independent variables of liquidity, income tax burden, and leverage; further research is expected to use other variables that have a significant influence.
2. This study uses the latest phenomena in 2024; further research can be done using the latest phenomena in the following year regarding the sectors listed on the Indonesia Stock Exchange (IDX).

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