

# The Effect of Liquidity, Solvency, Profitability, and Operational Costs on Corporate Income Tax in Various Industrial Sector Companies Listed on the Indonesia Stock Exchange for the 2017-2021 Period

Sri Sapto Darmawati<sup>1</sup>, Rosa Rosi Ana Aprogita<sup>2</sup>, Ira Phajar Lestari<sup>3</sup>, Bertilia Lina Kusrina<sup>4</sup>, Sudaryono<sup>5</sup>

<sup>1,2,3,4,5</sup>Universitas Gunadarma, Indonesia

Email: [srisaptod@gmail.com](mailto:srisaptod@gmail.com)

## Abstract

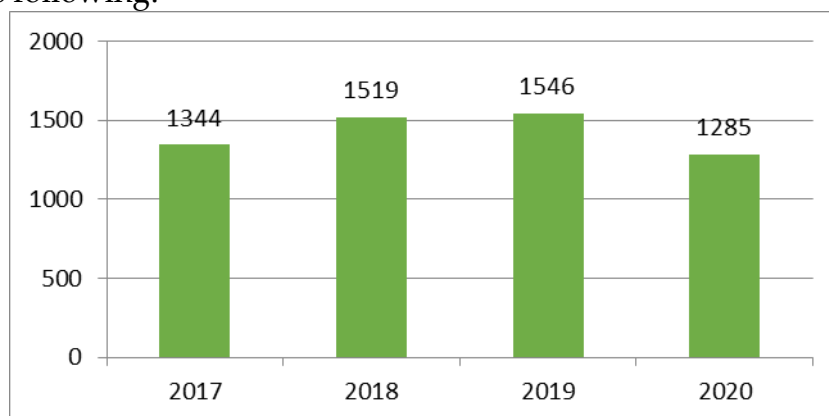
Taxes are a source of state revenue for long-term development financing activities and regulates economic growth. One of the biggest sources of tax revenue is income tax. This study aims to examine and analyze the effect of liquidity, solvency, profitability and operating costs on corporate income tax. This study uses secondary data in the form of annual reports of various industrial sector companies listed on the Indonesia Stock Exchange for the 2017-2021 period. The number of samples used were 6 companies obtained through purposive sampling method. The results showed that partially liquidity, solvency and operational costs have an effect on corporate income tax while profitability has no effect on corporate income tax. The results of the study simultaneously show that liquidity, solvency, profitability and operational costs have an effect on corporate income tax.

*Keywords: Liquidity, Solvency, Profitability, Operating Costs and Corporate Income Tax.*

## A. INTRODUCTION

Growth very developed economy push government for increase originating state revenue from tax. One effort made with pick up tax income on profit earned \_ Good for private persons nor body. Besides that, tax hold role important and giving contribution for development a country, therefore That tax contributions are needed (Aditya, 2019). This used for increase level people's welfare.

Tax revenue data according to financial statements ministry finance can seen in graph 1 as following:



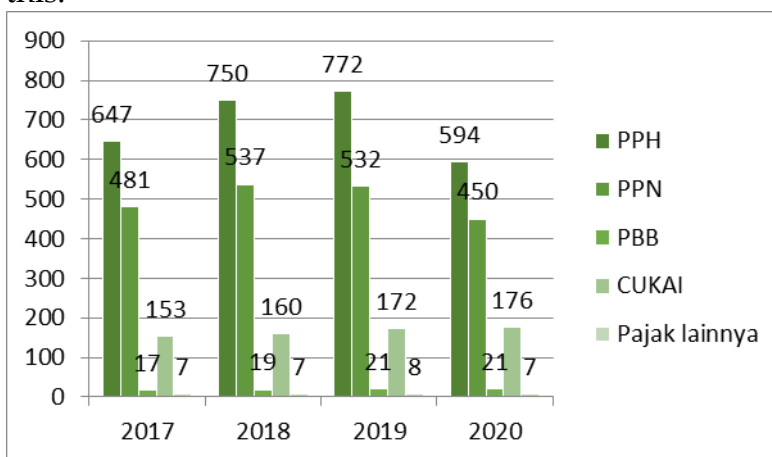
**Graph 1 Tax Revenue (In trillion rupiah)**

Source: Ministry of Finance

Graph 1 presents tax revenue data in 2017 which reached IDR 1,343,529,642,786,441. Then in 2018 and 2019 tax revenues increased by 13% and 2%, respectively, to Rp. 1,518,791,948,865,511 and Rp. 1,546,134,751,863,724. In 2020 tax revenues decreased by 17% to Rp. 1,285,145,085,848,461. The tax reduction was due to the Covid-19 pandemic that has occurred in Indonesia. The COVID-19 pandemic has resulted in a slowdown in national economic growth, a decrease in state revenues, an increase in state spending, and financing as well as a worsening of the state financial system.

The reduction in taxes caused by the Covid-19 pandemic the government immediately took a policy to guard stability economy with publish Government Regulation in Lieu of Law Number 1 of 2020 concerning State Financial Policies and Financial System Stability for Handling the Corona Virus Disease (COVID-19) Pandemic and/or in the Context of Dealing with Threats that Endanger the National Economy and/or Financial System Stability, which is then stipulated in Law Number 2 of 2020. With publication laws the expected can sustain various sector crazed industry impact of the covid-19 pandemic. Besides that, government also give relief rates tax namely the adjustment of the Corporate Income Tax rate from 25% to 22% for the 2020 and 2021 tax years, and to 20% starting from the 2022 tax year. Furthermore, on the law Number 7 of 2021 concerning Harmonization of Tax Regulations that the Corporate Income Tax rate for 2022 and so on remains at 22%.

According to report Ministry Finance about details reception tax can seen in graph 2 below this:



**Graph 2 Details of Tax Revenue Per Type of Revenue (in Trillion Rupiah)**

(Source: Ministry of Finance)

Based on chart 2 can stated that tax income own, more value big compared to tax others, p This Because tax income is tax imposed on an income received by each Taxpayers, both from within the country and from abroad. The company's contribution and efficiency in paying taxes can be seen in its financial performance company. Financial performance appraisal can help company in taking decision. Analysis ratio finance can used for analyzing financial reports. With do financial ratio analysis can know influence to tax corporate income.

Liquidity ratio shows internal company capabilities meet its short-term obligations. Ratio fluent used for measure level liquidity. Ratio fluent counted calculated by information working capital i.e accounts current assets and current liabilities (Harahap, 2019) through comparison between lance assets. Research conducted by Dyah & Nik Amah (2019) states that there is an effect of liquidity on corporate income tax. Meanwhile, the research by Risandi and Mira (2021) states that liquidity does not affect corporate income tax payable.

The solvency ratio is the ratio that shows the company's ability to pay its obligations. This ratio can be calculated from assets that are period such as fixed assets and long-term debt (Harahap, 2019). Research by Dina & Yunita (2020) states that solvency affects corporate income tax payable. Whereas Chairul & Lustyna (2018) in his research states that there is a positive influence but no significant.

Profitability ratios show the company's ability to earn profits through all capabilities and the resources they have for produce profit (Harahap, (2019). Renanda's research (2019) states that profitability has an effect on corporate income tax payable. Meanwhile, research by Edisah & Ade (2021) states that profitability has no effect on corporate income tax.

Operational costs are costs that indicate the level of efficiency of business management. Cost operational related with activity operations carried out company such as selling costs and administrative costs (Wardiyah, 2017). Because, that cost low operational showing that management cost the Already efficient. Ernadhi & Haqi's research (2018) states that operational costs have a positive influence on income tax burden. Research by Andres & Lorina (2021) states that operational costs have no significant effect on corporate income tax.

The purpose of this research is to analyze the effect of liquidity, solvency, profitability, and operational costs on corporate income tax in various industrial sector companies listed on the Indonesia Stock Exchange for the 2017-2021 Period

## **B. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT**

### **1. Ratio Liquidity**

According to Harahap (2019), the liquidity ratio is ratio that describes the company's ability to settle its short-term obligations. These ratios can be calculated through sources of information about working capital, namely current assets and current liabilities. In other words, ratio useful for measure ability company in fulfil obligation period in short good obligations on the parties external or within the company.

The current ratio *is* a ratio that shows the extent to which current assets cover current liabilities. If the comparison between current assets with increasing current liabilities big, then the higher the company's ability to meet its short-term obligations. In other words, the company owns level high liquidity can said company cash in condition well, so expected can fulfil obligation the taxation.

## 2. Ratio Solvability

According to Harahap (2019) the solvency ratio is a ratio that describes a company's ability to pay its long-term obligations or obligations if the company is liquidated. The ratio of debt to equity (*Debt to equity ratio*) is a ratio that describes the extent to which capital can cover its obligations to outsiders. In other words, the amount of debt incurred company compared with owned capital. The more-high debt so obligatory obligations paid as well big. company will burdened with cost flowers and trees a must loan paid. There is a load flower the will reduce profit resulting company amount burden tax become reduced.

## 3. Ratio Profitability

According to Harahap (2019) profitability ratio is ratio describes the capabilities of the company in generate profits through all capabilities and resources owned in the form of sales activities, cash, capital, number of employees, number of branches, and others. Yield results on assets (*Return on Assets*) is a ratio that shows how much net profit is earned as measured by the total asset company. (Harahap, 2019). Ratio This is comparison between profit clean with total assets. If ratio This tall so condition finance company can said the more ok.

## 4. Operating costs

According to Jumingan (2017) Business/Operational costs arise in connection with the sale or marketing of goods or services and the implementation of administrative and general functions of the company concerned. Cost operational is possible costs made as deduction profit dirty.

## 5. Corporate Income Tax

According to the Official Siti (2017), Income Tax is a tax imposed on a tax subject for income received or earned in a tax year. Corporate income tax is calculated based on provision taxation through reconciliation fiscal.

## 6. Effect of Liquidity on Corporate Income Tax

The liquidity ratio describes a company's ability to settle its short-term obligations. High liquidity indicates that the company is able to meet obligations short-term. It means condition finance company in circumstances healthy so they can bear the costs incurred like tax. Research by Dyah and Nik Amah (2019) states that there is an effect of liquidity on corporate income tax.

H<sub>1</sub>: Effect of liquidity on corporate income tax

## 7. Effect of solvency on corporate income tax

Solvability describes the company's ability to pay its obligations. This ratio relates to the company's liabilities. If the company has a loan then the company will imposed with interest costs while interest is included as a deduction in the calculation

of income tax. Research by Dina and Yunita (2020) states that solvency has a significant effect on corporate income tax payable.

H<sub>2</sub>: Effect of solvency on corporate income tax

#### **8. Effect of profitability on corporate income tax**

Profitability describes the company's ability to earn profits. High profitability can indicate the company's efficiency in income tax. Renanda's research (2019) states that profitability has a positive simultaneous positive significant level of corporate income tax payable.

H<sub>3</sub>: Effect of profitability on corporate income tax

#### **9. Effect of operational costs on corporate income tax**

Operational costs show the extent to which the efficiency of business management. Operational costs include among other things cost sales, administrative costs associated with the operations performed (Mia Lasmi Wardiyah, 2017). These operational costs are related to corporate income tax because they are related to good business activities in a manner direct nor no direct is a deduction from income tax. Muchammad, Ernadhi and Haqi's research (2018) states that operational costs have a positive influence on income tax burden.

H<sub>4</sub>: Effect of operational costs on corporate income tax

### **C. METHOD**

The type of data used in this research is secondary data obtained indirectly from the company's annual report and the financial statements of the ministry of finance. The data source used in this study came from the company's official website in the form of the company's annual report, the Indonesian Stock Exchange (IDX) website, then through the official website of the ministry of finance in the form of tax revenue data.

Population in study is a multi-industrial sector company listed on the Indonesia Stock Exchange (IDX) for the 2017-2021 period. Election sample study using purposive sampling in order to obtain as many as 6 companies namely PT. Astra International, Tbk., PT. Indospring, Tbk., PT. Multi Prima Sejahtera, Tbk., PT. Supreme Calbe Manufacturing & Commerce, Tbk., PT. Selamat Sempurna, Tbk., and PT. Unicharm Indonesia, Tbk. This study used multiple linear regression analysis and data processing using SPSS software version 26.

### **D. RESULTS AND DISCUSSION**

#### **1. Descriptive Statistical Analysis**

Descriptive statistical analysis shows the minimum, maximum, average and standard deviation values. The following table shows the results of the descriptive statistical analysis:

**Table 2 Descriptive Statistical Test Results**

Descriptive Statistics					
	N	Minimum	Maximum	Means	std. Deviation
Liquidity	30	1.15	13.04	4.1243	2.80294
Solvability	30	.07	1.71	.4623	.43202
Profitability	30	.02	.72	.1030	.13142
Operating costs	30	3.00	10.15	6.2030	2.18045
Corporate Income Tax	30	.00	8.94	4.5160	2.44517
Valid N (listwise)	30				

Source: processed data (2022)

Table 2 shows the results of the descriptive statistical test which states that the total data (N) or the total sample size is 30 data for 5 years, namely the period 2017 to 2021. The liquidity variable has a minimum value, namely 1.15, the maximum value is 13.04, the average value is 4.1243 and the standard deviation value is 2.80294. The solvency variable has a minimum value of 0.07, a maximum value of 1.71, an average value of 0.4623 and a standard deviation value of 0.43202. The profitability variable has a minimum value of 0.02, a maximum value of 0.72, an average value of 0.1030 and a standard deviation value of 0.13142. The operational cost variable has a minimum value of 3.00, a maximum value of 10.15, an average value of 6.2030 and a standard deviation value of 2.18045. The corporate income tax variable has a minimum value of 0.00, a maximum value of 8.94, an average value of 4.5160 and a standard deviation value of 2.44517.

**2. Classic Assumption Test**

a. Normality Test

The test method uses the Kolmogorov-Smirnov (KS) test. The following are the results of the normality test using this method.

**Table 3 Kolmogorov–Smirnov (KS) Results**

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residuals
N		30
Normal Parameters <sup>a,b</sup>	Means	.0000000
	std. Deviation	.46760278
Most Extreme Differences	absolute	.077
	Positive	.076
	Negative	-.077
Test Statistics		.077
asymp. Sig. (2-tailed)		.200 <sup>c,d</sup>

a. Test distribution is Normal.  
 b. Calculated from data.  
 c. Lilliefors Significance Correction.  
 d. This is a lower bound of the true significance.

Source: processed data (2022)

Based on table 3 the results of the normality test using the Kolmogorov – Smirnov (KS) test show Asymp. Sig (2-tailed) of 0.200 so can said that the residuals are normally distributed.

b. Multicollinearity Test

The following are the results of the multicollinearity test that has been processed in this study:

**Table 4 Multicollinearity Test Results**

Model		Collinearity Statistics	
		tolerance	VIF
1	(Constant)		
	Liquidity	.335	2,989
	Solvability	.466	2.144
	Profitability	.875	1.142
	Operating costs	.329	3,043

Source: processed data (2022)

Based on Table 4 the multicollinearity test results show a *tolerance value* of >0.10 and the VIF value < 10 so that it can be stated that there is no multicollinearity between the independent variables in the regression model.

c. Autocorrelation Test

The test method used is the Durbin-Watson test, if the DW value is between -2 and +2 or  $-2 < DW < +2$  then there is no autocorrelation. The following are the results of the autocorrelation test presented in table 5.

**Table 5 Autocorrelation Test Results**

Model	R	R Square	Summary Model <sup>b</sup>		
			Adjusted R Square	std. Error of the Estimate	Durbin-Watson
1	.982 <sup>a</sup>	.963	.958	.50362	.746

a. Predictors: (Constant), Operating Costs, Profitability, Solvency, Liquidity

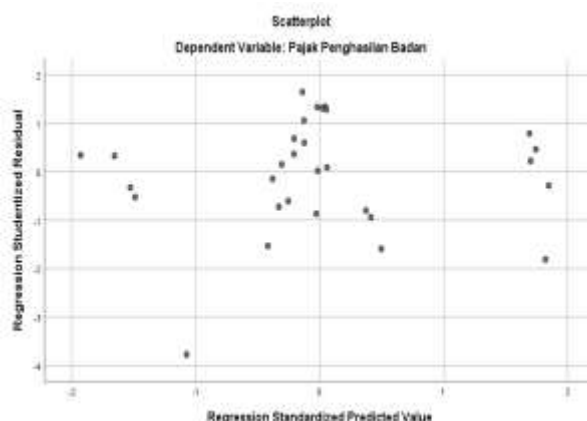
b. Dependent Variable: Corporate Income Tax

Source: processed data (2022)

Based on Table 5, the autocorrelation test results obtained a Durbin-Watson value of 0.746, this value is between (-2) to (+2). According to the provisions if the DW value is between -2 and +2 or  $-2 < DW < +2$  then there is no autocorrelation so that the value of 0.746 has no problem autocorrelation.

d. Heteroscedasticity Test

testing was carried out using scatterplot graphical analysis between ZPRED and SRESID, namely by looking at whether there is a certain pattern depicted on the graph. Following are the results of the Heteroscedasticity test which are presented in Figure 2.



**Figure 2 Heteroscedasticity Test Results**

Source: Processed data, (2022)

Based on Figure 2. The results of the Heteroscedasticity test show that the data points spread above and below or around the number 0 and the spread of data points does not form a wavy pattern, widening then narrowing and widening again. this \_ shows that there is no heteroscedasticity in the data.

### 3. Multiple Linear Regression Analysis

The following results from the multiple linear regression test are presented in table 6:

**Table 6 Multiple Linear Regression Test Results**

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	std. Error	Betas	t	Sig.
1	(Constant)	-.938	.678		-1,384	.179
	Liquidity	-.192	.058	-.220	-3,324	.003
	Solvability	-1,372	.317	-.242	-4,329	.000
	Profitability	1,140	.761	.061	1,499	.146
	Operating costs	1,090	.075	.972	14,569	.000

a. Dependent Variable: Corporate Income Tax

Source: processed data (2022)

Based on table 6 multiple linear regression test, the regression equation for the independent (independent) variable is obtained as follows:

$$\text{Corporate Income Tax} = - 0.938 - 0.192 X1 - 1.372 X2 + 1.140 X3 + 1.090X4 + e$$

Information:

X1: Liquidity

X2: Solvency

X3: Profitability

X4: Operational Costs

**4. Hypothesis testing**

**a. Partial Significance Test (t test)**

The partial significant test can also be called the t statistical test. This test is used to test the significance of the effect between the independent variable X on the dependent variable Y. The following is the result of the t statistical test.

**Table 7 Partial Significance Test (Statistical Test t)**

Model		t	Sig.
1	(Constant)	-1,384	.179
	Liquidity	-3,324	.003
	Solvability	-4,329	.000
	Profitability	1,499	.146
	Operating costs	14,569	.000

Source: processed data (2022)

Based on Table 7 the results of the partial significant test (t statistical test) the following results can be obtained:

- 1). The significance of liquidity is 0.003. With thereby can be said that the liquidity variable has an effect on corporate income tax.
- 2). The significance of solvency is 0.000. So, it can be concluded that the solvency variable has an effect on corporate income tax.
- 3). The significance of profitability is 0.146. this it can be said that the variable profitability has no effect on corporate income tax.
- 4). The significance of operational costs is 0.000. It shows operational cost variables have an effect on corporate income tax.

**b. Simultaneous significant test (F statistic test)**

This test has a function that is used to measure how much the independent variables simultaneously (simultaneously) affect the dependent variable significantly. The following are the results of the F statistical test.

**Table 8 Simultaneous Significant Test Results (Statistical Test F)**

		ANOVA <sup>a</sup>				
Model		Sum of Squares	df	MeanSquare	F	Sig.
1	Regression	167,045	4	41,761	164,650	.000 <sup>b</sup>
	residual	6,341	25	.254		
	Total	173,386	29			

a. Dependent Variable: Corporate Income Tax

b. Predictors: (Constant), Operating Costs, Profitability, Solvency, Liquidity

Source: processed data (2022)

Based on Table 8 shows that the variables of liquidity, solvency, profitability, and operational costs simultaneously affect corporate income tax.

**c. Determination Coefficient Test (R<sup>2</sup> Test)**

The following is the result of the coefficient of determination test.

**Table 9 Results for the Coefficient of Determination (Test R<sup>2</sup>)**

Model	R	R Square	Adjusted R Square	std. Error of the Estimate
1	.982 <sup>a</sup>	.963	.958	.50362

a. Predictors: (Constant), Operating Costs, Profitability, Solvency, Liquidity

b. Dependent Variable: Corporate Income Tax

Source: processed data (2022)

Based on Table 9, the test results for the coefficient of determination produce a value of 0.958 or 95.8% in the Adjusted R Square column. This shows that liquidity, solvency, profitability, and operational costs affect corporate income tax own contribution of 95.8%. While the remaining 4.2% is influenced by other independent variables that are not present in this study, such as capital structure and earnings management.

Test results hypothesis first ( $H_1$ ) states that liquidity proxied by the current ratio (*Current Ratio*) has a partial effect on corporate income tax. Cash and accounts receivable will increase when sales increase. Sales costs that are managed efficiently are likely to result in low costs so that the company can earn high profits and high-income taxes. Managed costs no efficient resulted cost become more-tall so that profit will the more-low, then tax income will become low. This research supports research conducted by Dyah & Nik Amah (2019:13) which states that there is an effect of liquidity on corporate income tax.

Testing hypothesis second ( $H_2$ ) stated that solvency which is proxied by the ratio of debt to equity (*Debt to Equity Ratio*) has a partial effect on corporate income tax and means that if solvency increases, corporate income tax will decrease. Debt own risk Because company besides must pay tree loans are also burdened with loan costs loan interest. The loan interest is a deduction from profit, therefore if the interest costs are greater, the income tax will decrease, followed by the income tax that must be paid by the company, which will be lower. This research supports study which was carried out by Dina & Yunita (2020:13) which stated that solvency has a significant effect on corporate income tax payable.

Testing third hypothesis ( $H_3$ ) stated that profitability proxied by returns results on assets (*Return on Assets*) no partial effect on income tax. Based on the test results show that net income and assets do not have an effect on the rise and fall of taxes and companies can pay taxes in accordance with tax provisions. This research supports study which was carried out by Edisah & Ade (2021:1) which stated that profitability did not affect the corporate income tax payable.

Fourth hypothesis test results ( $H_4$ ) stated that operational costs have a partial effect on income tax. The higher the operating costs, the higher the corporate income tax. Operational costs such as salary costs, advertising costs, rental costs, and so on, which are included in the operating cost component, are a deduction from the amount of taxable income. Therefore, the greater the operating costs, the greater the deduction for income tax, but the addition of operational costs also indicates that the company is getting better at minimizing losses so that it affects income tax. This research supports study conducted by Muchammad, Ernadhi & Haqi (2018:10) states that operational costs have a positive effect on income tax expense.

Test results of the fifth hypothesis ( $H_5$ ) shows that liquidity, solvency, profitability and operational costs simultaneously influence corporate income tax. The results of the test for the coefficient of determination show that the measures of liquidity, solvency, profitability, and operational costs affect corporate income tax by 0.958 or 95.8%. So that it can be interpreted that the efficiency of liquidity, solvency,

profitability and operational costs have a significant influence on income tax. Determination of the amount of corporate income tax is carried out by a fiscal reconciliation for the above adjustments commercial financial reports and fiscal financial reports.

## E. CONCLUSION

Based on data analysis in testing the effect of liquidity, solvency, profitability, and operating costs on corporate income tax in various industrial sector companies listed on the Indonesian stock exchange for the 2017-2021 period the conclusions are liquidity, solvency, and operational costs Partial effect on corporate income tax. While profitability has no effect on corporate income tax. Liquidity, profitability, solvency, and operational costs simultaneous effect on corporate income tax.

## REFERENCES

1. Aditya, D. K. (2019). *Pentingnya Pembayaran Pajak untuk Negara*. Retrieved from: <https://www.pajakku.com>
2. Anggraini, D., & Kusufiyah, Y. V. (2020). Dampak Profitabilitas, Leverage dan Biaya Operasional Terhadap Pajak Penghasilan Badan (Studi Empiris Pada Perusahaan Food and Beverage Yang Terdaftar di Bursa Efek Indonesia). *Jurnal Ekonomi dan Bisnis Dharma Andalas*, 22(1), 32–47.
3. Firdiansyah, A., Sudarmanto, E., & Fadillah, H. (2018). Pengaruh Profitabilitas dan Biaya Operasional Terhadap Baban Pajak Penghasilan Badan Terutang Pada Perusahaan Perdagangan Eceran Yang Terdaftar di BEI (Periode 2013-2017). *Jurnal Akuntansi Universitas Pakuan*, 1–13.
4. Ghozali, I. (2018). *Aplikasi Analisis Multivariate Dengan Program IBM SPSS 25*. Semarang: Badan Penerbit Universitas Diponegoro.
5. Harahap, S. S. (2019). *Analisis Kritis Atas Laporan Keuangan*. Jakarta: Raja Grafindo Persada.
6. Jumingan. (2017). *Analisis Laporan Keuangan*. Jakarta: Bumi Aksara.
7. Nainggolan, E. P., & Febriansyah, A. R. (2021). Pengaruh Rasio Profitabilitas dan Biaya Operasional Terhadap PPh Badan Terutang pada Perusahaan Sub Sektor Makanan dan Minuman Yang Terdaftar di BEI Tahun 2015-2019. *Seminar Nasional Teknologi Edukasi dan Humaniora*, 1(1), 1–8.
8. Puspitasari, D. A. L., & Amah, N. (2019). Pengaruh Profitabilitas Likuiditas dan Biaya Operasional Terhadap Pajak Penghasilan Badan (Studi Pada Perusahaan Manufaktur Sub Sektor Industri Barang Konsumsi Yang Terdaftar di Bursa Efek Indonesia Periode Tahun 2015-2017). *Simba Seminar Inovasi Manajemen, Bisnis dan Akuntansi I*, 474–488.
9. Resmi, S. (2017). *Perpajakan Teori dan Kasus*. Jakarta: Salemba Empat.
10. Sugiyono. (2018). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta.
11. Sunyoto, D. (2016). *Metodologi Penelitian Akuntansi*. Bandung: Refika Aditama.
12. Wardiyah, M. L. (2017). *Analisis Laporan Keuangan*. Bandung: Pustaka Setia.