

The Effect of Tax Loss Carryforward, Return on Assets, and Firm Age on the Effective Tax Rate of Non-Cyclicals Consumer Sector Companies Listed on the Indonesia Stock Exchange for the 2021-2024 Period

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Abstract

This study intends to investigate how tax loss carryforward, return on assets, and firm age influence the effective tax rate. The observation involves consumer non-cyclicals companies registered on the Indonesia Stock Exchange throughout the 2021-2024 timeframe. The theoretical foundations of this research incorporates tax planning theory, agency theory, and signalling theory to clarify the connection between corporate traits, tax management practices, and tax liabilities. This study applies a quantitative causal associative approach. The data rely on secondary sources from corporate financial reports. The sample selection followed a purposive sampling technique, initially producing 220 observations, which was subsequently adjusted to 199 observations for final analysis after the removal of outliers. Multiple linear regression is employed as the analytical technique, utilizing IBM SPSS Statistics 27 software. The results show that tax loss carryforward has no significant effect on ETR, ROA has a significant negative effect on ETR, and firm age has a significant positive effect on ETR. In addition, tax loss carryforward, ROA, and firm age simultaneously have a significant effect on ETR.

Keywords: *Tax Loss Carryforward, Return on Assets, Firm Age, Effective Tax Rate.*

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A. INTRODUCTION

Sustaining public services, driving national growth, and securing fiscal balance are heavily dependent on taxation, which remains a core mechanism for generating government income. Therefore, corporate tax behavior is important to examine because companies' decisions in managing their tax obligations may affect tax revenue and reflect their compliance with applicable regulations (Najicha, 2022). The importance of tax revenue is also reflected in Indonesia's tax revenue in 2024, which reached IDR 1,932.4 trillion, or 100.5% of the national expenditure goal, with a growth of 3.5% compared with the previous year (Ministry of Finance of the Republic of Indonesia, 2025). This condition indicates that tax management remains an important issue for both companies and the government.

The effective tax rate functions as a primary metric for evaluating the actual tax obligations borne by a corporation. ETR measures the effective tax burden by comparing income tax expense with income before tax (Waluyo, 2023). Differences in ETR among companies may indicate differences in tax planning, profitability, the

utilization of tax facilities, and other company characteristics. Therefore, ETR is relevant for examining how companies manage their effective tax burden.

Fluctuations in ETR are clearly identifiable across consumer non-cyclical enterprises registered on the Indonesia Stock Exchange (IDX). Data for 2021–2024 show differences in ETR among companies and changes from year to year. For example, Japfa Comfeed Indonesia Tbk. recorded ETR values of 23.73%, 23.72%, 25.00%, and 24.26% during 2021–2024, while Ultrajaya Milk Industry & Trading Company Tbk. recorded 17.20%, 25.10%, 21.30%, and 23.43%, respectively. These differences indicate that companies within the same sector may bear different effective tax burdens and apply different approaches to tax management.

The 2021–2024 period is also relevant because it represents the period of economic recovery following the COVID-19 pandemic. Indonesia's economic growth increased from 3.69% in 2021 to 5.31% in 2022, followed by 5.05% in 2023 and 5.03% in 2024. Changes in economic conditions may influence companies' ability to generate profits and manage their tax obligations. In addition, tax regulations provide facilities that may affect the effective tax burden, including tax loss carryforward, which allows fiscal losses to be offset against taxable income in subsequent periods. This mechanism can reduce taxable income and potentially affect the company's ETR.

In addition to tax loss carryforward, return on assets and firm age may also be associated with ETR. ROA measures a company's capability to convert resources into net earnings. Burdened by larger tax obligations, highly profitable firms are driven to optimize their tax outlays strategically. From an agency perspective, managers have authority over financial and tax-related decisions, so profitability may influence managerial decisions concerning tax management. Firm age, meanwhile, reflects the company's experience, maturity, and stability. From a signalling perspective, firm age communicates a company's operational history and long-term stability to external parties, while ETR can provide information about the company's management of its tax obligations.

Previous studies have reported inconsistent findings. Panjaitan and Ismail (2022) found that tax loss compensation had a substantial negative impact on tax avoidance, while Yudhistira et al. (2026) found no significant effect of fiscal loss compensation on ETR. Ningsih and Ferdiansyah (2024) reported a different relationship between fiscal loss compensation and tax avoidance. Regarding profitability, Wicaksono et al. (2024) concluded that ROA displayed an inverse relation with ETR, whereas Puspita and Arismutia (2025) found no significant effect. Studies on firm age have also produced inconsistent results, with Gowira et al. (2024) finding no significant effect, while Dewi and Hidayati (2024) found an effect of firm age on tax avoidance. These differences indicate that the determinants of ETR remain worthy of further investigation.

The research gap is also reflected in the limited number of studies examining tax loss carryforward, ROA, and firm age simultaneously, particularly in the consumer non-cyclicals sector. Furthermore, previous studies have often positioned

ETR as a proxy for tax avoidance, whereas this study uses ETR as the main dependent variable to directly assess the company's effective tax burden. Therefore, this paper intends to measure the individually and collectively impacts of firm age, ROA, and tax loss carryforward on the ETR within consumer non-cyclicals enterprises registered on the IDX across 2021–2024.

B. LITERATURE REVIEW

1. Agency Theory

Agency theory offers a perspective for exploring how the divergent goals held by corporate owners and executive managers materialize. These differences may arise because managers have greater information regarding the financial standing of the firm than shareholders. This condition can create information asymmetry and affect managerial decision-making, including decisions related to earnings and tax management (Purba, 2023).

To elucidate the connection between corporate profitability and tax strategies, this research applies the perspective of agency theory. Managers have an important role in determining company policies, including policies related to the management of tax obligations. Therefore, differences in interests between managers and shareholders may influence managerial decisions concerning the company's tax burden (Ghozali, 2020).

2. Signalling Theory

Signalling theory clarifies that management, as the party with greater information about the company, can provide signals to external parties through various company decisions. These signals are intended to reduce information asymmetry and uncertainty for investors and other stakeholders (Ghozali, 2020).

As stated by Brigham and Houston (2019), information disclosed by a firm can provide signals regarding its condition and future prospects. In this study, firm age can reflect the company's experience, stability, and business continuity, while ETR can provide information regarding how the company manages its tax obligations. Thus, firm age and ETR contain information that may be considered by external parties in evaluating the company.

3. Tax Planning Theory

Tax planning theory explains that companies can manage their tax obligations legally to minimize their tax burden without violating applicable tax regulations. Tax planning is an initial step in tax management that aims to achieve tax efficiency through the proper management of transactions and business activities (Waluyo, 2023).

Mardiasmo (2024) explains that tax planning should be conducted ethically and in accordance with applicable laws. Therefore, tax planning is not merely intended to reduce the tax burden but also to ensure that tax efficiency is achieved without creating tax risks or violating regulations.

4. The Effect of Tax Loss Carryforward on Effective Tax Rate

Tax loss carryforward is a tax facility that allows fiscal losses incurred in a particular period to be compensated against taxable income in subsequent periods in accordance with applicable tax regulations. Employing this facility is capable of cutting taxable earnings and ultimately lowering the tax obligations of the firm. From the perspective of tax planning theory, tax loss carryforward represents one of the mechanisms available to companies to achieve tax efficiency through the legal management of their tax obligations.

Leveraging tax loss carryforward is therefore expected to show a connection with the company's effective tax rate. When a company utilizes fiscal losses from previous periods, its taxable income can be reduced, which may subsequently affect the effective tax burden reflected in its ETR. Thus, companies that utilize tax loss carryforward may have a different effective tax burden from companies that do not utilize this facility.

Prior studies examining the link between tax loss carryforward and corporate tax behavior reveal inconsistent empirical findings. Panjaitan and Ismail (2022) found that tax loss carryforward impacts tax avoidance behavior, while Ningsih and Ferdiansyah (2024) similarly indicated an impact of tax loss carryforward on tax avoidance practices. However, the findings of Yudhistira et al. (2026) indicate that tax loss carryforward does not significantly affect ETR. Divergent outcomes from earlier literature imply that the relationship between tax loss carryforward and ETR remains inconclusive and requires further empirical examination.

Grounded in the theoretical overview and previous research outcomes, the first hypothesis is proposed in the following manner:

H₁: Tax loss carryforward has a negative effect on the effective tax rate.

5. The Effect of Return on Assets on Effective Tax Rate

A company's capability to yield profits from its administered assets is gauged using Return on Assets (ROA). An elevated ROA reflects enhanced organizational capability in leveraging resource holdings to yield earnings (Hery, 2021). Grounded in the framework of agency theory, profitability is relevant to managerial decision-making because managers are entrusted with overseeing corporate assets and determining policies that can support the corporate objectives and its shareholders.

A greater magnitude of profitability may also be associated with a higher tax burden because companies that generate greater profits generally have greater taxable income. This condition may encourage management to manage the company's tax obligations efficiently while remaining within the applicable tax regulations. Consequently, differences in profitability may be reflected in differences in the company's ETR

Earlier studies demonstrated varying outcomes regarding the relationship between ROA and the ETR. Muslimin et al. (2022) found that profitability (ROA)

affects ETR. Wicaksono et al. (2024) found that ROA exerts a negative influence on the ETR, indicating that higher profitability corresponds to a lower tax burden. In contrast, Puspita and Arismutia (2025) found that ROA exerts no substantial impact on the ETR. These mixed findings justify re-evaluating how ROA influences the ETR.

Based on the theoretical explanation and previous findings, the second hypothesis is proposed in the following manner:

H₂: Return on assets has a negative effect on the effective tax rate.

6. The Effect of Firm Age on Effective Tax Rate

Firm age represents the duration for which a business enterprise has operated. A company's age can reflect its experience, maturity, stability, and ability to maintain business continuity. Companies that have operated for a longer period may have accumulated greater experience in dealing with business activities and changes in applicable regulations, including tax regulations.

Through the framework of signalling theory, corporate characteristics serve as mechanisms to communicate insights regarding a firm's internal condition and future outlook to outside stakeholders. Firm age may therefore serve as an indicator of an enterprise's maturity and steadfastness. In addition, differences in experience and familiarity with tax regulations may influence how companies manage their tax obligations, which may ultimately be reflected in their ETR.

Previous research has also shown inconsistent findings. Dewi and Hidayati (2024) found that firm age influences tax avoidance, suggesting that the length of business operation may be associated with its tax-related decisions. On the other hand, Gowira et al. (2024) concluded that firm age exerts no significant impact on tax avoidance. Irawati et al. (2025) also examined firm age as one of the factors associated with tax avoidance. The differences in these reveal that the association between firm age and tax management remains open for further investigation, particularly when tax management is measured using ETR.

Based on the theoretical explanation and previous findings, the third hypothesis is proposed in the following manner:

H₃: Firm age has a negative effect on the effective tax rate.

7. The Simultaneous Effect of Tax Loss Carryforward, Return on Assets, and Firm Age on Effective Tax Rate

Tax loss carryforward, ROA, and firm age represent different factors that may be associated with a company's effective tax burden. Tax loss carryforward reflects the utilization of a tax facility, corporate profitability is captured through ROA, whereas organizational experience and developmental maturity are signified by firm age. Each factor provides a different perspective on the company's tax management.

Tax planning theory explains the role of tax facilities in achieving tax efficiency, including the utilization of tax loss carryforward. Agency theory sheds light on how managerial actions associate with corporate earnings and the execution of tax duties. Meanwhile, signalling theory explains how company characteristics

and tax-related information may provide signals to external parties. The combination of these perspectives indicates that ETR may be influenced by more than one company characteristic.

Therefore, tax loss carryforward, ROA, and firm age may jointly contribute to variations in the effective tax burden borne by companies. Examining these variables simultaneously is important to determine whether their combined influence is significant in explaining differences in ETR focusing on consumer non-cyclicals businesses maintaining public listings on the IDX.

Reflecting the theoretical associations among these variables, the fourth hypothesis is established as follows:

H₄: Tax loss carryforward, return on assets, and firm age simultaneously affect the effective tax rate.

C. METHOD

A quantitative causal-associative framework was utilized in this study to investigate how tax loss carryforward, return on assets, and firm age influences the effective tax rate. A quantitative approach was used because the variables were measured numerically and analyzed using statistical procedures. The causal-associative design was selected to evaluate how the independent factors drive changes in the dependent construct.

This empirical work utilized secondary data compiled from the published annual financial reports of consumer non-cyclicals corporations officially recorded on the IDX spanning the 2021–2024 period. Additional information was obtained from official IDX publications, company annual reports, and relevant tax regulations. Data were collected using a documentation study by downloading audited annual financial statements published by the companies.

1. Population and Sample

During the 2021–2024 period, the research universe was constituted by 132 consumer non-cyclicals corporations registered on the IDX. Sample selection relied on a targeted purposive strategy governed by defined prerequisites: (1) companies registered within the consumer non-cyclical industry consecutively spanning 2021–2024; (2) companies demonstrating the publication of comprehensive financial statements and yearly reports throughout the observation span; (3) companies utilizing the Indonesian Rupiah as the primary denomination currency for their financial accounts; and (4) companies with financial data that allow for the calculation of the ETR in accordance with the measurement formula in this study.

Applying these parameters yielded 55 firms, resulting in 220 firm-year observations across the study period (55 companies × 4 years). After the removal of outliers, 199 observations were retained for the final analysis.

2. Operational Variables

A dummy variable was utilized to measure tax loss carryforward. A value of

1 was assigned to companies that had a tax loss carryforward in the respective fiscal year, while 0 was assigned to companies without a tax loss carryforward.

ROA evaluates a company's efficiency in producing net earnings through its total asset base. It was calculated as follows:

$$ROA = \frac{\text{Net Income}}{\text{Total Assets}} \times 100\%$$

Firm age indicates the operational duration of a company from its establishment to the observation year. Because firm age had a relatively wide range, the variable was transformed using the natural logarithm (Ln). It was calculated as follows:

$$\text{LnFA} = \text{Ln} (\text{Observation Year} - \text{Year of Establishment})$$

Effective tax rate represents the true fiscal obligation borne by an enterprise in proportion to its earnings before taxes. It was calculated as follows:

$$ETR = \frac{\text{Income Tax Expense}}{\text{Income Before Tax}}$$

D. RESULT AND DISCUSSION

1. Descriptive Statistical Analysis

The study initially consisted of 220 firm-year observations derived from 55 consumer non-cyclicals corporations registered on the IDX between 2021 and 2024 period. Following the identification and removal of 21 outlier observations using casewise diagnostics, 199 observations were retained for further analysis.

Table 1. Descriptive Statistics Results

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Tax Loss Carryforward	199	.00	1.00	.1457	.35372
Return on Assets	199	.00	.33	.0983	.06384
Firm Age	199	1.61	4.77	3.5647	.59546
Effective Tax Rate	199	.13	.33	.2222	.03285
Valid N (listwise)	199				

Source: Data Processed Using SPSS 27, 2026

As detailed in table 1, tax loss carryforward has a mean of 0.1457, indicating that approximately 14.57% of the observations had a tax loss carryforward, while the remaining 85.43% did not. ROA spans from 0.00 to 0.33, averaging 0.0983, which demonstrates that sample firms produced an average net return equivalent to 9.83% of their total assets. Firm age, measured using natural logarithmic transformation, ranges from 1.61 to 4.77, with a mean of 3.5647. Meanwhile, ETR ranges from 0.13 to 0.33, with an average of 0.2222, indicating an average effective tax rate of 22.22%.

2. Classical Assumption Tests

Prior to executing multiple linear regression model, diagnostic tests for classical assumptions were performed to ensure the framework met the necessary criteria for producing reliable and unbiased parameters. These diagnostic evaluations encompassed checks for normality, multicollinearity, heteroscedasticity,

and autocorrelation, with the findings detailed below:

a. Normality Test

Table 2. Normality Test Results
One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		199
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	.02259593
Most Extreme Differences	Absolute	.056
	Positive	.056
	Negative	-.050
Test Statistic		.056
Asymp. Sig. (2-tailed) ^c		.200 ^d

Source: Data Processed Using SPSS 27, 2026

As displayed in Table 2, the One-Sample K-S test yields a test statistic of 0.056 with an Asymp. Sig. (2-tailed)^c value of 0.200^d based on 199 observations. Since the significance value of $0.200 > 0.05$, the distribution of residuals conforms to normality. Therefore, the model fulfills the requirement for a normality condition and permits the progression to multiple linear regression analysis.

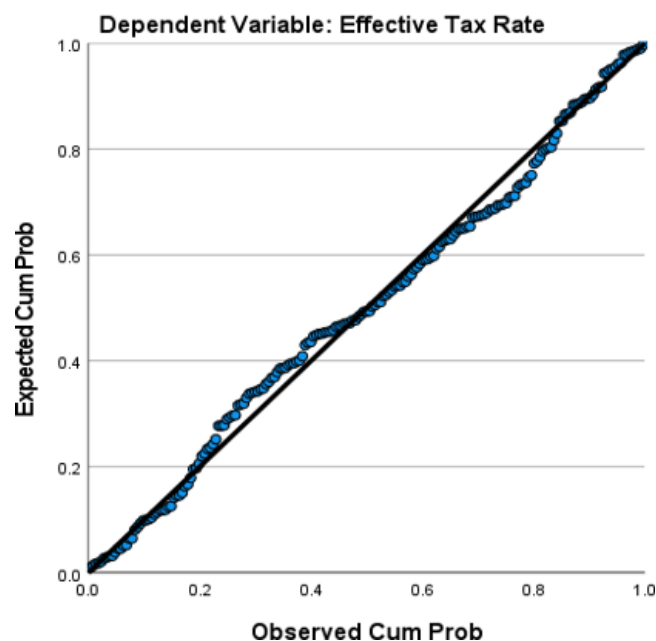


Figure 1. Normal P-P Plot of Regression Standardized Residuals

Source: Data Processed Using SPSS 27, 2026

Based on figure 1, visual inspection of the Normal P-P Plot demonstrates that data points for the residuals are well-aligned along the diagonal axis, denoting that the residuals approximate a normal distribution and thus satisfy the normality prerequisite.

b. Multicollinearity Test

Table 3. Multicollinearity Test Results

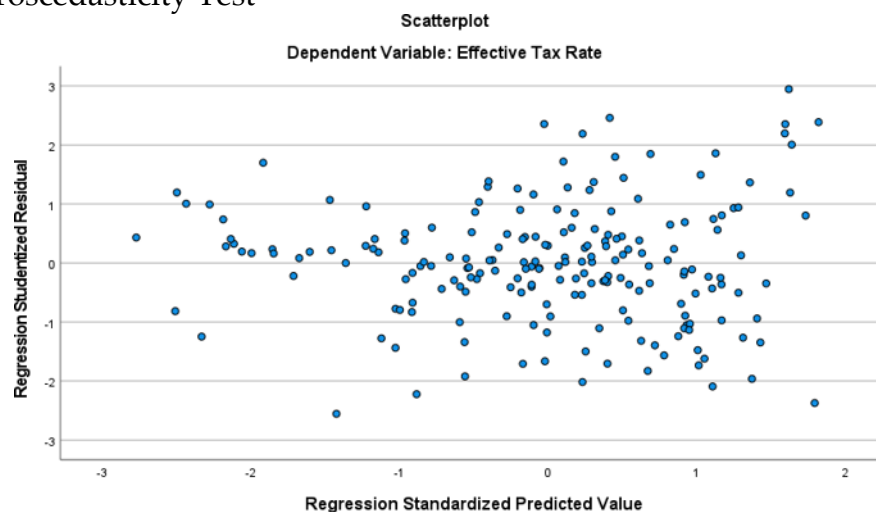
Coefficients ^a			
Model		Collinearity Statistics	
		Tolerance	VIF
1	Tax Loss Carryforward	.823	1.214
	Return on Assets	.961	1.041
	Firm Age	.795	1.257

Source: Data Processed Using SPSS 27, 2026

Reflecting the outcomes presented in table 3, the multicollinearity evaluation indicates that tax loss carryforward records a tolerance of 0.823 alongside a VIF of 1.214. Meanwhile, ROA exhibits a tolerance score of 0.961 paired with a VIF of 1.041, whereas firm age displays a tolerance level of 0.795 and a VIF of 1.257.

All independent variables register Tolerance metrics above 0.10 and VIF figures below 10.00. Therefore, the absence of multicollinearity in the regression model is confirmed, successfully fulfilling this vital classical prerequisite prior to subsequent analysis.

c. Heteroscedasticity Test

**Figure 2. Heteroscedasticity Test Results (Scatterplot)**

Source: Data Processed Using SPSS 27, 2026

An examination of the residual scatterplot was employed to test for heteroscedasticity. Findings reveal that the data points distribute randomly across both sides of the zero axis without organizing into any identifiable structure. Consequently, it is deduced that the regression model remains free from heteroscedasticity, thereby successfully satisfying this diagnostic assumption.

d. Autocorrelation Test

An initial Durbin-Watson value of 1.102 was obtained, indicating the presence of autocorrelation within the regression framework. Therefore, the Cochrane–Orcutt procedure was applied to correct the autocorrelation problem. The results after the correction are presented in the table below:

Table 4. Autocorrelation Test Results After Cochran–Orcutt**Model Summary^b**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.489 ^a	.239	.227	.02020	2.056

Source: Data Processed Using SPSS 27, 2026

The application of the Cochran-Orcutt adjustment successfully raised the Durbin-Watson metric to 2.056. With $dU = 1.799$ and $4 - dU = 2.201$, the value satisfies the condition ($1.799 < 2.056 < 2.201$). Therefore, the regression framework is cleared from autocorrelation and pass the autocorrelation assumption.

3. Multiple Linear Regression Analysis

Multiple linear regression technique was carried out to evaluate how tax loss carryforward, ROA, and firm age impact the effective tax rate. The outcomes derived from the multiple linear regression analysis are presented in the subsequent table.

Table 5. Multiple Linear Regression Analysis Results**Coefficients^a**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.118	.008		15.310	<.001
	Tax Loss Carryforward	.005	.006	.056	.845	.399
	Return on Assets	-.211	.027	-.493	-7.681	<.001
	Firm Age	.008474	.004	.150	2.239	.026

Source: Data Processed Using SPSS 27, 2026

Drawing from the regression output, the resulting equation is presented below: $ETR = 0.118 + 0.005TLC - 0.211ROA + 0.008474FA + e$. The regression coefficients show that tax loss carryforward has a positive coefficient of 0.005, ROA has a negative coefficient of -0.211, and firm age exhibits a positive coefficient of 0.008474.

4. Hypothesis Testing**Table 6. F-Test Results****ANOVA^a**

Model	Sum of Squares		df	Mean Square	F	Sig.
1	Regression	.025	3	.008	20.331	<.001 ^b
	Residual	.079	194	.000		
	Total	.104	197			

Source: Data Processed Using SPSS 27, 2026

The simultaneous significance test (F-test) was executed to determine whether tax loss carryforward, return on assets, and firm age simultaneously affect effective tax rate. The analysis yielded an F-statistic of 20.331 ($p < 0.001$). Since the resulting p-value is < 0.05 , the null hypothesis is consequently rejected, indicating that tax loss

carryforward, ROA, and firm age simultaneously affect ETR. Thus, H₄ is accepted.

Tax loss carryforward had a regression coefficient of 0.005, with a t-value of 0.845 and a significance value of 0.399. Since the significance value of $0.399 > 0.05$, tax loss carryforward had no significant effect on ETR. Although the coefficient was positive, the effect was not statistically significant. Therefore, H₁ was rejected.

ROA had a regression coefficient of -0.211, with a t-value of -7.681 and a significance value of <0.001 . Since the significance value was <0.05 , ROA significantly affected the ETR, where higher profitability correlated with a reduced tax burden. Therefore, H₂ was accepted.

Firm age had a regression coefficient of 0.008474, alongside a t-value of 2.239 and a significance value of 0.026. Because the significance value of $0.026 < 0.05$, firm age had a significant impact on ETR. The positive coefficient demonstrates that a rise in firm age was tied to an increase in ETR. However, because the hypothesis predicted a negative effect, the result did not support the proposed direction. Therefore, H₃ was rejected.

5. Coefficient of Determination

Table 7. Coefficient of Determination Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.489 ^a	.239	.227	.02020

Source: Data Processed Using SPSS 27, 2026

Based on the coefficient of determination findings, the Adjusted R-squared stands at 0.227. This suggests that 22.7% of the fluctuation in the effective tax rate is explained by firm age, return on assets, and tax loss carryforward. The remaining 77.3% is driven by external factors not captured within the scope of this study. Thus, the model's ability to explain changes in the effective tax rate is limited to 22.7%.

6. The Effect of Tax Loss Carryforward on Effective Tax Rate

According to the findings, tax loss carryforward does not significantly influence the effective tax rate, supported by a p-value of 0.399 and a coefficient of 0.005. This outcome suggests that utilizing tax loss carryforwards does not automatically alter a company's effective tax liability. Tax losses can only be utilized to offset future fiscal profits, so their effect depends on the availability of sufficient future taxable profits and the amount of losses that can still be utilized. Furthermore, the use of a dummy variable in this study only notes the presence or absence of tax loss carryforward without reflecting its scale or financial value. Therefore, this limitation could explain why the variable lacks the capacity to significantly impact the ETR.

This finding is inconsistent with Panjaitan and Ismail (2022), who observed that tax loss carryforward significantly influenced tax avoidance. However, the result

indicates that tax loss carryforward does not necessarily translate directly into changes in ETR. However, this finding is supported by Yudhistira et al. (2025) and Karundeng et al. (2022), who concluded that tax loss carryforward has no significant effect on ETR or tax aggressiveness. This may be because not all companies have or use tax loss carryforward during the study period. In addition, tax loss carryforward can only be used by companies that have fiscal losses and remaining losses that can still be compensated under applicable tax regulations

7. The Effect of Return on Assets on Effective Tax Rate

The findings demonstrate that ROA exerts a significant negative impact on the ETR, featuring a p-value <0.001 and a regression coefficient of -0.211 . In other words, higher-earning businesses typically experience lower ETR. Higher profitability generally creates a greater potential tax burden, which may encourage management to undertake tax planning to manage the company's effective tax burden.

This discovery contradicts Wicaksono et al. (2024); Utami and Lestari (2025), who examined ROA and ETR and found a negative significant relationship between the variables. Thus, the negative relationship found in this research indicates that profitability serves as a critical element linked to the corporate tax burden of consumer non-cyclicals companies. However, the results differ from those of Widati et al. (2024); Puspita and Arismutia (2025), who concluded that ROA has not significantly impacted ETR.

8. The Effect of Firm Age on Effective Tax Rate

The empirical results demonstrate that firm age exerts a statistically significant positive effect on the ETR, evidenced by a p-value of 0.026 and a coefficient of 0.008474 . Consequently, mature firms generally experience higher tax burdens. Companies that have operated for a longer period may have more established administrative systems, internal controls, and knowledge of tax regulations. These conditions may encourage more consistent tax compliance, resulting in an ETR that more closely reflects the company's tax obligations.

The findings of this research differ from those of Sinambela and Nuraini (2021), who observed a positive link between corporate age and tax avoidance. Since tax avoidance is conceptually inversely related to ETR, their conclusions can be construed as implying an inverse association between corporate longevity and the effective tax rate. This study also differs from Gowira et al. (2024), who established that firm age has no significant effect on tax avoidance when ETR is used as a proxy. However, the findings are consistent with Dewi and Hidayati (2024) alongside Irawati et al. (2025), both of which documented a positive impact of firm age on ETR.

9. The Simultaneous Effect of Tax Loss Carryforward, Return on Assets, and Firm Age on Effective Tax Rate

The F-test output shows that tax loss carryforward, ROA, and firm age

collectively exert a significant influence on the ETR, yielding an F-value of 20.331 with a p-value <0.001. This finding suggests that the three independent variables jointly help explain the fluctuations in the effective tax burden of consumer non-cyclicals firms.

The simultaneous effect suggests that ETR cannot be explained by a single factor. Tax loss carryforward represents the availability of a tax facility, ROA mirrors enterprise profitability, while firm age illustrates the business's experience and maturity. When considered together, these factors provide a broader explanation of differences in ETR among the companies studied.

E. CONCLUSION

Based on the empirical findings, tax loss carryforward exerts no substantial influence on the effective tax rate, suggesting that the availability of carried-forward fiscal losses does not inherently alter a company's overall tax liability. ROA exhibits a significant negative impact on the ETR, implying that firms with greater profitability tend to record lower ETR levels, which indicates that profitability is associated with differences in the effective tax burden. Meanwhile, firm age has a significant positive effect on ETR, indicating that older companies tend to have higher ETR, although this finding is contrary to the hypothesized negative direction. Simultaneously, tax loss carryforward, ROA, and firm age have a significant effect on ETR, indicating that the three variables collectively contribute to explaining variations in companies' effective tax burdens. With an adjusted R-squared standing at 0.227, it is demonstrated that the three explanatory variables account for 22.7% of the changes occurring in the ETR, with the remaining 77.3% driven by external factors outside this research model.

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