Sustainability report, turnover, accounting firm size, corporate tax nexus and financial performance of listed Indonesian Coal companies

*ABSTRACT*

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| The financial performance of coal businesses listed on the Indonesia Stock Exchange (IDX) between 2021 and 2023 is examined in relation to sustainability reporting and public accounting firm size. The corporate tax turnover ratio (CTTOR) is used as an intervening variable, while gross profit margin is used as the dependent. Using SPSS software, multiple linear regression analysis is performed on data from 96 out of 32 organisations. With scores of significant levels 0.015 and 0.000, the results of the first hypothesis test accept and show that the size of public accounting firms and sustainability reporting have a significant impact on gross profit margin. This means businesses that are audited by Big Four firms and those that publish sustainability reports typically have higher profitability. The second hypothesis reveals that CTTOR is not impacted by sustainability reporting, which received a score of 0.933, but it is by public accounting firm size and gross profit margin; both have a significant level of 0.000. The second hypothesis is thus disproved, indicating that compared to sustainability disclosure alone, audit quality and operational success have a stronger correlation with tax effectiveness. There is some evidence to support the third theory. The results of the mediation study show that sustainability reporting has a significant mediating impact since its indirect influence on CTTOR through gross profit margin (0.1128) is larger than its direct effect (0.007). On the other hand, there appears to be limited mediation, as the direct effect of audit firm size on CTTOR (0.368) is greater than the indirect effect. In conclusion, audit firm size directly contributes to greater financial transparency, whereas sustainability reporting indirectly improves tax efficiency through increased profitability. To more accurately evaluate sustainability quality, future research should broaden the sector focus, prolong the study period, and use standardised frameworks like the Global Reporting Initiative (GRI). |

Keywords: Corporate tax to turn over ratio, gross profit margin, public accounting firm size, sustainability report, tax

1. INTRODUCTION

Companies utilise financial statements as a communication tool with external parties,

such as creditors and investors, who use their financial statements. Therefore, by issuing

Regulation of the Financial Services Authority of the Republic of Indonesia Number 9 of 2023,

the Indonesian government in this case, the Financial Services Authority mandates that

businesses that have achieved public accountability also employ a public accounting firm registered with the Financial Services Authority to audit the yearly financial statements that have been prepared. All users of financial statements assume that the financial statements audited by the public accounting firm contain no substantial misstatements and are consistent with Indonesian accounting principles, and may be used as a reference in decision-making. Mayangsari & Sazangka (2023) concluded that the audit quality of a company can be examined from the size of the public accounting firm used by the company. Kamil (2021) also said that many companies and users of financial statements believe that the quality of audits conducted by large public accounting firms, in this case the Big Four, is better than public accounting firms other than the Big Four (dubbed the "non-Big 4"). As a result, it is possible to conclude that audit quality plays an important role in protecting the integrity of financial reporting. As a result, a high-quality audit automatically raises the reliability value of financial reports, allowing investors to make sound business decisions based on them.Therefore, the first independent variable in this study is the type of public accounting firm, categorised as Big Four versus non-Big Four.

Globalisation has led Indonesian companies to improve their reputation and performance. This is done to attract investors and maximise profits. This is in line with research by Widjanarko and Safitri (2020) and Damayanty and Safitri (2022) .However, this has a significant side effect: the issue of excessive environmental exploitation, which will be detrimental to human life now and in the future. The result will be an industry that is environmentally conscious and adheres to Elkington's (1994) triple bottom line concept of profit, people, and planet. With Circular Letter Number 16 of 2021, the Financial Services Authority (SEOJK) demonstrates its complete support for the idea of sustainable development by requiring all publicly accountable In accordance with the aforementioned rules, Endiana et al. (2021) discovered that sustainable reports are significant in guiding firm investment decisions. It also serves as a conduit for addressing stakeholders' expectations on social responsibility and transparency. This notion is validated by research published by Agustina and Pradesa (2024). As a result, the variable utilised in this study is that of a sustainability report, and it also utilises gross profit margin as a dependent profit because profit is the primary goal of forming a company and is derived from the firm's operational environment. This is consistent with the research done through Lenny (2025), which found a positive impact on gross profit margins.

The final variable is the corporate tax turnover ratio (CTTOR), which serves as an intervening factor. CTTOR can be used to examine a company's compliance and tax effectiveness. According to Lenny's (2025) research, the sustainability report variable and corporate tax turnover ratio (CTTOR) have a clear impact on the gross profit margin variable, which is aided by the interaction between sustainability and CTTOR. However, there is a research gap: no journal has been identified that addresses the relationship between the size of the public accounting firm and the sustainability report on gross profit margin with the corporate tax turnover ratio (CTTOR) as the intervening variable. The author has already conducted a study on the same item, but the distinction is that the CTTOR variable acts as a moderating variable

1. LITERATURE REVIEW
	1. Otoritas jasa keuangan (OJK)

Under Law No. 21 of 2011, the Indonesian government established the Financial Services Authority, also known as Otoritas Jasa Keuangan (OJK), to "implement a comprehensive regulatory and supervisory framework for all financial services activities with the aim of strengthening consumer protection, ensuring market integrity, and promoting healthy competition, thereby enhancing public and investor confidence."

* 1. Public accounting firm size

The public accounting firm's (KAP) size will be the first variable utilised. The Public Accounting Firm is an organisation that satisfies the requirements of Law Number 5 of 2011 pertaining to public accountants and serves as a venue for public accountants to meet and complete their professional obligations. The significance of the company's financial statements to its stakeholders, such as creditors and investors, makes it acceptable for a public accounting firm to audit the financial statements in order to verify their correctness. At the moment, audit firms are divided into two categories: those that are associated with a sizable global public accounting firm, commonly referred to as the "big four", and those that are not, commonly referred to as the "niche four".

This is the rationale for the company's decision to select a Big Four public accounting firm over other public accounting firms (non-Big Four): the public accounting firm is more independent, and it will instantly enhance the company's reputation in the eyes of financial statement readers. According to Rizki and Sudarno (2020), these results support the growing notion that consumers of financial statements favour financial reports audited by the Big Four because they are thought to be of higher quality than those from other public accounting firms.The study used dummy variables to group public accounting firms: companies that use the services of a big public accounting firm (the "big four") will be assigned a value of 1 (one"), and companies that use the services of public accounting firms other than the "big four" (the "non-big four") when auditing the financial statements they prepare will be assigned a value of 0 (zero).

* 1. Sustainability report

In accordance with Financial Services Authority Regulation Number 51 of 2017, the company's social, economic, and social activities that align with the concept of sustainable development are included in the annual report that is prepared using company data on both financial and non-financial performance. Presenting sustainable reports issued by companies listed on the Indonesia Stock Exchange can be done in two different ways because the Indonesian government currently has no standard guidelines. Some companies combine their audited financial statements and sustainable financial reports into a single report, while others keep the two reports separate.

According to the Financial Services Authority Circular Letter (SEOJK) Number 16 of 2021, all businesses that have registered on a capital market in this case, the Indonesia Stock Exchange are required to publish a sustainability report with the goal of maximising sustainable investment in Indonesia. Accordingly, this study will use a dummy variable, assigning a value of 1 (one) to businesses that provide sustainability reports and a rating of 0 (zero) to those that don't.

* 1. Gross Profit MArgin

 The set of highly significant profitability ratios includes this one in determining how well the firm is doing at making money out of its operations and in predicting whether it will survive. Thus, it may be said that this ratio can forecast how profitable and efficient a company's business operations are in producing gross profit:

 ***Gross profit margin* (GPM) =**$\frac{Gross Profit}{Revenue}$ x 100%

* 1. Corporate tax turn over ratio (CTTOR)

A company's tax efficiency must be estimated using the corporate tax turnover ratio (CTTOR) in order to determine the amount of tax payable owed and to forecast the degree of compliance of an entity or company with the appropriateness of tax practices implemented in comparison to applicable tax regulations. This allows the company to compare its capabilities with those of its competitors. The formula used is:

***Corporate tax turn over ratio* (CTTOR) =**$\frac{ Income taxes payable }{Revenue}$ **x 100%**

* 1. Previous Research

**Table 1. Previous Research**

| **No.** | **Title, Researcher Name, and Year of Literature** | **Research Variables** | **Methodology** | **Research Results**  |
| --- | --- | --- | --- | --- |
| 1. | The Effect of *Sustainability Report* on Financial Performance (Study on the Mining Sector Listed on the Indonesia Stock Exchange for the Period 2018-2022).(Setyowati May, *et.al,*  2024) | *Return on Asset*, Economic Dimension, Environmental Dimension, Social Dimension | Purposive sampling is used, and data analysis in quantitative research is done using EViews 12. This study included a total population of 63 companies, and six of them were used as research samples during a five-year period, for a total sample size of 30. | The economic dimension has a significant effect on financial performance with a probability value of 0.0013, while the opposite is true for the environmental and social dimensions with probability values of 0.8142 and 0.2550, respectively, which is greater than the significance value of 0.005. When considered simultaneously, all dimensions of the sustainability report have an effect with a probability value (F statistic) of 0.00, which is less than the significance value of 0.05. |
| 2 | The Effect of *Benchmarking* Ratios on Tax Avoidance in Miscellaneous Industry Sector Companies Listed on the IDX in 2018-2021 (Utomo and Handayani, 2024)  | Benchmarking ratio Tax avoidance (*Cash effective tax* *rate)*

|  |
| --- |
|  |

 | The research technique employs a quantitative approach with secondary data from companies in various industrial sectors listed on the Indonesia Stock Exchange between 2018 and 2021; the total number of population members is 63. The purposive sampling technique is used, with 80 financial reports as the sample. | Several variables, according to the report, have a major impact on tax avoidance. Operating profit margin (OPM), interest/sales ratio, outside income/sales ratio, and outside expenses/sales ratio are among the variables examined. These variables have significance levels below 0.05, suggesting statistical significance. However, a number of characteristics have no bearing on tax evasion. Gross profit margin (GPM), pretax profit margin (PPM), corporation tax to turnover ratio (CTTOR), net profit margin (NPM), salary/sales ratio, rent/sales ratio, depreciation/sales ratio, ratio of outside business expenses/sales, and ratio of other inputs/sales are all examples. The significance values of these factors are greater than 0.05, indicating that they have no significant impact on tax evasion. |
| 3 | *Analysis of sustainability reporting quality and**corporate social responsibility on companies listed on the* *Indonesia stock exchange**(Sebrina, et.al, 2023)* | *Corporate social responsibility, integrated reporting and Sustainability reporting.* | *Exploratory research involving quantitative analysis was undertaken to assess the diffusion level of non-financial reporting and the quality of sustainable reporting (also known as 'sustainability reporting') on companies listed on the Indonesia Stock Exchange from 2016 to 2019. The data was sourced from annual and sustainability reports. The total population comprised 713 companies, and a sample of about 240 sustainability reports was selected for analysis.* | *Over the last five years (2015-2019), the distribution of sustainable reports has expanded dramatically, going from 7.2% of public businesses in 2015 to 13.1% by 2019. In 2019, the content analysis of sustainable information was clearly focused on the triple bottom line, specifically the economic, which received the highest disclosure item on the sustainability report, scoring 91%. The environmental dimension garnered a 31% score, while the social dimension obtained 32%. The economic dimension's disclosure averaged 0.33, or 33%, of the total elements required to be declared in 2019.*  |
| 4 | *Sustainability Reporting and Tax Aggressiveness Before and Suring Covid -19: GCG Moderating Variable.*(Triwacananingrum and Wijaya, 2022) | *Tax avoidance, sustainability report, corporate governance on firm value: Leverage* | *A multiple linear regression analytical approach was employed on 100 businesses listed on the Indonesia Stock Exchange (IDX) from 2019 to 2020 as the research object, including financial and non-financial data acquired from fiscal statements, sustainability reports, and annual reports.* | *COVID-19 has no effect on the relationship between disclosures in sustainability reports and tax aggressiveness. This is supported by a significance level of 0.248, and COVID-19 has no incremental effect on good corporate governance in terms of strengthening the negative association with sustainability. Report disclosures on tax aggression with a significance level of 0.271, demonstrating that the obtained value exceeds 0.05.* |
| 5 | *The role of sustainability reporting in shareholder perception of tax avoidance*(Rudyanto and Pirzada, K. 2021) | *Sustainability Report, Firm Value, Tax Avoidance*  | *This research utilises the technique of moderated panel regression, with a dataset comprising 596 and 734 observations, respectively, to calculate two key rates: the cash effective tax rate (ETR) and the generally accepted accounting principles effective tax rate (GAAP ETR). The focus of this research is on non-financial firms, excluding firms operating in the oil and gas and property sectors, that are listed on the Indonesian Stock Exchange. The period under scrutiny in this research extends from 2014 to 2016.*The regression isanalysed by STATA 14. | *Since the average significant threshold is 0.1961 for cash ETR and 0.1784 for GAAP ETR, tax avoidance has no impact on business value. This indicates that tax avoidance, both cash tax avoidance and GAAP tax avoidance (tax expense avoidance), is not a concern for Indonesian shareholders. This indicates that there is no moderating influence of sustainability reporting. Environmentally sensitive and non-environmentally sensitive industries are the two industrial classifications into which this study divides the samples. In environmentally sensitive businesses, GAAP ETR has a positive correlation with company value (score of 0.2014); in non-environmentally sensitive industries, it has a negative correlation (score of -0.023).* |
| 6 | The Interplay among Sustainability Reporting, Gross Profit Margin and Corporate Tax Strategies (Lenny,2025) | *Sustainability report, gross profit margin, CTTOR* | *The data processing on these variables will be assisted by the SPSS program. The study population comprises coal-producing companieslisted on the Indonesia Stock Exchange (IDX) for the period 2021 to 2023, with a total of 34 companies included in the final data set* | *For starters, sustainability reports significantly improve gross profit margins. Secondly, CTTOR can be utilised to offset the impact of the sustainability report variable on gross profit margins. The final CTTOR, along with its relationship to sustainability, has a significant impact on gross profit margins, as both yield a value of 0.00.* |

As summarised in Table 1, previous research has explored variables such as sustainability reporting, public accounting firm size, gross profit, and cash turnover to total operating revenue (CTTOR), indicating that audit quality may be influenced by the size of the audit firm. In particular, stakeholders often perceive that larger firms, such as the Big Four, deliver higher-quality audits (Rizki & Sudarno, 2020), However, research conducted by Nindita and Siregar (2013) definitively shows that the size of a public accounting firm does not have a significant influence on audit quality. In addition, it was confirmed that using a Big Four public accounting firm is not an assurance of high audit quality.Nonetheless, there is still a research vacuum in the Lenny (2025) study, which took into account CTTOR, gross profit, and sustainability reporting as moderating factors but neglected to take audit firm size into consideration. With CTTOR acting as an intervening variable, the current study examines the impact of sustainability reporting on gross profit margin while taking public accounting firm size into consideration in order to overcome this constraint.

* 1. HYPOTHESIS

 The hypothesis to be tested :

H01 : Public accounting firm size and sustainability report affects gross profit margin.

H02  : Public accounting firm size, sustainability report, and gross profit margin affects gross

CTTOR

H03 : Public accounting firm size and sustainability report through gross profit margin affects

CTTOR

* 1. Conseptual Framework

 Growth profit margin and corporate tax turnover ratio (CTTOR) are the dependent factors in this study, while sustainability report and public accounting firm size are the independent variables. This study's conceptual framework is:

Gross Profit Margin (Y)

CTTOR

(Z)

Public Accountant

Firm Size (X1)

Sustainability

Report (X2)

**Figure 1. Conceptual Framework**

1. METHodOLOGY

The statistical analysis in this study goes beyond conventional approaches by integrating both direct and indirect effects through a two-step regression process. Unlike standard analyses of coal industry financial metrics that typically focus on standalone profitability measures, our methodological framework specifically examines how sustainability reporting practices and audit quality (represented by accounting firm size) create both immediate financial impacts and downstream effects on tax efficiency ratios. This approach was specifically developed to address the unique regulatory environment of Indonesia's extractive industries sector, where both environmental reporting and tax compliance have become increasingly scrutinized by stakeholders

The corporate tax turnover ratio (CTTOR) serves as an intervening variable in this quantitative study, which uses an associative explanatory research methodology to examine the relationship between sustainability reporting on gross profit margin and the size of public accounting firms. SPSS software is used for data analysis. The study's population comprises 34 coal-producing businesses that were listed on the Indonesia Stock Exchange (IDX) between 2021 and 2023, producing 102 observations. Companies that fit certain criteria are chosen using a purposive sample technique, yielding 96 useful data points that include sustainability and financial reports. As a precondition for multiple linear regression analysis, the data analysis process entails performing traditional assumption tests, such as normality, multicollinearity, heteroscedasticity, and autocorrelation tests.

The following are the criteria considered for the company sample:

**Table 2. Criteria Consider for Sample**

|  |  |  |
| --- | --- | --- |
| No. | Criteria  |  Company |
| 1 |

|  |
| --- |
| Coal companies that sell their shares on the Indonesia Stock Exchange (IDX) during the research period (2021-2023). |

 | 34 |
| 2 | Companies that did not launch complete annual reports and financial statement records during the research period (2021-2023)  | 2 |
| Number of companies that fulfil the criteria | 32 |
| Years of observation period | 3 |
| Number of observation data (sample)  | 96 |

 Souce : The Indonesia Stock Exchange (IDX) data

* 1. Linear regression equation

 The regression equation formula used is :

1. $Y\_{} = a+β\_{1} x\_{1}+β\_{2} x\_{2}+e$1 .......... equation 1
2. $ Z = a+β\_{1} x\_{1}+β\_{2} x\_{2}+β\_{3} Y+e$ 2 .......… equation 2

**Description:**

a = Constant

x1 = Public accounting firm size

x2 = Sustainability report

Y= Gross profit margin

z = Corporate tax turn over ratio (CTTOR)

β = Regression direction coefficient

e1 and e2 = Error

1. RESULTS AND DISCUSSION
	1. **CLASSICAL ASSUMPTION TEST**

To give a quantitative overview of the statistical properties of the variables in the study model, descriptive analysis is used. The analysis includes 96 observation samples from 2021 until 2023, as shown in Table 3. The mean, standard deviation, minimum, and maximum values for every variable are included in the descriptive statistics. Because they are measured using a dummy variable technique, the variables that indicate sustainability reporting and the size of the public accounting firm both show minimum and maximum values of 0.00 and 1.00, respectively. Their standard deviation and mean, however, are different. The sustainability report variable displays a mean of 0.8229 and a standard deviation of 0.38374, whilst the public accounting firm has a mean of 0.3229 and a standard deviation of 0.47005. The gross profit's minimum, maximum, mean, and standard deviation values are - 0.96, 0.67, 0.2663, and 0.24475, respectively. The last variable, CTTOR, has minimum, maximum, mean, and standard deviation values of - 0.01, 0.20, 0.418, and 0.04282, respectively.I have improved these parts with more specific details of the unique method:

**Table 3: Descriptive Results**

|  |
| --- |
| Descriptive Statistics |
|  | N | Minimum | Maximum | Mean | Std. Deviation |
| Public Accountant Firm Size | 96 | .00 | 1.00 | .3229 | .47005 |
| Sustainability Report | 96 | .00 | 1.00 | .8229 | .38374 |
| Gross Profit Margin | 96 | -.96 | .67 | .2663 | .24475 |
| CTTOR | 96 | -.01 | .20 | .0418 | .04282 |
| Valid N (listwise) | 96 |  |  |  |  |

Source : Secondary data from The Indonesia Stock Exchange (IDX) processed using SPSS

Following an examination of the descriptive statistics, the normality test must be

performed using the Kolmogorov-Smirnov non-parametric test to determine whether the research data from the sustainability report and the public accounting firm size variable, which are independent variables, are normal with respect to the gross profit margin, which is the dependent variable, using CTTOR. Table 4 below provides a review of the test results:

**Table 4: Normality Test Results**

|  |
| --- |
| ASymp. Sig (2-tailed) |
| Equation 1 | 0.323 |
| Equation 2 | 0.054 |

 Source : Secondary data from The Indonesia Stock Exchange (IDX) processed using SPSS

This study uses two linear equations that have been described previously. The normality test results listed in Table 4 produce a value of 0.323 for the first equation and 0.054 for the last equation. The regulation states that if the research data used is normally distributed, the significance value obtained must touch a number above 0.05 (α = 5%), but if otherwise, it is said to be not normally distributed, so the conclusions that can be drawn for the two equations are normally distributed.

According to the multicollinearity test, Table 5 displays the findings if the data is deemed free of multicollinearity, with a variance inflation factor (VIF) of less than 10 and an independent variable tolerance of greater than 0.1 (10%).

**Table 5: Multicollinearity Test Results**

|  |  |
| --- | --- |
|  | *Collinearity Statistics* |
| *Tolerance* | VIF |
| **Equation 1**  |
| Public Accountant Firm Size | 0.897 | 1.114 |
| Suitability Report | 0.897 | 1.114 |
| Equation 2 |
| Public Accountant Firm Size | 0.687 | 1.455 |
| Suitability Report | 0.860 | 1.162 |
| CTTOR | 0.680 | 1.470 |

Source : Secondary data from The Indonesia Stock Exchange (IDX) processed using SPSS

A regression method's tolerance value and variance inflation factor (VIF) value are two metrics that can reveal whether multicollinearity is present or not. Regressions with tolerance values greater than 0.01 or VIF values less than 10 are referred to as having no multicollinearity. The variables in the two equations listed in Table 5 generate tolerance values over 0.01 with all VIF values generated below the value of 10, as can be shown from the above table. This indicates that the variables utilised are no longer subject to multicollinearity.

The Glejser test, which is the next test after multicollinearity, is used to determine heteroscedasticity. It must be completed prior to the autocorrelation test, and each study's regression equation should have an equal variance of errors in each independent variable. Heteroscedasticity in the regression model can be claimed if the absolute residual value (ABS) is less than 0.05, which is the test's absolute condition. Table 6 displays the findings of the heteroscedasticity test used in this investigation.

The two independent variables, the size of the audit company and the sustainability report, have values of 0.761 and 0.064, respectively, according to the first equation in Table 6. Values of 0.668, 0.183, and 0.618 are obtained from the second equation, which has three independent variables: audit firm size, sustainability report, and CTTOR. Since each of these values is higher than 0.05, it can be said that heteroskedasticity is not present.

**Table 6: Heteroscedasticity Test Results**

|  |  |
| --- | --- |
|  | *Sig. (2-taied)* |
| Equation 1 | Public Accountant Firm Size | 0.761 |
| Sustainability Report | 0.064 |
| Equation 2 | Public Accountant Firm Size | 0.668 |
| Sustainability Report | 0.183 |
| CTTOR | 0.618 |

Source : Secondary data from The Indonesia Stock Exchange (IDX) processed using SPSS

The last test, the autocorrelation test, evaluates the study's linear regression equation using Durbin Watson. Autocorrelation is absent if the Durbin-Watson (DW) value is between the Durbin-Watson (DW) and (4-DW) ranges.

**Table 7: Autocorrelation Test Results**

|  |  |  |
| --- | --- | --- |
|  | Durbin Watson | Formula |
| Equation 1 | 1.867 | 1.7103 < 1.867 < 2.2897 |
| Equation 2 | 1.863 | 1.7326 < 1.863<2.2674 |

Source : Secondary data from The Indonesia Stock Exchange (IDX) processed using SPSS

It is evident from table 7 above that there is no autocorrelation because the Durbin-Watson value for the first equation is 1.867, while the value for the second equation is 1.863. Following data processing, the regression equation's findings are:

1. Y = 0.036 + 0.123 x1 + 0.232x2 ........ p. **1**
2. Z = 0.008+ 0.34 x1+ 0.001 x2 + 0.084 Y........ p. 2

Prior to evaluating hypotheses, a test that is equally important is the coefficient of determination test, which determines how much the independent variables contribute to the dependent variable at the same time.

**Table 8: Determination Coefficient Test Results**

|  |  |
| --- | --- |
|  | Test Results |
| Equation 1 | 0.243 |
| Equation 2 | 0.417 |

 Source : Secondary data from The Indonesia Stock Exchange (IDX) processed using SPSS

The first equation's test results indicate a value of 0.243, or 24.30%. This figure suggests that the sustainability report and the public accounting firm size variable have a 24.30% impact on gross profit margin, with other variable tests not included in this study accounting for the remaining 75.70%.

With regard to the final equation, the result is 0.417, or 41.70%. This indicates that the sustainability report, the CTTOR variable, and the public accounting firm size variable have a 41.70% impact on the gross profit margin, with other factors accounting for the remaining 55.40%.

* 1. **HYPOTHESIS TESTING**

The primary goal of a study is to determine whether the hypothesis was correct. The SPSS software helps with this test by utilising the F test to determine the simultaneous influence of the independent variables on the dependent variable used in the study or the T test to estimate the degree of influence between the independent and dependent variables. It states that a hypothesis cannot be accepted until its significance value is less than 0.05 (sig < 0.05).

**H01 : Public accounting firm size and sustainability report affects gross profit margin.**

**Table 9: Coefficient of Public Accountant Firm Size and Sustainability Report**

|  |
| --- |
| **Coefficientsa** |
| Model | Unstandardised Coefficients | Standardised Coefficients | t | Sig. |
| B | Std. Error | Beta |
| 1 | (Constant) | .036 | .052 |  | .689 | .492 |
| Public Accountant Firm Size  | .123 | .050 | .236 | 2.481 | .015 |
| Sustainability Report | .232 | .061 | .363 | 3.811 | .000 |
| a. Dependent Variable: Gross Profit Margin |

Source : Secondary data from The Indonesia Stock Exchange (IDX) processed using SPSS

The regression coefficients for public accounting company size are shown in Table 9, with significance values of 0.000 for the sustainability report and 0.015 for public accounting firm size. The relevant variable has a statistically significant influence if the significance value is less than 0.05, as per the specified criterion. These findings suggest that the sustainability report and the size of the public accounting firm both significantly affect the dependent variable, gross profit margin. Given their varying degrees of statistical significance, the results imply that these factors are crucial in determining profitability. So, it means the the hypothesis was accepted. These findings are congruent with those of prior studies by Lenny (2025) and Febriyanti (2021), both of which found a substantial link between the factors studied. However, the findings differ from those of Tarigan (2015) and Jecky and Suparman (2021), who found no such association.

**H02  : Public accounting firm size, sustainability report, and gross profit margin affects CTTOR**

**Table 10: Coefficient of Public Accountant Firm Size, *Sustainability Report* and *Gross Profit***

|  |
| --- |
| **Coefficientsa** |
| Model | Unstandardised Coefficients | Standardised Coefficients | t | Sig. |
| B | Std. Error | Beta |
| 1 | (Constant) | .008 | .008 |  | 1.071 | .287 |
| Public Accountant Firm Size | .034 | .007 | .368 | 4.551 | .000 |
| Sustainability Report | .001 | .009 | .007 | .085 | .933 |
| Gross Profit Margin | .084 | .015 | .478 | 5.600 | .000 |
| a. Dependent Variable: CTTOR |

Source : Secondary data from The Indonesia Stock Exchange (IDX) processed using SPSS

As shown in Table 10, the second hypothesis investigates the connection among sustainability reporting, public accounting firm size, and gross profit margin on CTTOR (Cash Turnover to Total Operating Revenue). A variable is deemed to have a significant influence if its significance value is less than 0.05, in accordance with the standards outlined in the first hypothesis. The three independent variables which are public accounting firm size, sustainability report, and gross profit margin have significance values of 0.000, 0.993, and 0.000, respectively, based on the information in Table 10. These findings suggest that CTTOR is positively and statistically significantly impacted by both the size of public accounting firms and gross profit margin. Conversely, the sustainability report variable does not exhibit a significant effect on the dependent variable, as its significance value of 0.993 exceeds the accepted threshold.

**H03 : Public accounting firm size and sustainability report through gross profit margin affects CTTOR**

CTTOR

(Z)

**0.236**

**0.363**

**0.368**

**0.478**

Public Accountant

Firm Size

(X1)

*Gross Profit Margin* (Y)

Sustainability

**0.007**

Report

(X2)

**Figure 2. Conseptual Framework examined with Information of table 9 and 10**

Together with the information in tables 9 and 10, the conceptual framework shown in figure 2 must be examined in order to properly address the last claim. By multiplying the standardised beta coefficient from Table 9 (0.236) by the beta coefficient for gross profit margin from Table 10 (0.478), the indirect effect of public accountant company size on CTTOR is determined to be 0.1128. Additionally, Table 10 shows that the CTTOR variable and the size of the public accountant business have a direct influence of 0.368. Together, these results demonstrate how the size of public accounting firms affects CTTOR both directly and indirectly. When a relationship between independent variables has a larger indirect effect than a direct effect, it is deemed to have a significant impact on the dependent variable. The size of the public accounting firm has a lesser indirect impact on CTTOR in this instance than the direct effect, which is mediated by the gross profit margin. This suggests that the indirect influence is not significant.

Second, the study examined the impact of sustainability reporting on corporate social responsibility (CTTOR) through the variable of gross profit margin. The direct effect of the sustainability report on CTTOR was found to be 0.007. Additionally, the indirect effect of gross profit margin on CTTOR was calculated by multiplying the standardised coefficients of the sustainability report and the gross profit margin, resulting in a value of 0.1128. This indicates that the indirect effect is greater than the direct effect, suggesting that the sustainability report has a significant impact on CTTOR through the gross profit margin variable. The hypothesis that both the sustainability report and public accounting firm size affect CTTOR was rejected, as only the sustainability report was found to have an effect.

1. CONCLUSIONS

This study investigated the influence of public accounting firm size and sustainability reporting on gross profit margin and corporate tax turnover ratio (CTTOR) among Indonesian coal companies listed on the Indonesia Stock Exchange from 2021 to 2023 with 96 samples. The findings reveal that both the size of the public accounting firm and the presence of sustainability reporting have a significant positive impact on the gross profit margin variable. Furthermore, the size of the public accounting firm and gross profit margin significantly influence CTTOR. Moreover, sustainability reporting does not exhibit a direct impact on CTTOR because its influence is exerted indirectly through gross profit margin, as evidenced by the stronger indirect effect (0.1128) compared to the direct effect (0.007). The gross profit margin significantly intervenes in the relationship between sustainability reporting and CTTOR, according to the mediation analysis. On the other hand, the direct effect of public accounting firm size on CTTOR is greater than the indirect effect through gross profit margin, suggesting that gross profit margin does not play a large mediating role in this connection. Overall, the results show that only sustainability reporting has an indirect impact on tax effectiveness (CTTOR), even if both independent variables increase business profitability. Therefore, there is very limited evidence to support the theory that both variables affect CTTOR through gross profit margin.

To enhance the research on sustainability reporting, audit quality, and financial performance, future studies should consider several improvements. Firstly, expanding the study beyond the coal mining sector to include various industries would enhance the generalisability of the findings. Secondly, extending the observation period would provide a better understanding of the long-term effects of sustainability practices and audit firm characteristics on financial outcomes. Additionally, future research should explore a broader range of variables, incorporating independent factors like environmental performance indicators and corporate governance attributes. Including alternative performance metrics related to finance and tax would also enrich the analysis. To improve the measurement of sustainability reporting quality, researchers are encouraged to use established frameworks such as the Global Reporting Initiative (GRI). These frameworks offer recognised standards that ensure consistency and comparability of sustainability disclosures. By considering these aspects, future research can contribute to a deeper understanding of the relationship between sustainability, audit quality, and financial performance in different market contexts.

**Disclaimer (Artificial intelligence)**

Option 1:

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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