

The Effect of Perceived Tax Audit Risk and Perceived Tax Sanctions on Individual Taxpayer Compliance in Manado City

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Abstract

This study aimed to examine the effect of perceived tax audit risk and perceived tax sanctions on the compliance of individual taxpayers who operate micro, small, and medium enterprises in Manado City, Indonesia. A quantitative explanatory survey was conducted with 100 respondents, determined using the Slovin formula and purposive sampling from a population of 20,499 enterprises across 11 sub-districts. Data were collected using a five-point Likert-scale questionnaire and analyzed using multiple linear regression in IBM SPSS Statistics 29. The results showed that perceived tax audit risk had a positive and significant effect on compliance ($t = 2.060$; $p = 0.042$). Perceived tax sanctions also had a positive and significant effect and were the more dominant predictor ($t = 4.247$; $p < 0.001$). Both variables simultaneously had a significant effect on compliance ($F = 40.803$; $p < 0.001$) and explained 45.7% of its variance; the standardized coefficients were 0.482 for sanctions and 0.234 for audit risk. These findings indicated that the stronger the taxpayers' perceptions of audit risk and sanctions, the higher their compliance, which supported Deterrence Theory and the Theory of Planned Behavior. Clearer socialization of audit risk and consistent enforcement of sanctions were recommended.

Keywords: *Perceived Tax Audit Risk, Perceived Tax Sanctions, Tax Compliance, Individual Taxpayers, Deterrence Theory.*



A. INTRODUCTION

Taxes are the backbone of national development financing in Indonesia. In 2023, tax revenue reached IDR 1,869.2 trillion, equal to 108.8% of the target, with non-oil and gas income tax as the largest contributor at IDR 993.0 trillion, a growth of 7.9% from the previous year (Direktorat Jenderal Pajak [DJP], 2024). This growth, however, slowed markedly compared with the 34.3% surge recorded in 2022, which signals that substantial tax potential remains untapped because of the compliance gap. Under the self-assessment system adopted in Indonesia since the 1984 tax reform, taxpayers are trusted to calculate, pay, and report their own tax obligations (Resmi, 2022), so the quality and consistency of compliance determine the effectiveness of tax collection.

Micro, small, and medium enterprises (MSMEs) occupy a strategic position in the Indonesian economy. They contribute around 61.07% of gross domestic product and absorb more than 97% of the national workforce (Kementerian Koperasi dan UKM, 2023). Their contribution to tax revenue, however, is not proportional to their economic role. Indonesia's tax ratio remains at around 10–11% of gross domestic product, far below the 15–20% average of developing countries, which is largely

attributed to the low compliance of MSME actors (Kementerian Keuangan, 2023). Under Law No. 7 of 2021 on the Harmonization of Tax Regulations and Government Regulation No. 55 of 2022, MSMEs with annual gross turnover not exceeding IDR 500 million are exempt from income tax, while those with turnover above IDR 500 million up to IDR 4.8 billion are subject to a final income tax of 0.5% of gross turnover (Republik Indonesia, 2021, 2022). This simple and light regime was designed to lower compliance barriers, yet the compliance of MSME actors as individual taxpayers remains far from expectations. Of the approximately 64 million MSME units operating in Indonesia, only about 432 thousand were recorded as actively paying final income tax in 2023 (DJP, 2024).

A systematic literature review of MSME compliance studies by Solihat et al. (2024) concluded that low compliance is multidimensional, covering administrative aspects (low filing of annual tax returns), material aspects (reporting below actual turnover), and aspects of knowledge and perception. Most relevant to the present study is the finding that taxpayers' perceptions of audit risk and of the consequences of sanctions are key determinants of compliance, more so than the nominal tax burden, which is already very light for MSMEs. Pohan (2017) explains that, under self-assessment, compliance is shaped by two mechanisms: voluntary compliance, which arises from internal awareness, and enforced compliance, which is formed through law enforcement such as audits and sanctions. For MSME actors, who generally have limited tax knowledge, enforced compliance, especially the perception of audit risk and sanctions, tends to be more dominant in shaping compliance behavior.

The problem is even more pressing in North Sulawesi and Manado City. Bank Indonesia data (2025), as cited in Barometer (2025), show that the fiscal independence of North Sulawesi in 2024 reached only 15.84%, which falls into the very low category. At a more specific level, Lolowang et al. (2024) reported that the compliance of MSME taxpayers at the Manado Pratama Tax Office during 2021–2023 ranged only between 5% and 9%. This low compliance relates mainly to the annual income tax return of individual taxpayers, as most MSME actors in Manado had not been orderly in reporting and paying the 0.5% final income tax under Government Regulation No. 55 of 2022. According to the Manado City Department of Cooperatives and MSMEs (2026), 20,499 MSME units were registered in the city across 11 sub-districts, which forms the population basis of this study.

Research on tax sanctions has also produced inconsistent findings. Some studies reported a positive and significant effect of sanctions on compliance (Alting et al., 2024; Antameng et al., 2024), whereas others found no significant effect (The et al., 2024; Yoga & Dewi, 2022). The review by Solihat et al. (2024) indicates that perceived sanctions yield more consistent results than objective sanctions. In Manado specifically, The et al. (2024) found that tax sanctions did not significantly affect the compliance of individual taxpayers who own MSMEs. This finding calls for further research on why objectively stipulated sanctions fail to shape MSME compliance, with an emphasis on taxpayers' subjective perceptions.

Several research gaps motivate this study. First, no study has specifically and comprehensively examined the effect of perceived tax audit risk on the compliance of individual taxpayers who operate MSMEs in Manado City using valid and current MSME population data from the local Department of Cooperatives and MSMEs. Second, previous research in Manado, such as The et al. (2024), treated tax sanctions as an objective variable rather than a perceptual variable, so the perceptual approach, which better reflects the psychological side of taxpayers, has not been tested for MSMEs in Manado. Third, the effect of the MSME tax regime updated by Government Regulation No. 55 of 2022 on perception and compliance in Manado City has not been examined.

The novelty of this study lies in three aspects. First, audit risk and sanctions are measured as taxpayers' perceptions rather than as objective conditions, so the deterrence mechanism is tested at the level where compliance decisions are actually made. Second, both perceptions are tested together, which allows their relative contribution to be compared in a local setting where earlier findings on sanctions are mixed (The et al., 2024; Soda et al., 2021). Third, the study uses official MSME population data and covers all 11 sub-districts of Manado City.

Accordingly, this study aims to examine the effect of perceived tax audit risk and perceived tax sanctions, partially and simultaneously, on the compliance of individual taxpayers who operate MSMEs in Manado City. Compliance here refers to the fulfillment of individual income tax obligations, particularly the submission of the annual tax return. The findings are expected to provide empirical evidence for the Directorate General of Taxes and the Manado City Government in designing strategies to improve MSME tax compliance.

B. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

1. Deterrence Theory

Deterrence Theory in taxation is rooted in the economic model of tax evasion developed by Allingham and Sandmo (1972). The model holds that compliance depends on the taxpayer's rational weighing of the benefit of evading tax against the risk of being detected and sanctioned, with taxpayers assumed to maximize the expected utility of their after-tax income. Three main factors are identified: the probability of an audit, the penalty rate, and the tax rate. The higher the perceived probability of an audit, the higher the expected cost of noncompliance, so taxpayers tend to comply; heavier sanctions raise this expected cost further.

An important development of the theory is the recognition that the effectiveness of deterrence depends on taxpayers' perceptions, not only on objective audit and sanction conditions. Hulopi (2024) showed empirically that the implementation of tax audits significantly affects the compliance of individual taxpayers, and Ali et al. (2025) confirmed that audits encourage compliance by shaping taxpayers' perception of the probability that noncompliance will be detected. Even when audits are rarely conducted because of limited resources, a high perceived audit risk can still produce a deterrent effect. Pranama et al. (2026)

found that tax audits and sanctions simultaneously affect compliance in fulfilling individual income tax obligations, in line with the prediction of the model.

2. Theory of Planned Behavior

The Theory of Planned Behavior (Ajzen, 1991) explains human behavior as the outcome of a planned process rather than a spontaneous impulse. Behavior is formed by the intention to act, which is influenced by three factors: attitude toward the behavior, subjective norms, and perceived behavioral control (Agassy & Tanno, 2024). In the context of MSME tax compliance, attitudes toward compliance are formed by taxpayers' perception of the consequences of compliance and noncompliance, and this is where perceived audit risk and perceived sanctions play a crucial role. If MSME actors perceive a high risk of audit and heavy sanctions for noncompliance, they are likely to form a positive attitude toward compliance because compliance is judged to be more beneficial. Manullang and Khairudin (2024) confirmed that taxpayer attitude and moral obligation significantly affect the intention to comply, whereas subjective norms and behavioral control do not, which suggests that internal psychological dimensions play a central role in shaping compliance.

3. Tax Compliance of Individual Taxpayers Operating MSMEs

Tax compliance is defined as a condition in which taxpayers fulfill all their tax obligations and exercise their tax rights in accordance with the prevailing laws and regulations (Resmi, 2022). It comprises formal compliance, namely administrative obligations such as registration, timely submission of the annual tax return, and payment, and material compliance, namely the correct calculation and reporting of income. Pohan (2017) further distinguishes voluntary compliance, which arises from internal awareness and trust in the government, from enforced compliance, which arises from law enforcement mechanisms such as audits and sanctions.

Unlike employee taxpayers, whose income tax is withheld by the employer, individual taxpayers who operate MSMEs must independently calculate, pay, and report their tax under the self-assessment system. Their obligations include obtaining a taxpayer identification number (or using the population identification number as tax identity), calculating and paying income tax under the applicable regime, and submitting the annual individual income tax return no later than 31 March of the following year. These obligations are demanding for small business owners with limited administrative resources and varying levels of tax literacy.

4. Perceived Tax Audit Risk

Perceived tax audit risk is the taxpayer's subjective assessment of the probability of being audited by the tax authority (Ali et al., 2025). It differs fundamentally from actual audits, which are objective actions taken by tax officers. The perception is shaped by personal experience, by information received from the media, the social environment, or tax socialization, and by taxpayers' perception of

the effectiveness of the tax supervision system. In this study, perceived audit risk has two dimensions: (a) the perceived probability and thoroughness of audits, and (b) the perceived detection capability of the tax authority, that is, the belief that its systems and technology are able to detect inconsistencies or manipulation in tax reporting.

5. Perceived Tax Sanctions

Tax sanctions guarantee that tax laws and regulations will be obeyed and serve as a preventive instrument that keeps taxpayers from violating tax norms (Wau et al., 2023). Under the General Provisions and Tax Procedures Law as amended by Law No. 7 of 2021, sanctions are divided into administrative sanctions, which take the form of fines, interest, and surcharges, and criminal sanctions, which take the form of imprisonment and/or fines for more serious violations (Republik Indonesia, 2021). An example of an administrative sanction is the fine of IDR 100,000 for individual taxpayers who submit the annual tax return late or fail to submit it. Perceived tax sanctions are therefore taxpayers' subjective assessment of the legal and financial consequences they would receive if they failed to fulfill their tax obligations. This study measures them through two dimensions: (a) the perceived clarity and severity of sanctions, and (b) the perceived certainty and fairness of sanction enforcement. Throughout this study, perceived audit risk and perceived sanctions refer to taxpayers' subjective beliefs. They are distinct from the actual audit rate applied by the tax authority and from the sanctions legally stipulated, and both are measured only through respondents' ratings on the questionnaire.

6. Hypotheses Development

In the Allingham and Sandmo (1972) framework, a taxpayer who under-reports keeps the evaded tax if undetected but loses it, plus a penalty, if detected. Because this decision is made in advance, what enters the calculation is the taxpayer's subjective estimate of detection, not the audit rate actually applied. A higher perceived audit probability therefore lowers the expected utility of under-reporting. Through the Theory of Planned Behavior, the same perception shapes beliefs about the consequences of noncompliance and thus the attitude toward compliance (Ajzen, 1991). Earlier findings corroborate this expectation. Hulopi (2024) found a positive and significant effect of tax audits on individual taxpayer compliance at the Gorontalo Pratama Tax Office, and Ali et al. (2025) confirmed that the effectiveness of audits works through the formation of risk perception in taxpayers. Positive audit effects were also reported by Primasari and Hendrani (2022) and Lumban Gaol and Sarumaha (2022). Considering that MSME compliance in Manado is only 5–9% (Lolowang et al., 2024), a higher perception of audit risk is expected to raise compliance. Therefore, the first hypothesis is formulated as follows.

H₁: Perceived tax audit risk has a positive and significant effect on the compliance of individual taxpayers who operate MSMEs in Manado City.

The penalty enters the same calculation: the larger the loss a taxpayer expects upon detection, the lower the expected utility of under-reporting. Sanctions can deter only if taxpayers know them, expect them to be applied, and regard them as fair, which is why clarity, severity, certainty, and fairness are the perceived dimensions measured here. Earlier findings corroborate this expectation. Solihat et al. (2024) confirmed that taxpayers' perception of sanctions influences compliance more consistently than objective sanctions. Antameng et al. (2024) found a positive and significant effect of sanction firmness on MSME compliance in the Sangihe Islands Regency, and Soda et al. (2021) reported a positive and significant partial effect of tax sanctions on MSME compliance in Manado City. Although The et al. (2024) found that objective sanctions did not significantly affect MSME taxpayers in Manado, the perceptual approach adopted here is expected to yield more consistent results. Therefore, the second hypothesis is formulated as follows.

H₂: Perceived tax sanctions have a positive and significant effect on the compliance of individual taxpayers who operate MSMEs in Manado City.

Because the expected cost of noncompliance combines the probability of detection and the size of the penalty, a taxpayer who perceives severe sanctions but a negligible chance of detection (or the reverse) still faces a low expected cost. The two perceptions are therefore expected to complement each other in explaining compliance (Hulopi, 2024; Solihat et al., 2024), and the Theory of Planned Behavior supports this view by explaining that attitudes are formed by several interacting factors (Agassy & Tanno, 2024). Earlier findings corroborate this expectation. Pranama et al. (2026) found that tax audits and sanctions simultaneously have a significant effect on individual taxpayer compliance at the Madiun Pratama Tax Office. Therefore, the third hypothesis is formulated as follows.

H₃: Perceived tax audit risk and perceived tax sanctions simultaneously have a positive and significant effect on the compliance of individual taxpayers who operate MSMEs in Manado City.

The relationships are depicted in Figure 1.

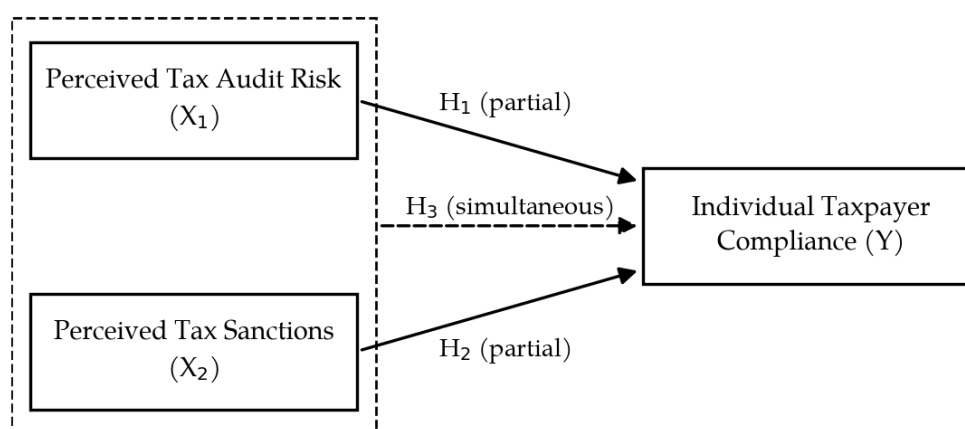


Figure 1. Conceptual Framework

Source: Authors' Work (2026)

C. METHOD

This study employed a quantitative survey approach with an explanatory research design. According to Sugiyono (2022), a survey collects data from a natural setting through questionnaires distributed to respondents, while explanatory research aims to explain the position of the variables studied and the causal relationships among them through hypothesis testing. The study was conducted in Manado City, North Sulawesi Province, Indonesia, from June to July 2026.

The population comprised all individual taxpayers who were MSME actors (owners or managers of micro, small, and medium enterprises) registered and operating in Manado City. The population size was determined from official data of the Manado City Department of Cooperatives and MSMEs (2026), which recorded 20,499 MSME units across 11 sub-districts: Bunaken (333), Bunaken Islands (538), Malalayang (2,861), Mapanget (1,761), Paal Dua (1,589), Sario (1,172), Singkil (3,131), Tikala (1,279), Tuminting (3,140), Wanea (2,772), and Wenang (1,923).

The sample was selected through purposive sampling, in which respondents are chosen on the basis of particular considerations in line with the research objectives (Sugiyono, 2022). Practical considerations of accessibility and willingness to complete the questionnaire guided the selection of respondents. The sample size was calculated with the Slovin formula at a 10% margin of error: $n = N / (1 + Ne^2) = 20,499 / (1 + 20,499 \times 0.1^2) = 20,499 / 205.99 \approx 99.51$, rounded up to 100 respondents. To ensure regional representation, nine respondents were drawn from each of the 11 sub-districts, with one additional respondent from Tuminting, the sub-district with the largest number of MSMEs, bringing the total to 100. Respondents had to meet the following criteria: (1) be the owner or main manager of an MSME in Manado City; (2) have a taxpayer identification number or use the population identification number as tax identity; (3) have an obligation to submit the annual individual income tax return; (4) have operated the business for at least one year; and (5) have submitted the annual individual income tax return.

Primary data were collected through a questionnaire on perceived tax audit risk, perceived tax sanctions, and compliance in submitting the annual tax return. Secondary data were obtained from books, journals, tax regulations, and publications of the Directorate General of Taxes. All items were measured on a five-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree) (Sugiyono, 2022). Each variable was measured with 10 items, so total scores ranged from 10 to 50. The operational definitions and measurement of the variables are summarized in Table 1. Instrument quality was evaluated by item-total correlations (Pearson) for validity and Cronbach's alpha for reliability; the results are reported in Table 3. Because all variables were self-reported perceptions, common-method bias was a concern. Procedurally, the questionnaire stated that there were no right or wrong answers, respondent names were optional, and respondents were asked to answer according to their own conditions and opinions. No statistical test of common-method bias was performed, and this is acknowledged as a limitation.

Perceived tax audit risk (X_1) is the subjective assessment and belief of MSME taxpayers about the possibility that the tax authority will audit their tax reports. Perceived tax sanctions (X_2) is the subjective assessment of MSME taxpayers about the legal and financial consequences they would face if they failed to fulfill their tax obligations. Individual taxpayer compliance (Y) is the behavior of MSME taxpayers in fulfilling all tax obligations in accordance with the prevailing regulations, covering both formal and material aspects.

Table 1. Operationalization of Research Variables

Variable	Dimensions	Items	Scale
Perceived tax audit risk (X_1)	(1) Perceived probability and thoroughness of audits; (2) perceived detection capability of the tax authority	10	Likert 1–5
Perceived tax sanctions (X_2)	(1) Perceived clarity and severity of sanctions; (2) perceived certainty and fairness of sanction enforcement	10	Likert 1–5
Taxpayer compliance (Y)	(1) Formal compliance (timely return submission, timely payment, no tax arrears); (2) material compliance (accuracy of calculation, completeness of return)	10	Likert 1–5

Source: Adapted from Manullang and Khairudin (2024), Solihat et al. (2024), and Resmi (2022).

Data were analyzed using IBM SPSS Statistics 29 in the following stages. First, descriptive statistics (mean, standard deviation, minimum, and maximum) were used to describe the data. Second, instrument quality was tested through validity and reliability tests. Validity was assessed with the Pearson product-moment correlation between each item score and the total score, and an item was considered valid when r -count exceeded r -table and significance was below 0.05. Reliability was assessed with Cronbach's alpha, and an instrument was considered reliable when alpha exceeded 0.60. Third, classical assumption tests were performed (Ghozali, 2021): normality of residuals with the Kolmogorov–Smirnov test (Asymp. Sig. > 0.05), multicollinearity with tolerance (> 0.10) and the variance inflation factor (VIF < 10), and heteroskedasticity with a scatterplot of standardized predicted values against studentized residuals. Fourth, the hypotheses were tested using the following multiple linear regression model: $Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + e$

where Y is individual taxpayer compliance, α is the constant, β_1 and β_2 are the regression coefficients, X_1 is perceived tax audit risk, X_2 is perceived tax sanctions, and e is the error term. The coefficient of determination (R^2) measured the model's ability to explain variation in the dependent variable, the t -test examined the partial effects (H_1 and H_2), and the F -test examined the simultaneous effect (H_3), all at a significance level of 0.05 (Ghozali, 2021).

D. RESULTS AND DISCUSSION

1. Respondents Characteristic

The study was conducted in Manado City, the center of government and economic activity in North Sulawesi. The distribution of MSMEs across the 11 sub-districts is uneven. The largest concentrations are in Tuminting (3,140 units, 15.32% of the total), Singkil (3,131 units, 15.27%), and Malalayang (2,861 units, 13.96%), which are centers of trade and people's economic activity. The smallest numbers are in Bunaken (333 units, 1.62%) and Bunaken Islands (538 units, 2.62%), areas whose island character limits economic activity and accessibility. The 100 respondents were spread across all 11 sub-districts, with nine respondents in each of ten sub-districts and ten respondents in Tuminting.

2. Descriptive Statistics

Table 2 presents the descriptive statistics of the three variables. The mean scores were 41.65 for perceived tax audit risk, 41.32 for perceived tax sanctions, and 40.88 for compliance. Dividing the theoretical score range of 10–50 into five equal class intervals (class width = 8), all three means fall in the high category (34–42). This indicates that MSME taxpayers in Manado generally perceive a high risk of being audited, regard tax sanctions as firm and burdensome, and report a fairly high level of compliance. The high compliance score should be interpreted with caution, however, because it is based on respondents' self-reports and because only taxpayers who had submitted the annual tax return at least once were included in the sample. It therefore need not contradict the low official compliance rate of 5–9% reported by Lolowang et al. (2024).

Table 2. Descriptive Statistics of Research Variables

Variable	N	Minimum	Maximum	Mean	SD	Range
Perceived Tax Audit Risk (X_1)	100	30	47	41.65	3.658	17
Perceived Tax Sanctions (X_2)	100	30	50	41.32	3.944	20
Taxpayer Compliance (Y)	100	30	48	40.88	4.132	18

Source: Primary data processed with IBM SPSS Statistics 29 (2026).

3. Instrument Quality Tests

With 100 respondents and a significance level of 5%, the r-table value was 0.196. As shown in Table 3, all 30 items had r-count values above this threshold and significance values below 0.05. The r-count values ranged from 0.281 to 0.660 for perceived tax audit risk, from 0.319 to 0.696 for perceived tax sanctions, and from 0.296 to 0.627 for compliance. All items were therefore declared valid.

Cronbach's alpha was 0.646 for perceived tax audit risk, 0.654 for perceived tax sanctions, and 0.626 for compliance. All values exceeded the minimum threshold of 0.60, so the instrument was declared reliable for measuring the research variables consistently.

Table 3. Results of Validity and Reliability Tests

Variable	Items	Range of <i>r</i> -count	Cronbach's alpha	Conclusion
Perceived Tax Audit Risk (X_1)	10	0.281–0.660	0.646	Valid and reliable
Perceived Tax Sanctions (X_2)	10	0.319–0.696	0.654	Valid and reliable
Taxpayer Compliance (Y)	10	0.296–0.627	0.626	Valid and reliable

Note: r -table = 0.196 ($n = 100$, $\alpha = 5\%$).

Source: Primary data processed with IBM SPSS Statistics 29 (2026).

4. Classical Assumption Tests

The classical assumption tests are summarized in Table 4. The histogram and the normal P–P plot of the standardized residuals showed a pattern close to normal distribution, and the One-Sample Kolmogorov–Smirnov test gave a test statistic of 0.085 with an Asymp. Sig. (2-tailed) of 0.070, which is above 0.05, so the residuals were normally distributed. Tolerance was 0.434 and VIF was 2.303 for both independent variables, indicating that the two perceptions are fairly closely related but remain far from the threshold of multicollinearity. The scatterplot of standardized predicted values against studentized residuals showed points scattered randomly above and below zero without a clear pattern, so heteroskedasticity did not occur. The regression model therefore met the classical assumptions.

Table 4. Results of Classical Assumption Tests

Test	Result	Criterion	Conclusion
Normality (Kolmogorov–Smirnov)	Asymp. Sig. (2-tailed) = 0.070	> 0.05	Residuals normally distributed
Multicollinearity	Tolerance = 0.434 and VIF = 2.303 (X_1 and X_2)	Tolerance > 0.10 ; VIF < 10	No multicollinearity
Heteroskedasticity	Scatterplot: points spread randomly, no clear pattern	No clear pattern	No heteroskedasticity

Source: Primary data processed with IBM SPSS Statistics 29 (2026).

5. Multiple Linear Regression and Hypothesis Testing

Table 5 presents the regression results. The estimated regression equation is $Y = 8.997 + 0.264X_1 + 0.505X_2 + e$. The constant of 8.997 is the predicted compliance score when both perception scores are zero; it is a mathematical baseline only, because the lowest possible total score of each variable is 10. The coefficient of X_1 (0.264) indicates that each one-unit increase in perceived tax audit risk raises compliance by 0.264 units, holding perceived tax sanctions constant. The coefficient of X_2 (0.505) indicates that each one-unit increase in perceived tax sanctions raises compliance by 0.505 units, holding perceived audit risk constant.

Table 5. Results of Multiple Linear Regression Analysis

Variable	B	Std. Error	Beta	t	Sig.
(Constant)	8.997	3.646	–	2.467	0.015
Perceived Tax Audit Risk (X_1)	0.264	0.128	0.234	2.060	0.042
Perceived Tax Sanctions (X_2)	0.505	0.119	0.482	4.247	< 0.001

Note: Dependent variable = taxpayer compliance (Y).

Source: Primary data processed with IBM SPSS Statistics 29 (2026).

The partial test used a t-table value of 1.985 ($df = 97$, $\alpha = 5\%$, two-tailed). Perceived tax audit risk had a t-count of 2.060 ($p = 0.042$), which exceeds the t-table value and has a significance below 0.05, so H_1 was supported. Perceived tax sanctions had a t-count of 4.247 ($p < 0.001$), so H_2 was supported. The standardized coefficients show that perceived tax sanctions ($\beta = 0.482$) had a relatively more dominant effect on compliance than perceived tax audit risk ($\beta = 0.234$). The simultaneous test produced an F-count of 40.803 with a significance below 0.001 ($df = 2$ and 97), so H_3 was supported. The model had $R = 0.676$, $R^2 = 0.457$, and adjusted $R^2 = 0.446$, meaning that perceived tax audit risk and perceived tax sanctions together explained 45.7% of the variation in compliance, while the remaining 54.3% was explained by factors outside the model. The results of the hypothesis tests are summarized in Table 6.

Statistical significance should be read together with effect size. Because both variables were measured on a 10–50 scale, a one-standard-deviation increase in perceived audit risk ($SD = 3.658$) corresponds to a predicted increase of about 0.97 points in compliance (about 0.23 SD of compliance), whereas the same increase in perceived sanctions ($SD = 3.944$) corresponds to about 1.99 points (about 0.48 SD). The 95% confidence interval was 0.010–0.518 for audit risk and 0.269–0.741 for sanctions. The lower bound for audit risk is close to zero and its p-value (0.042) is only just below 0.05, so the audit-risk result should be treated as modest and less robust than the sanction result. Because the data are cross-sectional, the coefficients describe associations that are consistent with, but do not prove, a causal effect.

Table 6. Summary of Hypothesis Testing

Hypothesis	Statistical Result	Direction	Decision
H_1	$t = 2.060 > 1.985$; $p = 0.042$ ($X_1 \rightarrow Y$)	Positive	Supported
H_2	$t = 4.247 > 1.985$; $p < 0.001$ ($X_2 \rightarrow Y$)	Positive	Supported
H_3	$F = 40.803$; $p < 0.001$; $R^2 = 0.457$ (X_1 and $X_2 \rightarrow Y$)	Positive	Supported

Source: Primary data processed with IBM SPSS Statistics 29 (2026).

6. Effect of Perceived Tax Audit Risk on Compliance

The results show that perceived tax audit risk has a positive and significant effect on the compliance of individual taxpayers who operate MSMEs in Manado City. The more strongly taxpayers perceive the possibility of being audited, the ability of audits to uncover discrepancies, and the effectiveness of tax supervision, the more likely they are to fulfill their tax obligations. This finding is explained by Deterrence Theory (Allingham & Sandmo, 1972): when taxpayers perceive that an audit is likely and capable of detecting noncompliance, the perceived cost of

noncompliance rises, which encourages them to be more careful in carrying out their obligations. It is also consistent with the finding of Hulopi (2024) that tax audits significantly affect individual taxpayer compliance, as well as with the positive audit effects reported by Primasari and Hendrani (2022) and Lumban Gaol and Sarumaha (2022). Because the present study measured perceptions rather than actual audits, it supports the argument of Ali et al. (2025) that audits promote compliance by shaping taxpayers' perception of detection.

7. Effect of Perceived Tax Sanctions on Compliance

Perceived tax sanctions also have a positive and significant effect on compliance. The clearer, firmer, more certain, and more consequential taxpayers perceive tax sanctions to be, the higher their tendency to comply. This result is in line with Deterrence Theory, which holds that the larger the consequences expected from a violation, the stronger the incentive to avoid noncompliance. It is consistent with Antameng et al. (2024), Soda et al. (2021), and Mardhatilla et al. (2023), who found positive and significant effects of sanctions on MSME taxpayer compliance. It differs from The et al. (2024), who found no significant effect of objective sanctions on MSME taxpayers in Manado. One possible explanation, consistent with the review of Solihat et al. (2024), is that the perceptual measurement used here captures how taxpayers actually experience sanctions better than objective sanction provisions do; this explanation should be tested further because the two studies differ in several other respects.

Perceived tax sanctions also had the larger standardized coefficient (0.482 versus 0.234), indicating that among MSME taxpayers in Manado, the perceived consequences of noncompliance weigh more heavily on compliance than the perceived chance of being audited. In other words, the more clear, certain, and fair the sanctions are perceived to be, the stronger the taxpayers' tendency to comply.

These results concern what taxpayers believe, not what the tax authority does. Perceived audit probability may differ from the actual audit rate, and perceived sanctions may differ from the sanctions legally imposed; the findings show that beliefs matter for compliance, but they do not show that more audits or heavier legal penalties would raise compliance. In the local context, the official compliance rate of 5–9% (Lolowang et al., 2024) contrasts with the high self-reported compliance in this sample, which suggests that respondents' perceptions may be more favorable than actual behavior. The dispersed island sub-districts (Bunaken and Bunaken Islands) may also differ in exposure to tax socialization, which this study could not test.

8. Simultaneous Effect and Coefficient of Determination

Perceived tax audit risk and perceived tax sanctions together have a significant effect on compliance. The two perceptions complement each other: perceived audit risk relates to the probability that noncompliance will be discovered, while perceived sanctions relate to the consequences once it is discovered. When taxpayers perceive both a real possibility of an audit and serious consequences for

violations, their drive to comply becomes stronger. This finding agrees with Deterrence Theory, which places the probability of detection and the severity of sanctions together as determinants of the compliance decision, and with the Theory of Planned Behavior (Ajzen, 1991), in which perceptions of consequences form attitudes and intentions that lead to compliance behavior. It also agrees with Pranama et al. (2026), who found a simultaneous effect of tax audits and sanctions on individual taxpayer compliance.

The coefficient of determination of 0.457 is fairly good for social and behavioral research, given that tax compliance is human behavior that is difficult to explain fully with only one or two variables. The remaining 54.3% is likely explained by other factors identified in earlier studies and not included in this model, such as tax knowledge (The et al., 2024), taxpayer awareness (Antameng et al., 2024), and perceived tax fairness (Soda et al., 2021).

The findings suggest that strengthening both perceptions is an effective strategy to raise MSME tax compliance. For the Directorate General of Taxes and the Manado Pratama Tax Office, socialization that explains clearly and understandably how audits are conducted and what sanctions apply may raise perceived audit risk and sanction awareness without increasing the frequency of actual audits. Consistent and fair enforcement of sanctions is also important, since the perceived certainty and fairness of sanctions is part of what forms taxpayers' perception. For the Manado City Government and the Department of Cooperatives and MSMEs, MSME empowerment policies can be oriented toward tax compliance.

E. CONCLUSIONS

This study concludes that (1) perceived tax audit risk has a positive and significant effect on the compliance of individual taxpayers who operate MSMEs in Manado City ($t = 2.060$; $p = 0.042$); (2) perceived tax sanctions have a positive and significant effect and are the more dominant variable ($t = 4.247$; $p < 0.001$; $\beta = 0.482$ versus 0.234); and (3) both variables simultaneously have a significant effect on compliance ($F = 40.803$; $p < 0.001$) and explain 45.7% of its variation. The findings support Deterrence Theory and the Theory of Planned Behavior: the stronger taxpayers' perception of audit risk and sanctions, the higher their compliance.

Based on these findings, the Directorate General of Taxes and the Manado Pratama Tax Office are advised to keep strengthening supervision of individual taxpayers who operate MSMEs and to socialize audit and sanction provisions in a clear and easily understood way. MSME taxpayers are encouraged to comply not only out of fear of audits or sanctions but also out of an understanding that compliance is part of their responsibility as taxpayers. Practically, the findings point to taxpayer education and clear communication of audit procedures and sanction provisions, together with consistent and fair application of the sanctions already stipulated by law, as ways to strengthen compliance. These recommendations are proportionate to a model that explains 45.7% of the variance and rests on perceptual, cross-sectional data.

This study has several limitations. The sample ($n = 100$) was selected purposively in one city and included only taxpayers who had submitted the annual return, so the results cannot be generalized. All variables were self-reported perceptions measured at one point in time, which exposes the results to common-method bias and prevents causal conclusions. The reliability coefficients (0.626–0.654) were acceptable but modest, and the audit-risk effect was only marginally significant. Future research may use larger probability samples, include actual audit and filing records, test additional variables such as tax knowledge, taxpayer awareness, and perceived fairness, and use longitudinal or experimental designs.

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