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Tax Compliance Among Generation Z Taxpayers in Medan Deli District: The Role of Tax System Digitalization, Tax Awareness, and Tax Understanding

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ABSTRACT

This study investigates how Tax System Digitalization, Tax Awareness, and Tax Understanding relate to Tax Compliance among Generation Z taxpayers in Medan Deli District. Using a quantitative design, primary data were gathered from questionnaires completed by 100 respondents selected through incidental sampling. Multiple linear regression and additional statistical tests were conducted using Statistical Package for the Social Sciences (SPSS) version 25. All three variables showed positive, statistically significant associations with Tax Compliance: Tax System Digitalization ($B = 0.206$, $t = 3.067$, $p = 0.003$), Tax Awareness ($B = 0.481$, $t = 6.685$, $p < 0.001$), and Tax Understanding ($B = 0.348$, $t = 5.061$, $p < 0.001$). The regression model was significant, $F(3,96) = 55.191$, $p < 0.001$, explaining 63.3% of the variation in Tax Compliance ($R^2 = 0.633$; Adjusted $R^2 = 0.622$). Thus, higher digitalization, awareness, and understanding of taxation corresponded to greater compliance among the Generation Z taxpayers surveyed.

Keywords: *Generation Z Taxpayers, Tax Awareness, Tax Compliance, Tax System Digitalization, Tax Understanding*

INTRODUCTION

Taxes constitute the main source of state revenue for development and public expenditure (Simbolon et al., 2026). They drive economic activity, finance public facilities, and sustain government operations. (Sintiawati et al., 2026), emphasise that taxation is fundamental to state financing, as government programmes may be disrupted without tax revenue. According to (Supramono & Theresia, 2010), define taxes as contributions without direct reciprocal benefits (counterprestations), which can be allocated to public expenditure. Society instead receives these benefits indirectly. To maximise tax collection, the government pursues legislative measures, tax-system digitalisation, and tax education to strengthen public knowledge, awareness, and willingness to pay voluntarily. However, growth in the number of registered taxpayers does not necessarily ensure consistent fulfilment of tax obligations. Taxpayer compliance therefore remains essential to tax administration because effective collection depends on both government policies and administrative systems and taxpayers' willingness to fulfil their obligations.

To emphasise the importance of tax payments, the Indonesian government introduced a self-assessment system allowing taxpayers to calculate, pay, and report their own tax obligations. Although regarded as efficient and modern, its implementation still faces

challenges, particularly taxpayer compliance (Sintiawati et al., 2026). (Riyanto & Ningsih, 2021) describe compliance as taxpayers' adherence to applicable tax rules and regulations. High compliance is therefore essential to maximising tax revenue and supporting national development.
Tax system digitalization may improve taxpayer compliance. (Rangga & Nugraha, 2025), define digital tax administration as the use of information and communication technology to streamline administrative processes, marking a major shift in fiscal management. Through the integrated Coretax platform, digitalisation facilitates NPWP registration, tax payments, and SPT filing. Digital tax systems can also strengthen state revenue by reducing potential leakages and improving administrative efficiency, thereby supporting greater taxpayer compliance.

However, the availability of digital tax services needs to be accompanied by taxpayers' awareness of their tax obligations. According to (Supriatiningsih & Jamil, 2021), to be tax conscious is to be well-versed in, understand, respect, and adhere to all relevant tax laws and regulations, and to take one's tax responsibilities seriously and want to see them through to completion. As a result, everyone has a responsibility to contribute to the national economy by paying their fair share of taxes in a spirit of national solidarity and mutual aid (Hek & Gani, 2023). If taxpayer awareness continues to be enhanced through ongoing socialization and education, it has the potential to increase taxpayer compliance.

Alongside taxpayer awareness and tax system digitalisation, tax understanding is essential to compliance. According to (Limbong et al., 2023), tax understanding as knowledge of Indonesia's tax collection procedures and applicable regulations. Such knowledge helps taxpayers fulfil their obligations and follow provisions concerning sanctions, circulars, and decrees. Greater tax understanding may therefore enable taxpayers to meet their obligations correctly and in accordance with prevailing regulations.

Having grown up amid rapid technological advances, Generation Z is a relevant group for studying taxpayer compliance in an increasingly digitalised tax system (I Dewa Gede Soni Aryawan ATD, 2022). However, digital familiarity does not guarantee tax awareness, understanding, or compliance. This study therefore focuses on eligible Generation Z taxpayers in Medan Deli District to examine these factors within a defined taxpayer population rather than among young people generally.

Previous studies have generally reported positive relationships with Tax Compliance, although their findings are not entirely consistent. (Supriyati et al., 2025) linked tax digitalization and Tax Awareness positively to compliance. (Wulandari, 2021) found positive effects for e-filing and e-invoicing, but not e-billing. Tax Awareness was positively associated with compliance in (Nafiah et al., 2021) and (Le et al., 2024), whereas (Caroline et al., 2023) and (Saputri & Nugraha, 2024) reported positive links for Tax Understanding. Differences in variables and populations leave the separate and joint relationships of these three predictors understudied among Generation Z taxpayers in Medan Deli District. To provide demographic context, Table 1 presents the population aged 15–29 years in Medan Deli District based on Statistics Indonesia (BPS) data.

Table 1.
Population Aged 15-29 Years in Medan Deli District

Age Group (Years)	Total
15 – 19	18,523
20 – 24	17,763
25 – 29	16,479
Total	**52,765**

Table 1 shows 52,765 Medan Deli residents aged 15–29 in 2025, not the number of registered Generation Z taxpayers. This study addresses the research gap by assessing the partial and simultaneous relationships of Tax System Digitalization, Tax Awareness, and Tax Understanding with Tax Compliance among eligible Generation Z taxpayers in the district.

LITERATURE REVIEW

Theoretical Foundation

The Theory of Planned Behavior (TPB), introduced by (Ajzen, 1991) explains that behavioral intentions are influenced by attitudes, subjective norms, and perceived behavioral control. This teory has also been examined in more recent research by (Hagger & Hamilton, 2024). In the context of taxation, Tax Awareness is conceptually related to attitudes toward tax obligations, while Tax Understanding and Tax System Digitalization may support taxpayers' perceived ability to comply with tax regulations. Therefore, TPB provides a supporting theoretical perspective for examining the relationships between these three variables and Tax Compliance. However, the original TPB constructs are not directly tested in this study.

Tax Compliance

(Hidayat & Maulana, 2022), describe tax compliance as taxpayers' willingness to fulfil obligations that support national development. (Liberty et al., 2023) wh emphasise fulfilling tax duties under applicable regulations, while (Munyati et al., 2024) highlight adherence to prescribed provisions and procedures (Permata & Zahroh, 2022) examined tax compliance in relation to tax understanding, rates, and sanctions. This study uses six questionnaire indicators covering tax calculation, correct return preparation, timely filing and payment, and accurate reporting, as discussed by (Daryatno, 2023) and (Lubis et al., 2019). Their wording represents the present study's operationalization, not a verbatim instrument adopted from those two publications:

1. Calculating taxes correctly.
2. Paying taxes on time.
3. Filling out the tax return (SPT) correctly.
4. Submitting the tax return (SPT) on time.
5. Remitting the tax due on time.
6. Reporting the owed taxes accurately.

Tax System Digitalization

According to (Juniarti et al., 2025), tax system digitalization uses information technology for tax registration, reporting, and payment. (Zahro & Machdar, 2024) highlight its role in improving government tax procedures amid digital advances, while (Mardiana et al., 2025) describe it as a transformation of tax administration aimed at enhancing efficiency, effectiveness, transparency, and compliance. In this study, Tax System Digitalization refers to administrative support delivered through digital tax services. Greater transparency, efficiency, accuracy, and accessibility are expected to help taxpayers fulfil their obligations and be positively related to Tax Compliance. The four study-specific dimensions align with discussions of digital tax services (Juniarti et al., 2025) and e-filing implementation aspects described by (Gultom et al., 2022). They should not be presented as four verbatim questionnaire indicators from (Juniarti et al., 2025):

1. Transparency of digital tax services.
2. Efficiency of tax processes.
3. Accuracy of tax reporting and payment processes.
4. Ease of access and use of digital tax services.

Tax Awareness

(Herviana & Halimatusadiah, 2022) associate Tax Awareness with recognising the need to pay taxes, while (Meidiyustiani et al., 2022) emphasise taxpayers' sincere willingness

to meet payment obligations (Hidayat & Maulana, 2022) further link awareness to understanding tax duties and regulations and fulfilling them accurately and voluntarily, without external pressure. In this study, Tax Awareness denotes recognition of taxation as a legal responsibility and willingness to fulfil that obligation. Greater awareness is therefore expected to encourage compliance and show a positive relationship with Tax Compliance. The three awareness indicators discussed in (Hidayat & Maulana, 2022) are used here with study-specific item wording:

1. Realisation that paying taxes is a way to actively assist the growth of one's country.
2. Realisation that the state suffers when tax payments are postponed or reduced.
3. The knowledge that taxes are legal and obligatory.

Tax Understanding

According to (Abdullah et al., 2022), suggest that understanding tax laws increases awareness of obligations and supports timely, full payment. (Hanifah et al., 2023) define Tax Understanding as comprehending tax regulations, while (Gultom et al., 2022) emphasise applying tax knowledge when paying taxes. In this study, Tax Understanding covers knowledge of tax procedures, regulations, systems, and functions and is expected to be positively related to Tax Compliance by supporting accurate fulfilment of obligations. Of the four dimensions described by (Gultom et al., 2022) this study adopts three, excluding tax sanctions from the questionnaire:

1. Understanding related to the procedures and general provisions of taxation.
2. Understanding related to the regulations and taxation system in Indonesia.
3. Understanding related to the functions of taxation.

Four research variables were assessed through 16 indicators adapted from prior studies, comprising 32 questionnaire items. Each indicator had two items rated on a five-point Likert scale. Table 2 summarizes the indicators, item codes, sources, and scales.

Table 2.
Measurement of Research Variables

Variable	Indicator and Item Code	Source	Scale
Tax Compliance (Y)	1. Calculating taxes correctly (Y.1–Y.2)	Daryatno (2023); (Lubis et al., 2019)	Likert (5 point)
	2. Paying taxes on time (Y.3–Y.4)		
	3. Filling out the tax return (SPT) correctly (Y.5–Y.6)		
	4. Submitting the tax return (SPT) on time (Y.7–Y.8)		
	5. Remitting the tax due on time (Y.9–Y.10)		
	6. Reporting the owed taxes accurately (Y.11–Y.12)		
Tax System Digitalization (X_1)	1. Transparency of digital tax services (X1.1–X1.2)	Juniarti et al. (2025); (Gultom et al., 2022)	
	2. Efficiency of taxation processes (X1.3–X1.4)		
	3. Accuracy of tax reporting and payment processes (X1.5–X1.6)		
	4. Ease of access and use of digital tax services (X1.7–X1.8)		
Tax Awareness (X_2)	1. Realisation that paying taxes is a way to actively assist the growth of one's country (X2.1–X2.2)	(Hidayat & Maulana, 2022)	
	2. Realisation that the state suffers when tax payments are postponed or reduced (X2.3–X2.4)		

	3. The knowledge that taxes are legal and obligatory (X2.5–X2.6)	
Tax Understanding (X_3)	1. Understanding related to the procedures and general provisions of taxation (X3.1–X3.2) 2. Understanding related to the regulations and taxation system in Indonesia (X3.3–X3.4) 3. Understanding related to the functions of taxation (X3.5–X3.6)	(Gultom et al., 2022) [3 of 4 selected]

Note. "Source" identifies literature relevant to the conceptual dimensions; the 32 questionnaire items retain the wording used in this study and are not claimed to be copied verbatim from a single published instrument. For X3, three of the four dimensions discussed by (Gultom et al., 2022) were selected. The two payment-timeliness indicators for Y are conceptually related.

Based on the theoretical discussion and previous studies, Tax System Digitalization (X1) is expected to facilitate Tax Compliance (Y) through accessible and efficient digital tax services. Tax Awareness (X2) may encourage taxpayers to fulfill their obligations voluntarily, while Tax Understanding (X3) may help taxpayers comply with tax regulations and procedures correctly. These proposed relationships form the basis of the conceptual framework presented below:

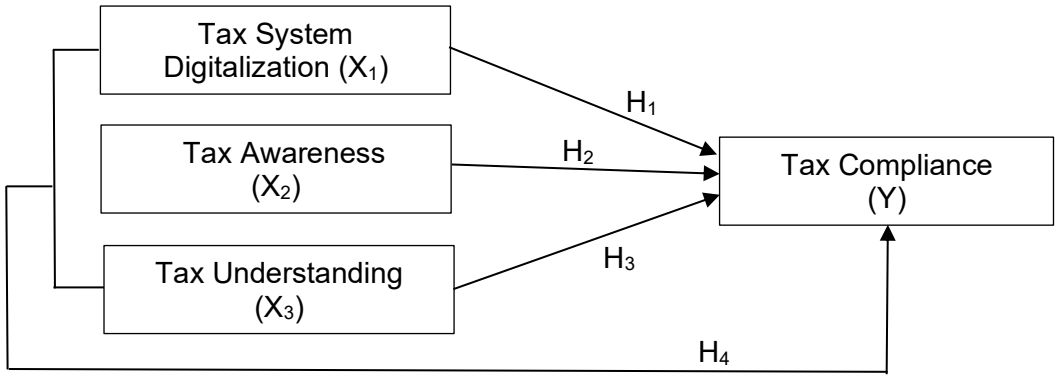


Figure 1. Conceptual Framework

The framework outlines the expected relationships among Tax System Digitalization, Tax Awareness, Tax Understanding, and Tax Compliance. H1–H3 assess the predictors separately, whereas H4 tests their combined significance using the overall F-test, not interaction effects. The hypotheses are:

H_1: Tax System Digitalization positively affects Tax Compliance

H_2: Tax Awareness positively affects Tax Compliance

H_3: Tax Understanding positively affects Tax Compliance

H_4: Tax System Digitalization, Tax Awareness, and Tax Understanding simultaneously affect Tax Compliance

RESEARCH METHOD

This research conducted between July and October 2026, this quantitative study used primary data from surveys of Generation Z taxpayers in Medan Deli District. According to (Ilmie et al., 2022), primary data are gathered to address research problems or objectives through methods such as surveys or observations, while quantitative research involves collecting and measuring numerical data. According to (Rianto, 2024). The target population consisted of Generation Z taxpayers residing in Medan Deli District,

with Generation Z defined as individuals aged 15–29 years (Karimi & Efendi, 2026). As reported in Table 1, Central Statistics Agency (BPS) data show 52,765 residents aged 15–29 in the district. This figure reflects the demographic age-group population rather than the exact number of registered Generation Z taxpayers.

This study used incidental sampling, in which participants are recruited through chance encounters (Muhammad Taufiq Azhari et al., 2023). During data collection, individuals encountered by the researcher were screened for age, residence in Medan Deli District, and NPWP or taxpayer registration status. Eligible individuals completed a Likert-scale questionnaire, yielding 100 respondents. The Slovin formula served solely as a reference for the target sample size; it neither establishes probability sampling nor guarantees a margin of error. Data analysis included validity, reliability, and descriptive tests, followed by classical assumption tests (normality, multicollinearity, and heteroskedasticity), multiple linear regression, partial and simultaneous hypothesis tests, and the coefficient of determination (R^2).

RESULT

Validity Test

According to (Yulia et al., 2023), Validity testing examines item accuracy and research-framework clarity. A separate pilot survey of 30 respondents preceded the main study. Each item was correlated with its variable total using Pearson correlations. At $\alpha = 0.05$ (two-tailed) and df = 28 (n − 2), the critical value was 0.361. All 32 items exceeded this value and were deemed valid.

Table 3.
Validity Test Results

Item Number	R-Count	R-Table	Criteria	Result
Tax System Digitalization (X_1)				
X1.1	0.687	0.361	R-Count > R-Table	Valid
X1.2	0.590	0.361	R-Count > R-Table	Valid
X1.3	0.776	0.361	R-Count > R-Table	Valid
X1.4	0.729	0.361	R-Count > R-Table	Valid
X1.5	0.539	0.361	R-Count > R-Table	Valid
X1.6	0.750	0.361	R-Count > R-Table	Valid
X1.7	0.627	0.361	R-Count > R-Table	Valid
X1.8	0.688	0.361	R-Count > R-Table	Valid
Tax Awareness (X_2)				
X2.1	0.768	0.361	R-Count > R-Table	Valid
X2.2	0.540	0.361	R-Count > R-Table	Valid
X2.3	0.851	0.361	R-Count > R-Table	Valid
X2.4	0.774	0.361	R-Count > R-Table	Valid
X2.5	0.594	0.361	R-Count > R-Table	Valid
X2.6	0.865	0.361	R-Count > R-Table	Valid
Tax Understanding (X_3)				
X3.1	0.721	0.361	R-Count > R-Table	Valid
X3.2	0.570	0.361	R-Count > R-Table	Valid
X3.3	0.869	0.361	R-Count > R-Table	Valid
X3.4	0.659	0.361	R-Count > R-Table	Valid
X3.5	0.578	0.361	R-Count > R-Table	Valid
X3.6	0.792	0.361	R-Count > R-Table	Valid
Tax Compliance (Y)				
Y.1	0.754	0.361	R-Count > R-Table	Valid
Y.2	0.560	0.361	R-Count > R-Table	Valid
Y.3	0.594	0.361	R-Count > R-Table	Valid
Y.4	0.727	0.361	R-Count > R-Table	Valid
Y.5	0.593	0.361	R-Count > R-Table	Valid

Y.6	0.781	0.361	R-Count > R-Table	Valid
Y.7	0.742	0.361	R-Count > R-Table	Valid
Y.8	0.601	0.361	R-Count > R-Table	Valid
Y.9	0.679	0.361	R-Count > R-Table	Valid
Y.10	0.692	0.361	R-Count > R-Table	Valid
Y.11	0.630	0.361	R-Count > R-Table	Valid
Y.12	0.707	0.361	R-Count > R-Table	Valid

Source: Processed data, 2026

Reliability Test

According to (Sugeng Lubar Prastowo, 2021), examining how consistently and steadily respondents answer research questionnaire questions or assertions structured in a construct is known as reliability testing. We use the Cronbach Alpha (α) test to do reliability testing. If each variable's Cronbach's Alpha value is more than 0.60, the reliability test results indicate a minimal reliability level.

Table 4.
Reliability Test Results

Variable	Cronbach's Alpha	Description
Tax System Digitalization	0.766	Reliable
Tax Awareness	0.786	Reliable
Tax Understanding	0.776	Reliable
Tax Compliance	0.762	Reliable

Source: Processed data, 2026

The Cronbach's Alpha values for all variables exceed 0.60, indicating an acceptable level of internal consistency among the questionnaire items used to measure each variable. These results indicate reliability under the criterion applied in this study but do not, by themselves, establish construct validity.

Descriptive Statistics

According to (Siregar, 2023), the goal of descriptive statistics is to make data more understandable by describing, illustrating, explaining, or elaborating on it. Composite scores were calculated by summing item responses, with theoretical ranges of 8–40 (X1), 6–30 (X2), 6–30 (X3), and 12–60 (Y). All items were scored in the same direction, with no reverse coding or missing values.

Table 5.
Descriptive Statistical Test Results

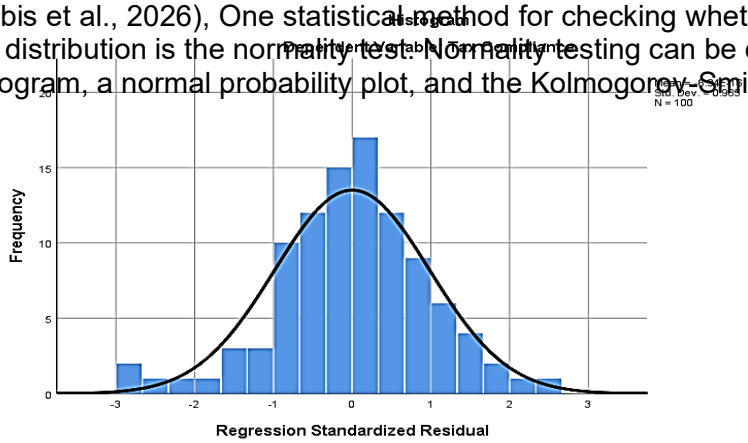
	Descriptive Statistics				
	N	Minimum	Maximum	Mean	Std. Deviation
Tax System Digitalization	100	13	35	25.50	5.064
Tax Awareness	100	11	29	20.53	4.580
Tax Understanding	100	8	28	21.38	4.213
Tax Compliance	100	23	45	33.13	4.469
Valid N (listwise)	100				

Source: Processed data, 2026

As shown in Table 5, the observed scores ranged from 13 to 35 for Tax System Digitalization, 11 to 29 for Tax Awareness, 8 to 28 for Tax Understanding, and 23 to 45 for Tax Compliance. These values represent observed composite scores rather than the theoretical minimum and maximum scores.

Normality Test

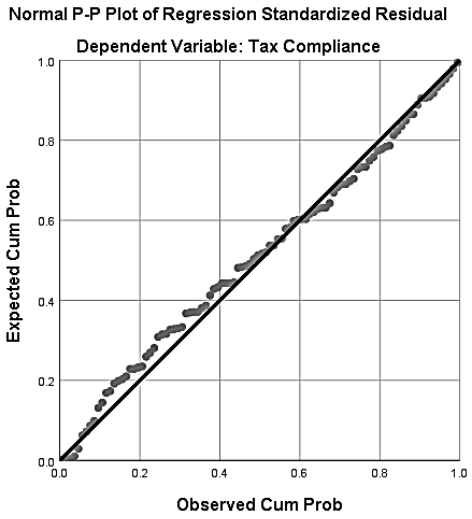
According to (Lubis et al., 2026), One statistical method for checking whether a dataset follows a normal distribution is the normality test. Normality testing can be conducted by examining a histogram, a normal probability plot, and the Kolmogorov-Smirnov test.



Source: Processed data, 2026

Figure 2. Histogram Normality Test

As shown in figure 2, the histogram of the regression residuals is approximately symmetrical and does not show a major visual departure from normality.



Source: Processed data, 2026

Figure 3. Normal Probability Plot of Regression

Figure 3 shows that the residual points generally follow the diagonal line, providing visual support for the normality assumption. This result is consistent with the histogram, which also shows no major visual departure from normality.

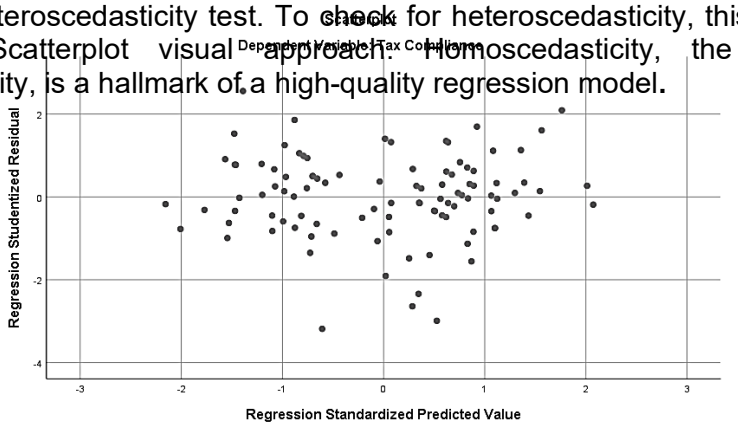
Table 6.
Kolmogorov Smirnov Normality Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		100
Normal Parameters[a,b]	**Mean**	.0000000
	Std. Deviation	2.70743504
Most Extreme Differences	**Absolute**	.066
	Positive	.040
	Negative	-.066
Test Statistic		.066
Asymp. Sig. (2-tailed)		.200[c,d]
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. This is a lower bound of the true significance.		

Source: Processed data, 2026

According to the data in the table, the Kolmogorov–Smirnov test was conducted on the unstandardized regression residuals. The test produced an Asymp. Sig. (2-tailed) value of 0.200, which is greater than 0.05. Therefore, the test does not indicate a statistically detectable departure of the residuals from normality.

Heteroscedasticity Test
According to (Taqi et al., 2025), In regression models, the classical assumption test includes the heteroscedasticity test. To check for heteroscedasticity, this research will employ the Scatterplot visual approach. Homoscedasticity, the absence of heteroscedasticity, is a hallmark of a high-quality regression model.



Source: Processed data, 2026

Figure 4. Heteroscedasticity Test Results

Figure 4 shows residuals scattered above and below zero without a distinct pattern, suggesting no clear visual indication of heteroscedasticity.

Multicollinearity Test
Multicollinearity testing assesses correlations among independent variables in a regression model (Shilvia, 2021). It uses tolerance and variance inflation factor (VIF)

values (Wahyuni & Pane, 2021). Tolerance above 0.10 and VIF below 10 are the adopted criteria for indicating no problematic multicollinearity (Wahyuni, 2025).

Table 7.
Multicollinearity Test Results

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Tax System Digitalization	.662	1.511
	Tax Awareness	.704	1.421
	Tax Understanding	.910	1.098

Source: Processed data, 2026

Each independent variable has a VIF value of 1.511, 1.421, or 1.098, and the Tolerance values of Tax System Digitalization, Tax Awareness, and Tax Understanding are 0.662, 0.704, and 0.910, respectively, according to the multicollinearity test. The variables do not show signs of multicollinearity, as a result.

Multiple Linear Regression Analysis
According to (Wahyuni, 2024), regression analysis examines the direction and magnitude of relationships between independent and dependent variables. The research used the following regression equation:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Note:
Y : Tax Compliance
X_1 : Tax System Digitalization
X_2 : Tax Awareness
X_3 : Tax Understanding
α : Constant
$\beta_{1,2,3}$: Regression Coefficient
e : Error

Table 8.
Multiple Linear Regression Analysis Results

Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	10.577	1.840	
	Tax System Digitalization	.206	.067	.233
	Tax Awareness	.481	.072	.493
	Tax Understanding	.348	.069	.328

Source: Processed data, 2026

The table presents the following multiple linear regression equation for this study:

Tax Compliance = 10.577 + 0.206 Tax System Digitalization + 0.481 Tax Awareness + 0.348 Tax Understanding + e

The constant value of 10.577 represents the predicted Tax Compliance score when all independent variables equal zero. However, it has no substantive interpretation because zero falls outside the observed score ranges. The unstandardized regression coefficients

(B) indicate that, holding the other predictors constant, a one-unit increase in Tax System Digitalization, Tax Awareness, and Tax Understanding is associated with an increase in Tax Compliance of 0.206, 0.481, and 0.348 units, respectively.

T-Test

According to (Hatuwe, 2022), the purpose of the t-test is to show that an independent variable influences a single dependent variable. At a 5% significance level (α = 0.05), the critical t-value is 1.98498, based on df = N − k − 1 = 100 − 3 − 1 = 96. H0 is rejected when p ≤ 0.05 or |t-count| > t-table.

Table 9.
T-Test Results

Model		t	Sig.
1	(Constant)	5.748	.000
	Tax System Digitalization	3.067	.003
	Tax Awareness	6.685	.000
	Tax Understanding	5.061	.000

Source: Processed data, 2026

The analysis results show that Tax System Digitalization has a positive coefficient, with t = 3.067 and p = 0.003; therefore, H1 is supported. Tax Awareness also has a positive coefficient, with t = 6.685 and p < 0.001, supporting H2. Tax Understanding has a positive coefficient, with t = 5.061 and p < 0.001, supporting H3. These results indicate statistically significant positive associations between each predictor and Tax Compliance within the regression model.

F-Test

According to (Hatuwe, 2022), the F-test is used to determine whether the independent variables jointly have a statistically significant effect on the dependent variable. In this study, H0 states that the regression coefficients of Tax System Digitalization, Tax Awareness, and Tax Understanding are jointly equal to zero. At a 5% significance level, the critical F value is 2.70, with df1 = k = 3 and df2 = N − k − 1 = 100 − 3 − 1 = 96. H0 is rejected when p ≤ 0.05 or F-count exceeds F-table; otherwise, H0 is not rejected. This test assesses the predictors' joint significance rather than their interactions.

Table 10.
F-Test Results

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1251.620	3	417.207	55.191	.000[b]
	Residual	725.690	96	7.559		
	Total	1977.310	99			

a. Dependent Variable: Tax Compliance
b. Predictors: (Constant), Tax Understanding, Tax Awareness, Tax System Digitalization
Source: Processed data, 2026

The overall regression model is statistically significant, F (3, 96) = 55.191, p < 0.001. Therefore, H0 is rejected and H4 is supported, indicating that Tax System Digitalization, Tax Awareness, and Tax Understanding jointly contribute to explaining variation in Tax Compliance.

Coefficient of Determination Test (R^2)

According to (Riyanto & Hatmawan, 2020), to measure how well a model explains the variance of the dependent variable (the bound variable), R^2 analysis is used. The range of values for the coefficient of determination is 0 to 1. Coefficients close to 1 indicate that the independent variables explain almost all of the dependent variable's variation.

Table 11.
Results of the Determination Coefficient Test (R^2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.796[a]	.633	.622	2.749

Source: Processed data, 2026

Tax System Digitalization, Tax Awareness, and Tax Understanding explain 63.3% of the sample variance in Tax Compliance ($R^2 = 0.633$). After adjusting for sample size and the number of predictors, the Adjusted R^2 is 0.622, representing 62.2% explained variance. The fitted regression model leaves 36.7% of the variance unexplained.

Variable Contribution Test
As an additional descriptive decomposition of the model's explained variance, each predictor's contribution was calculated by multiplying its Standardized Coefficients Beta by its zero-order correlation with Tax Compliance.

Table 12.
Variable Contribution Test Results

Variable	Standardized Coefficients Beta	Correlation Coefficient
Tax System Digitalization	0.233	0.599
Tax Awareness	0.493	0.678
Tax Understanding	0.328	0.485

Source: Processed data, 2026

To determine the contribution of each variable, the following can be done:

1. Contribution of Tax System Digitalization= 0.233 x 0.599 x 100 = 14%
2. Contribution of Tax Awareness = 0.493 x 0.678 x 100 = 33.4%
3. Contribution of Tax Understanding = 0.328 x 0.485 x 100 = 15.9%

Based on the calculations above, Tax System Digitalization contributes 14% to Tax Compliance, Tax Awareness contributes 33.4% to Tax Compliance, while Tax Understanding contributes 15.9% to Tax Compliance. These percentages represent a descriptive decomposition of the model's explained variance and should not be interpreted as independent causal effects.

DISCUSSION

Tax System Digitalization on Tax Compliance
Tax System Digitalization was positively associated with Tax Compliance (B = 0.206, t = 3.067, p = 0.003), supporting H1. Respondents who rated digital tax services higher in transparency, efficiency, accuracy, and accessibility also reported stronger compliance. This result aligns with (Supriyati et al., 2025) and (Wulandari, 2021). In the Theory of Planned Behavior, accessible services may ease administrative difficulties related to perceived behavioral control.

Tax Awareness on Tax Compliance
Tax Awareness showed a positive association with Tax Compliance (B = 0.481), supporting H2. Respondents more conscious of taxation as a legal duty, its contribution to national development, and the consequences of delayed or reduced payments tended

to report greater compliance. This result agrees with (Nafiah et al., 2021) and (Le et al., 2024). Within the Theory of Planned Behavior, tax awareness may shape attitudes toward fulfilling tax obligations.

Tax Understanding on Tax Compliance

Tax Understanding was positively related to Tax Compliance (B = 0.348), supporting H3. Greater knowledge of tax procedures, regulations, systems, and functions corresponded to higher reported compliance. This pattern is consistent with (Caroline et al., 2023) and (Saputri & Nugraha, 2024). Tax Understanding may strengthen taxpayers' perceived ability to meet their obligations, although perceived behavioral control was not directly measured.

Tax System Digitalization, Tax Awareness, and Tax Understanding on Tax Compliance

Tax System Digitalization, Tax Awareness, and Tax Understanding jointly contribute significantly to explaining Tax Compliance, supporting H4. The model's R^2 of 0.633 indicates that these predictors accounted for 63.3% of the variance within the sample, leaving 36.7% unexplained. Previous studies by (Supriyati et al., 2025), (Wulandari, 2021), (Nafiah et al., 2021), (Le et al., 2024), (Caroline et al., 2023) and (Saputri & Nugraha, 2024) provide supporting evidence for the individual relationships examined in this study. However, these previous studies primarily support the individual relationships and do not necessarily establish the joint significance of the specific three-predictor model examined in this study.

CONCLUSION

The findings indicate positive and statistically significant associations between Tax Compliance and Tax System Digitalization, Tax Awareness, and Tax Understanding, supporting H1, H2, and H3, respectively. The three predictors were also jointly significant, supporting H4. The regression model accounted for 63.3% of the variance in Tax Compliance (R^2 = 0.633; Adjusted R^2 = 0.622), leaving 36.7% unexplained. These findings are limited to 100 Generation Z taxpayers in Medan Deli District selected through incidental sampling.

RECOMMENDATION

Tax authorities may consider improving the transparency, efficiency, accuracy, and accessibility of digital tax services for Generation Z taxpayers. Tax education programs may emphasize the importance of taxation for national development, legal obligations, the consequences of delayed payments, and practical guidance on tax calculation and reporting procedures. These recommendations are aligned with the measured indicators rather than proven effects of specific interventions.

This study is limited by incidental sampling, an uncertain eligible taxpayer population, self-reported data, a cross-sectional design, and its focus on one district. Consequently, the findings cannot establish causality or be generalized to all Generation Z taxpayers. Future research may employ more representative samples and longitudinal data to examine these relationships further.

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