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Tax Knowledge, Tax Administration System Modernization, Digital Literacy, and Taxpayer Compliance among Culinary MSMEs in Medan Area District

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ABSTRACT

The research investigates how taxation knowledge, improvements in tax administration technology, and proficiency in digital tools influence tax compliance among food-service micro, small, and medium-sized enterprises (MSMEs) in Medan Area District. A quantitative design was applied, with survey responses obtained from 79 participants drawn from 381 business operators, using Slovin's sampling calculation and a 10% error tolerance. Statistical procedures included instrument validation, consistency assessment, descriptive analysis, assumption diagnostics, multiple regression, partial and simultaneous significance testing, and explanatory-power measurement. Findings indicate that taxation knowledge (t = 4.639), administrative system advancement (t = 2.723), and digital competence (t = 2.177) are individually and positively associated with compliance, with each statistic exceeding the threshold of 1.992. The combined model is also statistically significant (F = 29.115, above the critical value of 2.727). The coefficient of determination (R^2 = 0.538) suggests that the predictors account for 53.8% of compliance variation, whereas 46.2% relates to influences beyond the model. The adjusted R^2 is 0.520.

Keywords: Tax Compliance, Tax Knowledge, Modernization of Tax Administration System, Digital Literacy, MSMEs.

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play an important role in economic growth by creating employment, increasing household income, and contributing to state revenue through taxation. However, taxpayer compliance remains a challenge, particularly as tax administration increasingly relies on digital technology. Taxpayer compliance refers to fulfilling tax obligations in accordance with applicable laws and regulations (Nugrahani & Suryaningsum, 2023).

In Medan Area District, taxpayer compliance requires further investigation. A preliminary survey conducted on July 15, 2026, involving 30 MSME operators found that 18 respondents (60%) disagreed that they consistently fulfilled their tax obligations, while 12 (40%) agreed. The questionnaire covered timely tax return submission, tax payments, financial reporting, and compliance with tax regulations. These findings indicate potential compliance issues, although specific problems require further analysis.

Tax knowledge is an important factor in taxpayer compliance, as understanding tax regulations and procedures helps taxpayers fulfill their obligations correctly (Nugrahani & Suryaningsum, 2023). (Sarpong et al., 2024) found a significant relationship between

tax knowledge and compliance. However, some MSME operators in Medan Area District reportedly lack sufficient understanding of tax rates, reporting procedures, and deadlines.

Tax administration system modernization aims to improve tax services through information technology, enhancing efficiency, transparency, and accessibility (Yuliani & Ratnasari, 2025). (Magribi & Yulianti, 2022) found that modernization significantly affected taxpayer compliance. Nevertheless, some MSME operators experience difficulties using electronic tax services and adapting to system changes.

Digital literacy, defined as the ability to access, understand, evaluate, and use digital information effectively (Syafrial, 2023), is increasingly important as tax services become digitalized. (Praskoco & Widiatmoko, 2025) found that digital literacy significantly influenced MSME taxpayer compliance. However, difficulties using digital services may hinder compliance among MSME operators in Medan Area District.

Previous studies have reported varying findings. (Kushwah et al., 2021) found that tax knowledge had no significant partial effect on compliance, while (Sarpong et al., 2024) reported a significant relationship. Other studies identified significant effects of tax administration modernization, digital literacy, and related variables (Magribi & Yulianti, 2022; Praskoco & Widiatmoko, 2025; Yuliani & Ratnasari, 2025). These differences highlight the need for further research in specific contexts.

Therefore, this study examines the effects of tax knowledge, tax administration system modernization, and digital literacy on taxpayer compliance among culinary MSMEs in Medan Area District, Medan City, North Sumatra. Its contribution is to examine these three variables simultaneously within a specific business sector that has received limited attention in previous studies.

LITERATURE REVIEW

Taxpayer Compliance

According to (Wahyuni et al., 2022), tax compliance refers to taxpayers' awareness of voluntarily paying taxes correctly and on time in accordance with applicable norms and laws and regulations. According to (Baso & Surianto, 2020), tax compliance is the willingness of taxpayers to fulfill their tax obligations by calculating, paying, and reporting taxes correctly, on time, and in accordance with the applicable laws and regulations. According to (Prima et al., 2024), tax compliance is a condition in which taxpayers understand tax regulations and make efforts to fulfill their obligations, such as completing tax forms correctly, calculating taxes accurately, and paying taxes on time. This study adapts taxpayer compliance indicators to culinary MSMEs based on Minister of Finance Regulation No. 39/PMK.03/2018, as follows:

1. Timely submission of tax returns (SPT)
2. No outstanding tax liabilities
3. Orderly and accurate business financial reporting
4. Adherence to tax regulations and avoidance of violations

Tax Knowledge

According to (Pratiwi & Sinaga, 2023), tax knowledge refers to information used by taxpayers as a guideline for exercising their rights and fulfilling their obligations in the field of taxation. According to (Ananda et al., 2025), tax knowledge refers to the ability of taxpayers to understand tax regulations that are useful for fulfilling their rights and obligations. According to (Aninda et al., 2023), tax knowledge refers to taxpayers' basic understanding of carrying out tax administration, calculating tax liabilities, completing and submitting tax returns, and fulfilling other tax obligations. The indicators of tax knowledge are as follows (Nasiroh & Afiqoh, 2022):

1. Knowledge of the functions of taxation

2. Knowledge of tax regulations
3. Knowledge of tax rates and tax reporting procedures

Tax Administration System Modernization

According to (Hamida & Hasnawati, 2024), system modernization refers to an innovation or reform aimed at assisting taxpayers in fulfilling their tax obligations. According to (Hendrawati et al., 2021), system modernization is a form of innovation or reform that functions to facilitate taxpayers in carrying out their tax obligations and can improve taxpayer compliance. The ease of using the system is one of the considerations for taxpayers in fulfilling their tax obligations. According to (Putra, 2020), system modernization is a form of innovation or reform that functions to facilitate taxpayers in carrying out their tax obligations and improve taxpayer compliance. The indicators of tax administration system modernization are as follows (Sukoyo & Sopiyana, 2023):

1. Utilization of technology
2. Utilization of e-filing facilities
3. Improvement of tax administration performance

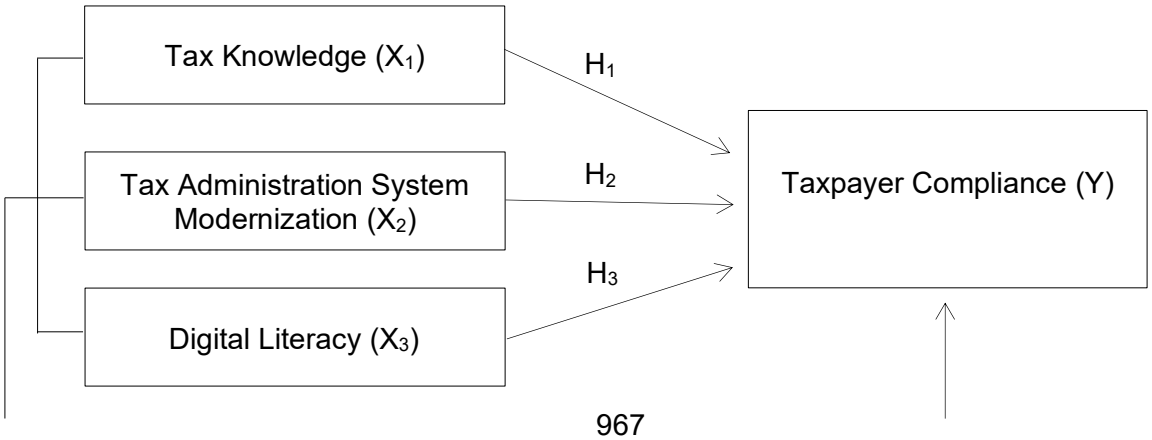
Digital Literacy

According to (Ifani et al., 2025), digital literacy refers to the ability to obtain, understand, and utilize information from various digital sources wisely. Digital literacy encompasses not only skills in using devices and the internet but also the ability to analyze and utilize information appropriately. According to (Hildawati et al., 2024), digital literacy refers to a set of concepts or guidelines that serve as a foundation for developing digital literacy skills among individuals and groups. According to (Aksenta et al., 2023), digital literacy is an individual's ability to understand, use, and participate in the digital world wisely, encompassing the knowledge and skills required to interact with digital technology. The indicators of digital literacy are as follows (Syafrial, 2023):

1. Awareness of the impact of media on individuals and society
2. Understanding of mass communication
3. Development of strategies used to analyze and discuss media messages
4. Awareness of media content as text that provides insight into and knowledge of contemporary human culture and the self
5. Enhancement of enjoyment, understanding, and appreciation of media content

Conceptual Framework

This study applies the Theory of Planned Behavior (TPB) by (Ajzen, 1991) to examine the effects of tax knowledge, tax administration system modernization, and digital literacy on taxpayer compliance among culinary MSMEs in Medan Area District. Previous studies have reported significant relationships between these variables and taxpayer compliance, although findings on tax knowledge remain inconsistent (Kushwah et al., 2021; Sarpong et al., 2024; Praskoco & Widiatmoko, 2025). Therefore, this study examines these three variables as predictors of taxpayer compliance, as illustrated in the conceptual framework below.



H_4

Figure 1. Conceptual Framework

Based on the conceptual framework presented above, the following hypotheses can be formulated:

H_1: Tax knowledge has a significant effect on taxpayer compliance among MSMEs in Medan Area District.

H_2: Tax administration system modernization has a significant effect on taxpayer compliance among MSMEs in Medan Area District.

H_3: Digital literacy has a significant effect on taxpayer compliance among MSMEs in Medan Area District.

H_4: Tax knowledge, tax administration system modernization, and digital literacy simultaneously have a significant effect on taxpayer compliance among MSMEs in Medan Area District.

RESEARCH METHOD

This study employed a quantitative approach using primary data collected through a questionnaire survey of culinary micro, small, and medium enterprise (MSME) operators in Medan Area District, Medan City, North Sumatra. The research was conducted from June to September 2026. Based on 2024 data reported in Medan Area District in Figures 2025, published by Statistics Indonesia (BPS), the study population comprised 381 culinary MSMEs categorized as food and beverage stalls in Medan Area District.

Table 1.
Number of Culinary MSME Operators in Medan Area District

Subdistricts	Restaurants	Food and Beverage Stalls
Pasar Merah Timur	13	109
Tegal Sari II	10	15
Tegal Sari III	8	53
Tegal Sari I	7	5
Sukaramai I	2	20
Kota Matsum II	7	25
Kota Matsum IV	10	7
Kota Matsum I	11	10
Sei Rengas Permata	1	10
Sukaramai II	27	59
Sei Rengas II	20	47
Pandau Hulu II	5	21
Medan Area	**121**	**381**

Sources: (Badan Pusat Statistik Kota Medan, 2025)

The sample size was calculated using the Slovin formula with a 10% margin of error:

$$n = \frac{N}{1 + N(e)^2} = \frac{381}{1 + 381(0.10)^2} = \frac{381}{4.81} = 79.21 \approx 79$$

The study involved 79 respondents selected from 381 culinary MSMEs in Medan Area District using the Slovin formula with a 10% margin of error. Data were collected through questionnaires distributed directly from July to September 2026, yielding 79 valid responses from 93 distributed questionnaires. Respondents were eligible business operators with an NPWP and sufficient knowledge of their tax obligations. The independent variables were tax knowledge (X_1), tax administration system

modernization (X_2), and digital literacy (X_3), while taxpayer compliance (Y) was the dependent variable.

Table 2.
Operationalization of Research Variables

Variable	Operational Definition	Indicator and Item Code	Source
Taxpayer Compliance (Y)	The extent to which culinaryMSME taxpayers fulfill their tax obligations correctly and on time in accordance with applicable tax regulations.	1. Timely submission of tax returns (SPT) (Y1-Y2) 2. No outstanding tax liabilities (Y3-Y4) 3. Orderly and accurate business financial reporting (Y5-Y6) 4. Adherence to tax regulations and avoidance of violations (Y7-Y8)	(Wahyuni et al., 2022; Baso & Surianto, 2020; Prima et al., 2024)
Tax Knowledge (X1)	The taxpayer's understanding of tax functions, applicable regulations, tax rates, and procedures for fulfilling tax obligations.	1. Knowledge of the functions of taxation (X1.1-X1.2) 2. Knowledge of tax regulations (X1.3-X1.4) 3. Knowledge of tax rates and tax reporting procedures (X1.5-X1.6)	(Pratiwi & Sinaga, 2023; Nasiroh & Afiqoh 2022)
Tax Administration System Modernization (X2)	The taxpayer's perception of the use of technology and electronic facilities to facilitate tax administration and improve the efficiency of tax services.	1. Utilization of technology (X2.1-X2.2) 2. Utilization of e-filing facilities (X2.3-X2.4) 3. Improvement of tax administration performance(X2.5-X2.6)	(Hamida & Hasnawati, 2024; Sukoyo & Sopiyana, 2023)
Digital Literacy (X3)	The ability to access, understand, evaluate, and utilize digital information and technology effectively and responsibly.	1. Awareness of the impact of media on individuals and society(X3.1-X3.2) 2. Understanding of mass communication(X3.3-X3.4) 3. Ability to analyze and discuss media messages(X3.5-X3.6) 4. Understanding media content in its cultural and social context(X3.7-X3.8) 5. Appreciation of media content(X3.9-X3.10)	(Ifani et al., 2025; Syafrial, 2023)

Table 2 presents the operational definitions, indicators, and measurement sources for the four variables: taxpayer compliance (Y), tax knowledge (X_1), tax administration system modernization (X_2), and digital literacy (X_3), measured using 8, 6, 6, and 10 questionnaire items, respectively. All items used a five-point Likert scale, from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating higher levels of each variable. Primary data were collected through questionnaires, while secondary data were obtained from books, journals, BPS, the Directorate General of Taxes, and other relevant sources. Data were processed using IBM SPSS Statistics, with analysis consisting of:

1. Validity Test
2. Reliability Test
3. Descriptive Statistics

4. Classical Assumption Tests:
   a. Normality Test
   b. Heteroscedasticity Test
   c. Multicollinearity Test
5. Multiple Linear Regression Analysis
6. Hypothesis Testing:
   a. t-Test
   b. F-Test
   c. Coefficient of Determination (R^2) Test

RESULT AND DISCUSSION

Validity Test

The validity test was conducted on a pilot sample consisting of 30 respondents who were not included in the research sample. The results of the validity test are presented below:

Table 3.
Validity Test Results

Statement	r_{hitung}	r_{table}	Criteria	Information
Tax Knowledge				
1	0.851	0.361	$r_{hitung} > r_{table}$	Valid
2	0.875	0.361	$r_{hitung} > r_{table}$	Valid
3	0.660	0.361	$r_{hitung} > r_{table}$	Valid
4	0.778	0.361	$r_{hitung} > r_{table}$	Valid
5	0.586	0.361	$r_{hitung} > r_{table}$	Valid
6	0.871	0.361	$r_{hitung} > r_{table}$	Valid
Tax Administration System Modernization				
1	0.797	0.361	$r_{hitung} > r_{table}$	Valid
2	0.885	0.361	$r_{hitung} > r_{table}$	Valid
3	0.913	0.361	$r_{hitung} > r_{table}$	Valid
4	0.870	0.361	$r_{hitung} > r_{table}$	Valid
5	0.860	0.361	$r_{hitung} > r_{table}$	Valid
6	0.766	0.361	$r_{hitung} > r_{table}$	Valid
Digital Literacy				
1	0.794	0.361	$r_{hitung} > r_{table}$	Valid
2	0.763	0.361	$r_{hitung} > r_{table}$	Valid
3	0.672	0.361	$r_{hitung} > r_{table}$	Valid
4	0.839	0.361	$r_{hitung} > r_{table}$	Valid
5	0.801	0.361	$r_{hitung} > r_{table}$	Valid
6	0.734	0.361	$r_{hitung} > r_{table}$	Valid
7	0.883	0.361	$r_{hitung} > r_{table}$	Valid
8	0.876	0.361	$r_{hitung} > r_{table}$	Valid
9	0.725	0.361	$r_{hitung} > r_{table}$	Valid
10	0.609	0.361	$r_{hitung} > r_{table}$	Valid
Taxpayer Compliance				
1	0.814	0.361	$r_{hitung} > r_{table}$	Valid
2	0.718	0.361	$r_{hitung} > r_{table}$	Valid
3	0.871	0.361	$r_{hitung} > r_{table}$	Valid
4	0.756	0.361	$r_{hitung} > r_{table}$	Valid
5	0.817	0.361	$r_{hitung} > r_{table}$	Valid
6	0.777	0.361	$r_{hitung} > r_{table}$	Valid
7	0.700	0.361	$r_{hitung} > r_{table}$	Valid
8	0.857	0.361	$r_{hitung} > r_{table}$	Valid

Source: Processed Research Data, 2026

Based on the table above, the validity test results for all variables show that all r-count

values are greater than the r-table value of 0.361. Therefore, all questionnaire statement items for the variables are declared valid and can be used.

Reliability Test

The reliability test was conducted on a pilot sample consisting of 30 respondents who were not included in the research sample (Wahyuni, 2025). The results of the reliability test are presented below:

Table 4.
Reliability Test Results

Variable	Cronbach's Alpha	N of Items
Tax Knowledge	0.858	6
Tax Administration System Modernization	0.919	6
Digital Literacy	0.916	10
Taxpayer Compliance	0.904	8

Source: Processed Research Data, 2026

Based on the table, all variables demonstrate acceptable reliability, with reliability coefficients of 0.858 for Tax Knowledge, 0.919 for Tax Administration System Modernization, 0.916 for Digital Literacy, and 0.904 for Taxpayer Compliance. Since all values exceed the 0.60 threshold, the instruments are considered reliable.

Descriptive Statistics

The demographic profile of the 79 respondents was based on gender, age, education, and monthly income. Most respondents were male (60.8%), aged 31–40 years (44.3%), and senior high school graduates (48.1%). Regarding monthly income, 75.95% earned less than IDR 20,000,000, while 24.05% earned more than IDR 20,000,000. The results of the descriptive statistical analysis are presented in the table below:

Table 5.
Descriptive Statistics

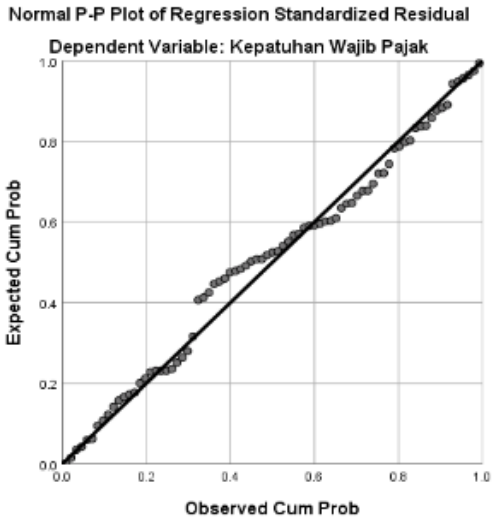
	N	Minimum	Maximum	Mean	Std. Deviation
Tax Knowledge	79	11	28	19.53	4.057
Tax Administration System Modernization	79	11	27	18.44	3.717
Digital Literacy	79	20	45	32.03	4.723
Taxpayer Compliance	79	17	37	26.82	4.917
Valid N (listwise)	79				

Source: Processed Research Data, 2026

The analysis used 79 observations from culinary MSMEs in Medan Area District. The mean scores were 19.53 for Tax Knowledge, 18.44 for Tax Administration System Modernization, 32.03 for Digital Literacy, and 26.82 for Taxpayer Compliance, with standard deviations of 4.057, 3.717, 4.723, and 4.917, respectively.

Normality Test

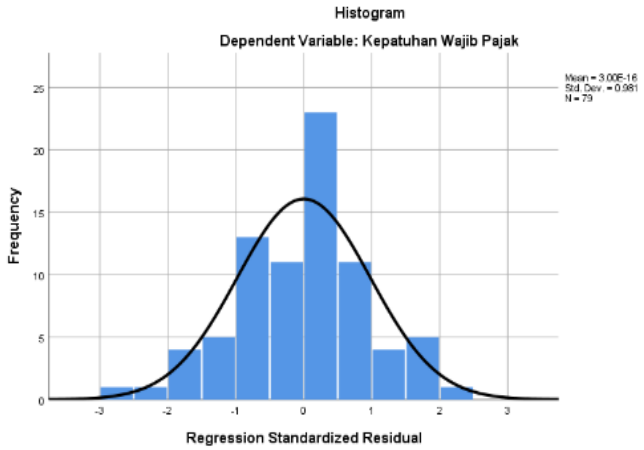
The results of the normality test are presented below:



Source: Processed Research Data, 2026

Figure 2. Normal Probability Plot Regression Graph

Based on the figure, it can be observed that the data points are distributed around and follow the diagonal line. Therefore, the residuals in the regression model can be considered to be normally distributed.



Source: Processed Research Data, 2026

Figure 3. Histogram Graph

Based on the figure, it can be observed that the curve resembles a bell shape and is not skewed to either the left or the right. This indicates that the data are normally distributed and have met the normality assumption.

Table 6.
One-Sample Kolmogorov Smirnov Test

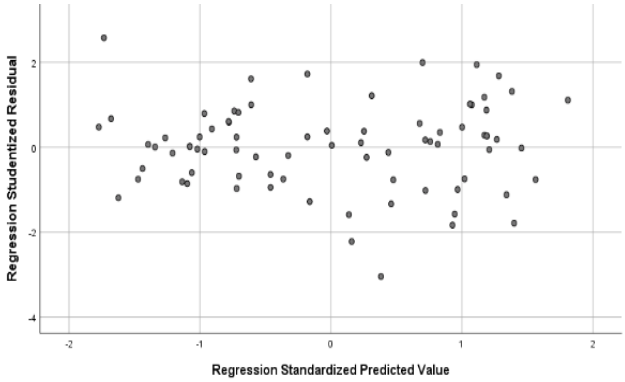
	Unstandardized Residual
N	79
Asymp. Sig. (2-tailed)	.167[c]

Source: Processed Research Data, 2026

The Kolmogorov–Smirnov test yielded a significance value of 0.167, exceeding 0.05. Thus, the residuals are considered normally distributed, and the normality assumption is satisfied.

Heteroscedasticity Test

The results of the heteroscedasticity test are presented below:



Source: Processed Research Data, 2026

Figure 4. Scatterplot Graph

Based on the scatterplot, the data points are randomly distributed above and below the zero line without forming a specific pattern. This indicates that the regression model does not exhibit heteroscedasticity and therefore satisfies the homoscedasticity assumption.

Multicollinearity Test

The results of the multicollinearity test are presented below:

Table 7.
Multicollinearity Test

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Tax Knowledge	.669	1.496
	Tax Administration System Modernization	.699	1.431
	Digital Literacy	.757	1.321

a. Dependent Variable: Taxpayer Compliance
Source: Processed Research Data, 2026

Based on the table above, all variables have tolerance values greater than 0.1 and VIF values less than 10. Therefore, it can be concluded that no multicollinearity problems were identified.

Multiple Linear Regression Analysis

The results of the multiple linear regression analysis are presented below:

Table 8.
Multiple Linear Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	3.497	2.836	
	Tax Knowledge	.540	.116	.445
	Tax Administration System Modernization	.338	.124	.256
	Digital Literacy	.204	.094	.196

a. Dependent Variable: Taxpayer Compliance
Source: Processed Research Data, 2026

Taxpayer Compliance = 3.497 + 0.540 Tax Knowledge + 0.338 Tax Administration System Modernization + 0.204 Digital Literacy + e

The constant of 3.497 represents the predicted Taxpayer Compliance score when all independent variables are zero, although this condition falls outside the observed score ranges. The coefficients for Tax Knowledge (0.540), Tax Administration System Modernization (0.338), and Digital Literacy (0.204) indicate that a one-point increase in each variable is associated with an increase of 0.540, 0.338, and 0.204 points in predicted Taxpayer Compliance, respectively, holding the other variables constant. These results indicate associations, not necessarily causal effects.

Partial Hypothesis Testing (t-Test)
The partial t-test was conducted at a 5% significance level to examine the effect of each independent variable on the dependent variable (Wahyuni, 2018). The results are presented in the following table:

Table 9.
Partial Hypothesis Testing (t-Test)

Model		t	Sig.
1	(Constant)	1.233	.221
	Tax Knowledge	4.639	<.001
	Tax Administration System Modernization	2.723	.008
	Digital Literacy	2.177	.033

a. Dependent Variable: Taxpayer Compliance
Source: Processed Research Data, 2026

With 75 degrees of freedom, the critical t-value at a 5% significance level (two-tailed) is 1.992. The results show that Tax Knowledge ($t = 4.639$, $p < 0.001$), Tax Administration System Modernization ($t = 2.723$, $p = 0.008$), and Digital Literacy ($t = 2.177$, $p = 0.033$) each have a statistically significant positive association with Taxpayer Compliance. Since all p-values are below 0.05 and all calculated t-values exceed 1.992, the null hypotheses are rejected. These findings indicate that all three variables are significant predictors of Taxpayer Compliance, holding the other variables constant.

Simultaneous Hypothesis Testing (F-Test)
The simultaneous F-test is used to determine whether all independent variables collectively have an effect on the dependent variable (Wahyuni, 2021). The results of the F-test are presented in the following table:

Table 10.
Simultaneous Hypothesis Testing

Model		F	Sig.
1	Regression	29.115	.000[b]
	Residual		
	Total		

a. Dependent Variable: Taxpayer Compliance
b. Predictors: (Constant), Digital Literacy, Tax Administration System Modernization, Tax Knowledge
Source: Processed Research Data, 2026

With 3 and 75 degrees of freedom at $\alpha = 0.05$, the critical F-value is 2.727. The calculated F-value of 29.115 exceeds this value, with $p < 0.001$. Therefore, Tax Knowledge, Tax Administration System Modernization, and Digital Literacy are jointly significant predictors of Taxpayer Compliance.

Coefficient of Determination

The coefficient of determination measures how well the independent variables explain variations in the dependent variable, with values ranging from 0 to 1 (Wahyuni, 2025). The results are presented in the following table.

Table 11.
Coefficient of Determination Test Results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.734[a]	.538	.520	3.408

a. Dependent Variable: Taxpayer Compliance
b. Predictors: (Constant), Digital Literacy, Tax Administration System Modernization, Tax Knowledge

Source: Processed Research Data, 2026

Based on the table above, The model explains 53.8% of the sample variation in compliance scores (R^2=0.538), with adjusted R^2=0.520. The remaining 46.2% of sample variation is not explained by this model.

DISCUSSION

The Effect of Tax Knowledge on MSME Taxpayer Compliance in Medan Area District

The partial t-test results show that Tax Knowledge has a positive and statistically significant association with MSME taxpayer compliance in Medan Area District (t = 4.639, p < 0.001), with a regression coefficient of 0.540. This suggests that greater tax knowledge is associated with better understanding of tax regulations, payment procedures, and reporting requirements. Although this finding differs from (Kushwah et al., 2021), who found no significant relationship among corporate taxpayers in India, differences in research contexts may explain the variation. Therefore, H1 is accepted, indicating that tax knowledge is a significant predictor of taxpayer compliance, although the result does not establish causation.

The Effect of Tax Administration System Modernization on MSME Taxpayer Compliance in Medan Area District

The partial t-test results indicate that Tax Administration System Modernization has a positive and statistically significant association with MSME taxpayer compliance in Medan Area District (t = 2.723, p = 0.008), with a regression coefficient of 0.338. This suggests that accessible and user-friendly digital tax services may help MSME operators manage tax payments and reporting more efficiently, consistent with the perceived behavioral control concept in the Theory of Planned Behavior and the findings of (Magribi & Yulianti, 2022). However, this study does not directly test the underlying mechanism or establish causation. Therefore, H2 is accepted.

The Effect of Digital Literacy on MSME Taxpayer Compliance in Medan Area District

The partial t-test results show that Digital Literacy has a positive and statistically significant association with MSME taxpayer compliance in Medan Area District (t = 2.177, p = 0.033), with a regression coefficient of 0.204. This suggests that digital literacy may help MSME operators access tax information and navigate electronic tax services, consistent with the perceived behavioral control concept in the Theory of Planned Behavior. The finding also aligns with (Praskoco & Widiatmoko, 2025), who reported a significant relationship between digital literacy and tax compliance. However, the results indicate an association rather than definitive causation. Therefore, H3 is accepted.

The Effect of Tax Knowledge, Tax Administration System Modernization, and Digital Literacy on MSME Taxpayer Compliance in Medan Area District

The simultaneous F-test shows that Tax Knowledge, Tax Administration System Modernization, and Digital Literacy are jointly significant predictors of MSME Taxpayer Compliance in Medan Area District ($F = 29.115$, $p < 0.001$). The Adjusted R^2 value of 0.520 indicates that the model explains 52.0% of the variation in taxpayer compliance, while the remaining 48.0% is not explained by the model. These findings suggest that tax knowledge, perceptions of modernized tax administration, and digital literacy collectively contribute to understanding taxpayer compliance, although the results do not establish causation or interaction effects. Therefore, H4 is accepted.

CONCLUSION

The study found that Tax Knowledge, Tax Administration System Modernization, and Digital Literacy each have a significant positive association with Taxpayer Compliance among culinary MSMEs in Medan Area District, both individually and jointly. The R^2 value of 0.538 indicates that the model explains 53.8% of the variation in taxpayer compliance, while the remaining 46.2% is not explained by the model. The study is limited by its specific respondent group, questionnaire-based self-reported data, cross-sectional design, measurement methods, and inclusion of only three predictors. Future research could expand the sample across regions and business sectors, use longitudinal designs, compare self-reported compliance with available tax records, and examine additional factors to improve the robustness and generalizability of the findings.

RECOMMENDATION

MSME operators in Medan Area District are encouraged to improve their understanding of tax regulations, payment procedures, reporting deadlines, and relevant electronic tax services. The Directorate General of Taxes, local tax offices, and MSME support agencies could provide practical tax guidance, digital service demonstrations, and assistance tailored to taxpayers' needs. Future research should improve sampling and measurement procedures, compare self-reported compliance with official records where permitted, expand the study to other sectors and regions, and examine additional factors. Longitudinal studies could also assess whether tax assistance and digital training are associated with improved compliance over time.

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