



## **Determinants of Tax Compliance Behavior of Future Taxpayers: Proof of Students in the Cirebon Region Using PLS-SEM**

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**Overview**

**Background:** Tax compliance among university students is essential for strengthening future tax revenue, yet evidence on its determinants remains limited in Indonesia.

**Objective:** This study aims to examine the effects of tax awareness, tax knowledge, tax system modernization, tax education, tax socialization, and tax ethics on tax compliance behavior among university students in the Cirebon region, Indonesia.

**Method:** This study employed a quantitative research approach involving 260 students from the Faculty of Economics and Business in Cirebon City, Cirebon Regency, and Indramayu. Respondents were selected using purposive sampling based on prior experience with taxation courses. Data were analyzed using Partial Least Squares–Structural Equation Modeling (PLS-SEM) with SmartPLS to evaluate the relationships among seven research constructs.

**Results:** The findings indicate that tax awareness ( $\beta = 0.593$ ,  $p = 0.001$ ), tax knowledge ( $\beta = 0.649$ ,  $p < 0.001$ ), and tax socialization ( $\beta = 0.428$ ,  $p < 0.001$ ) have significant positive effects on tax compliance behavior. Conversely, tax system modernization ( $\beta = -0.280$ ,  $p < 0.001$ ) and tax education ( $\beta = -0.543$ ,  $p = 0.011$ ) exhibit significant negative effects, suggesting implementation challenges in the student context. Tax ethics does not significantly influence tax compliance behavior ( $\beta = 0.067$ ,  $p = 0.562$ ). The structural model demonstrates excellent explanatory power ( $R^2 = 0.981$ ) and high predictive relevance ( $Q^2 = 0.895$ ).

**Conclusion:** Tax compliance among university students is mainly influenced by tax awareness, tax knowledge, and tax socialization. The findings provide practical guidance for improving tax education and compliance strategies for future taxpayers.

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### **INTRODUCTION**

Taxes are one of the key elements of Indonesia's national revenue, playing a major role in supporting government spending and national development. According to Law No. 28 of 2007 concerning General Provisions and Tax Procedures, taxes are mandatory contributions made by citizens without receiving direct compensation and are intended for the welfare of the people (Pratama et al., 2024). However, in reality, according to the OECD, Indonesia's tax compliance rate remains relatively low, ranking as the third lowest among 28 Asia-Pacific countries (Heriana & Irawan, 2024). This low level of compliance poses a major challenge for the government in optimizing tax revenue as the main source of state funding.

Tax compliance refers to the extent to which taxpayers voluntarily fulfill their tax obligations in accordance with applicable regulations, without pressure or threats from tax authorities. Tax compliance is influenced by a combination of internal factors, such as tax knowledge and moral values, as well as external factors, such as sanctions and tax socialization.

On the other hand, Tiong (2023) stated that modernizing the tax system is important for improving tax compliance. The use of digital systems, such as e-Filing and e-Billing, has been proven to reduce administrative barriers and provide convenience for taxpayers in fulfilling their obligations. Furthermore, according to Surugiu (2021), tax compliance is closely related to public awareness of taxation itself. As tax awareness increases, willingness to comply with tax regulations also increases. Therefore, improving tax compliance requires a comprehensive strategy that includes tax education, system digitalization, and increased public awareness fostered by tax authorities.

As the future generation of taxpayers, students play a strategic role in increasing tax awareness and compliance. According to Hastuti (2014) and Pratama (2023) tax knowledge is an important factor that greatly influences students' tax compliance levels. Tax knowledge helps students understand tax obligations, benefits, and consequences, as well as increase awareness of voluntary tax compliance. Tax knowledge has a positive impact on tax compliance behavior. However, Yasa (2020) found that tax knowledge does not have a positive impact on tax compliance behavior.

According to Florek (2021), tax morality reflects the ethical values of an individual's contribution to the state and plays an important role in shaping the intention to comply with tax laws. Individuals with high tax morality tend to have intrinsic motivation to comply with taxes, even in the absence of sanctions or supervision. Previous research has shown that tax morality is positively associated with tax compliance, and taxpayers who feel morally responsible for taxes are more motivated to report and pay taxes correctly. Conversely, low tax morality can lead to tax evasion and violations. This is supported by Heriana (2024) who stated that tax ethics positively influences tax compliance behavior. On the other hand, Rakman (2024) found that tax ethics negatively impacts tax compliance behavior.

Increasing tax awareness plays a crucial role in promoting compliance with tax obligations. According to Shofaa (2023) tax awareness reflects an individual's understanding of and concern for the importance of taxes in national development. Tax awareness and tax education are the main factors that influence tax compliance behavior in society (Linawati & Putra, 2023). This is in line with the findings of Mohamad (2023) who stated that increasing tax awareness and tax education positively influences tax compliance behavior. On the other hand, according to Werdiningsih (2019) tax education does not affect tax compliance behavior. Similarly, Astuti (2024) found that tax awareness has a negative impact on tax compliance behavior.

In addition, the modernization of the tax system and tax socialization are important factors that affect tax compliance behavior (Nguyen et al., 2020). The modernization of the tax system has become one of the key innovations in tax administration aimed at improving taxpayer efficiency and compliance. The introduction of technologies such as e-Filing systems and electronic invoicing aims to simplify the tax administration process, reduce direct interactions that may cause inconvenience, and accelerate tax reporting and payment. This is supported by research conducted by (Dewi et al., 2022; Kusuari, 2019). However, Pernamasari (2021) found that the modernization of the tax system does not affect tax compliance behavior. On the other hand, tax socialization plays an important role in communicating information about tax obligations, procedures, and benefits to the public. Intensive and structured socialization programs through seminars, mass media, and public campaigns can increase public awareness of and trust in the tax system. Suardana (2020) stated that taxpayers who receive sufficient information from socialization programs tend to have a better understanding, which in turn increases compliance levels. This is also supported by Indriani (2024) who found that tax socialization affects tax compliance behavior. Conversely, Rusli (2021) found that socialization does not affect taxpayers' compliance behavior.

Existing research gaps reveal a lack of empirical consistency among the key determinants of tax compliance, particularly studies on tax modernization, tax education, and tax ethics, which have produced conflicting results depending on population and context. Previous research has primarily focused on registered adult taxpayers and small business owners, leaving a contextual gap among college students whose compliance behaviors and perceptions remain underexplored. Therefore, this study aims to bridge these gaps by analyzing how tax awareness, tax knowledge, modernization of the tax system, tax education, tax socialization, and tax ethics affect the tax

compliance behavior of students in the Cirebon region. This research is based on the Theory of Planned Behavior (TPB) Ajzen (1991) and assumes that behavioral intentions, including tax compliance, are shaped by attitudes, subjective norms, and perceived behavioral control. The Cirebon region was chosen because, despite being a developing economic corridor in West Java, research on tax compliance in this area remains limited. Thus, students in this region are strategically important as future taxpayers, and early tax socialization may have a long-term impact on regional tax revenues.

## METHOD

This study used a quantitative method with a structured survey to analyze the determinants of tax compliance behavior among students in three regions of Cirebon, including Cirebon City, Cirebon Regency, and Indramayu. The target population consisted of all active students enrolled in faculties of economics and business at universities in the region. A total of 260 respondents were selected through purposive sampling based on two inclusion criteria: (1) being actively enrolled in an economics or business study program and (2) having completed at least one tax-related course. The sample size of 260 was determined according to the rule of thumb recommended by Hair (2017) for PLS-SEM, which requires at least ten times the maximum number of structural paths directed at any construct.

With six predictors, at least 60 respondents were required. Therefore, the sample of 260 exceeded this threshold and met the recommended ratio for adequate statistical power. Data were collected from February to April 2025 through a self-administered online survey distributed via Google Forms. To address the risk of common method bias, Harman's single-factor test was performed, considering that all variables were collected from the same respondents at a single point in time. The results showed that no single factor exceeded 50% of the total variance, with the maximum factor accounting for 38.7%, suggesting that common method bias was not a major problem in this dataset. In addition, the full collinearity VIF values for all constructs were below 3.3, further confirming the absence of common method bias.

Table 10 presents the operational definitions and measurement indicators for each construct. Tax Awareness (TA) refers to the recognition of tax obligations and their role in national development (TA1–TA3, modified from (Shofaa & Nurhasanah, 2023)). Tax Knowledge (TK) refers to an understanding of tax regulations, calculations, and reporting procedures (TK1–TK3, revised from (Pratama et al., 2023)). Tax System Modernization (TSM) refers to the adoption of electronic filing and billing systems (TSM1–TSM3, adapted from (Mardiana et al., 2022)). Tax Education (TE) refers to formal and informal tax-related education received by respondents (TE1–TE3, adapted from (Prasetyo, 2023)). Tax Socialization (TS) refers to access to tax information through seminars, media, and campaigns (TS1–TS3, adapted from (Suardana & Gayatri, 2020)). Tax Morality (TM) refers to intrinsic ethical motivation to comply with tax obligations (TM1–TM3, modified from (Florek, 2021)). Tax Compliance Behavior (TCB) refers to the voluntary fulfillment of tax obligations (TCB1–TCB3, revised from (Paleka & Vitezic, 2023)). All items were measured using a 5-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree.

The collected data were analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) method with SmartPLS software. In this analysis, model testing was conducted in two stages: the measurement model, also known as the outer model, and the structural model, also known as the inner model. In the measurement model stage, construct validity and reliability were assessed by examining the average variance extracted (AVE), with a recommended value of 0.50 or higher, composite reliability, with an expected value of 0.70 or higher, and Cronbach's alpha to ensure convergent validity. Discriminant validity was verified using the Fornell-Larcker criterion and the cross-loading method to ensure that each construct was distinct.

Furthermore, in the structural model stage, analysis was conducted to verify the relationships between variables. The path coefficient values were analyzed to determine the strength and direction of the relationships between the independent variables, namely tax knowledge, tax awareness, tax system modernization, tax ethics, tax socialization, and tax education, and the dependent variable, namely tax compliance behavior. The  $R^2$  value was used to assess the extent to which the model explained variation in tax compliance behavior. Next, the

effect size test ( $f^2$ ) was performed to measure the impact of each independent variable on the dependent variable, while predictive relevance ( $Q^2$ ) was used to evaluate the model's predictive capability. The significance of the relationships between variables in the model was tested using the bootstrapping method, with  $p < 0.05$  used as the significance threshold.

## RESULTS AND DISCUSSION

### Results

#### *Characteristics of respondents*

**Table 1.** Characteristics of Tax Compliance Behavior - Respondents

Categories	Frequency	Percentage (%)
<b>Gender</b>		
fully	110	42.30%
Women	150	57.70%
<b>Total gender</b>	260	100%
<b>GPA</b>		
2.5 - 3.0	90	34.60%
3.1 - 3.5	120	46.20%
> 3.5	50	19.20%
<b>Overall GPA</b>	260	100%
<b>Obtaining a Tax Certificate</b>		
Yes	39	15.00%
That's not the case	221	85.00%
<b>Total Tax Certificate</b>	260	100%
<b>Age Group</b>		
Age 18 - 21 years old	99	38.10%
22 - 26 years old	161	61.90%
<b>Total age range</b>	260	100%

Source: Data Processing, 2025

Table 1 shows the characteristics of 260 students regarding tax compliance behavior. Based on gender, the majority of respondents were women (57.7%), with the remaining 42.3% being men. Regarding cumulative GPA, most respondents scored between 3.1 and 3.5 (46.2%), followed by a GPA between 2.5 and 3.0 (34.6%), and the rest had a GPA of 3.5 or higher (19.2%). Regarding participation in the tax reform program, only 15% of respondents participated in the program, while the remaining 85% did not. Regarding the age group of respondents, the majority of students were between the ages of 22 and 26 (61.9%), while the remaining 38.1% were aged 18 to 21. This data provides a clear picture of respondent demographics and serves as a basis for analyzing the factors that affect student tax compliance.

#### *Analysis Test Results*

**Table 2.** Multicollinearity Test Results

Variable	Durability	Different
Tax Awareness	0,620	1,888
Tax Knowledge	0,611	1,792
Modernization of the Tax System	0,690	1,961
Tax Education	0,701	1,840
Tax Socialization	0,714	1,821
Tax Morality	0,782	1,802
Tax Compliance Measures	0,670	1,822

Source: Data Processing, 2025

Table 2 shows the results of the multicollinearity test for various variables that affect tax compliance behavior. The results of this test measure the correlation between each independent variable. Tolerance and variance inflation factors (VIF) are used to assess the likelihood of multicollinearity between variables. All allowed values detected exceed 0.1, the VIF value of each variable does not exceed 10, and there are no significant multicollinearity issues between variables. Therefore, variables such as tax awareness, tax knowledge, modernization of the tax system, tax education, tax socialization, tax ethics, and tax compliance behavior can be utilized independently for further analysis without worrying about the influence of strong multicollinearity.

**Table 3.** Validity and reliability analysis results

Components	Item	Loading	alpha	rho_A	CR	Roads
Tax Awareness	TA1	0,953	0,900	0,912	0,963	0,866
	TA2	0,932				
	TA3	0,955				
Tax Knowledge	TK1	0,921	0,892	0,901	0,941	0,811
	TK2	0,931				
	TK3	0,926				
Modernization of the Tax System	TSM1	0,915	0,901	0,897	0,948	0,820
	TSM2	0,920				
	TSM3	0,918				
Tax Education	TE1	0,944	0,863	0,899	0,960	0,887
	TE2	0,928				
	TE3	0,955				
Tax Socialization	TS1	0,925	0,877	0,894	0,911	0,893
	TS2	0,951				
	TS3	0,885				
Tax Morality	TM1	0,925	0,890	0,888	0,921	0,845
	TM2	0,926				
	TM3	0,927				
Tax Compliance Measures	TCB1	0,902	0,869	0,820	0,900	0,829
	TCB2	0,954				
	TCB3	0,920				

Source: Data Processing, 2025

Table 3 shows the results of validity and reliability tests on various constructions related to tax compliance behavior. The validity of each item is measured by the load factor, which shows how much of its components are described. All items have a load value above 0.7, indicating excellent effectiveness. To measure component reliability, several indicators are used, including Cronback alpha (Alpha), rho\_A, composite reliability (CR), and average variance extract (AVE). High alpha and rho\_A Cronback values indicate excellent internal consistency, with most values exceeding the recommended value (0.7). CR shows excellent component reliability, with the most values above 0.9. On the other hand, an AVE above 0.5 indicates that this component can account for more than 50% of the variance of the related item. Overall, the results of this analysis show that all of the concepts and items used in this study have excellent validity and reliability, and the data used for further analysis of tax compliance behavior are reliable.

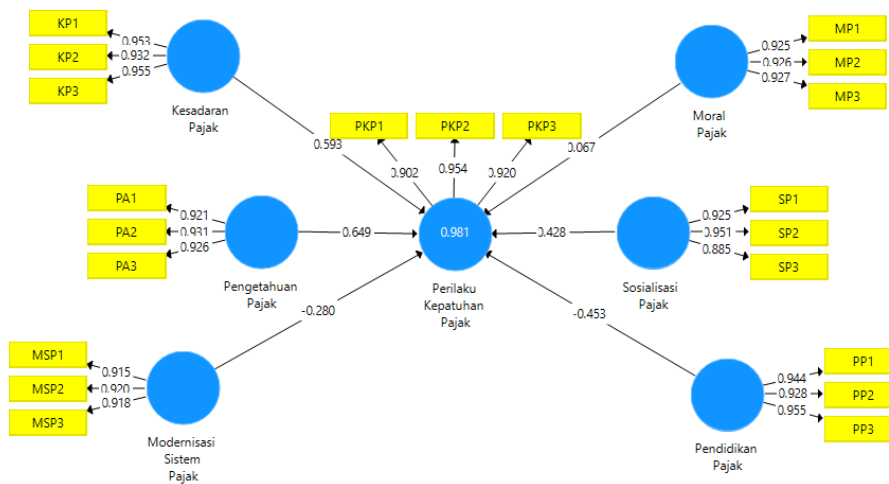


Figure 1. Measurement Model

Table 4. Validity of Discrimination

	PLOT	Kindergarten	TSM	THE	TS	TM	TCB
PLOT	<b>0,891</b>						
Kindergarten	0,781	<b>0,811</b>					
TSM	0,790	0,778	<b>0,836</b>				
THE	0,821	0,801	0,800	<b>0,844</b>			
TS	0,820	0,812	0,823	0,810	<b>0,851</b>		
TM	0,888	0,850	0,843	0,831	0,810	<b>0,866</b>	
TCB	0,878	0,825	0,834	0,820	0,811	0,806	<b>0,801</b>

Source: Data Processing, 2025

Table 4 shows the results of the discriminant validity test for the components used in the study. The diagonal values (TA, TK, TSM, TE, TS, TM, TCB) represent the root value of AVE for each construct and are greater than the correlation between the other components. This shows that each component can be clearly distinguished. For example, the root of AVE tax awareness (TA) is 0.891, which is higher than the phase factor of 0.781 with other components such as tax knowledge (TK). These results show the difference between excellent construction and guarantee the validity of good construction in the study.

Table 5. Differential Effectiveness (HTMT)

	PLOT	Kindergarten	TSM	THE	TS	TM	TCB
PLOT	<b>0,850</b>						
Kindergarten	0,878	<b>0,877</b>					
TSM	0,827	0,862	<b>0,835</b>				
THE	0,834	0,877	0,817	<b>0,810</b>			
TS	0,890	0,878	0,819	0,835	<b>0,829</b>		
TM	0,836	0,845	0,830	0,836	0,821	<b>0,899</b>	
TCB	0,835	0,844	0,891	0,831	0,801	0,800	<b>0,835</b>

Source: Data Processing, 2025

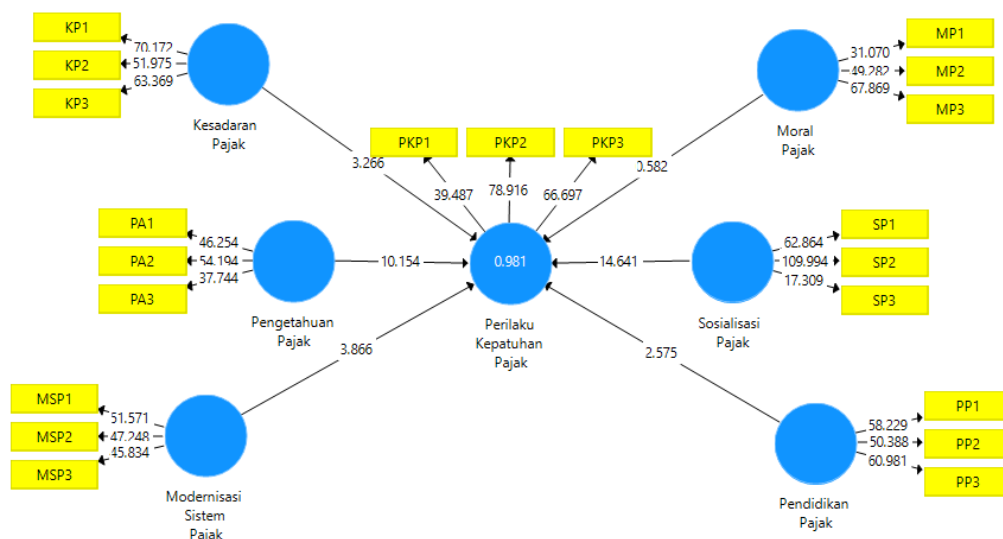
Table 5 shows the results of the discriminant validity test using HTMT (Heteromorph-to-Single Trait Ratio), which aims to measure the extent to which the components in this study can be distinguished. If the HTMT value between two constructions is less than the threshold (usually 0.90), the construction can be considered discriminatory. In this table, the HTMT value between components such as Tax Awareness (KP) and Tax Knowledge (PA) of 0.850, and Tax Socialization (SP) and Tax Ethics (MP) of 0.829 are below the threshold where the components can be clearly distinguished. Overall, the results of this HTMT test confirm that this research component has good wisdom and can be used independently for further analysis.

**Table 6.** bootstrap

Hypothesis	Direct contact	Beta version	T-Value	p-value	Survey Results
H1	TCB--->TA	0,593	3,266	0,001	Support
H2	TK--->TCB	0,649	10,154	0,000	Support
H3	TSM--->TCB	(0,280)	3,866	0,000	Support
H4	TE--->TCB	(0,543)	2,575	0,011	Support
H5	TS ---> TCB	0,428	14,641	0,000	Support
H6	TM--->TCB	0,067	0,582	0,562	Not supported

Source: Data Processing, 2025

Based on the bootstrap test results presented in Table 6, the structural model reveals that five of the six proposed hypotheses are supported. Tax awareness has a significant positive effect on tax compliance behavior ( $\beta = 0.593$ ,  $T = 3.266$ ,  $p = 0.001$ ), indicating that higher levels of tax awareness encourage stronger tax compliance among students, thereby supporting H1. Similarly, tax knowledge demonstrates a significant positive relationship with tax compliance behavior ( $\beta = 0.649$ ,  $T = 10.154$ ,  $p < 0.001$ ), suggesting that greater understanding of taxation enhances individuals' willingness to comply with tax obligations, supporting H2. Tax system modernization shows a significant negative effect on tax compliance behavior ( $\beta = -0.280$ ,  $T = 3.866$ ,  $p < 0.001$ ), implying that the current implementation of modernization initiatives may not yet effectively promote compliance among students, thus supporting H3 despite the negative direction. Likewise, tax education exhibits a significant negative relationship with tax compliance behavior ( $\beta = -0.543$ ,  $T = 2.575$ ,  $p = 0.011$ ), indicating that existing tax education programs may require improvement to achieve their intended objectives, supporting H4. Furthermore, tax socialization has a strong positive influence on tax compliance behavior ( $\beta = 0.428$ ,  $T = 14.641$ ,  $p < 0.001$ ), demonstrating that more intensive tax socialization activities significantly increase students' compliance, thereby supporting H5. In contrast, tax ethics does not significantly affect tax compliance behavior ( $\beta = 0.067$ ,  $T = 0.582$ ,  $p = 0.562$ ), indicating that moral considerations alone are insufficient to explain students' tax compliance behavior in this study; therefore, H6 is not supported.



**Figure 2.** Structural model

**Table 7.** Variance is explained by endogenous latent variables

	R Square	R-Square Customized
Tax Compliance Measures	0,981	0,980

Source: Data Processing, 2025

Table 7 presents the results of the analysis of endogenous latent variables, namely variance in tax compliance behavior. The R-squared value of 0.981 indicates that 98.1% of changes in tax compliance behavior can be explained by independent variables in the model. Meanwhile, the adjusted R-square of 0.980 shows that 98% of the change in tax compliance behavior can be explained by considering the number of predictive variables used in the model. Therefore, this very high R-square value suggests that this research model has an excellent ability to explain tax compliance behavior.

**Table 8.** Effect size

Variable	Tax Compliance Measures	Effect size
Tax Awareness	0,670	large
Tax Knowledge	0,691	large
Modernization of the Tax System	0,701	large
Tax Education	0,777	large
Tax Socialization	0,890	large
Tax Morality	0,881	large

Source: Data Processing, 2025

Table 8 shows the effect size ( $f^2$ ) for tax compliance behavior for each independent variable. Tax awareness ( $f^2 = 0.670$ ), tax knowledge ( $f^2 = 0.691$ ), tax modernization ( $f^2 = 0.701$ ), tax education ( $f^2 = 0.777$ ), tax socialization ( $f^2 = 0.890$ ), and tax ethics ( $f^2 = 0.881$ ) were all classified in the large effect size category ( $f^2 > 0.35$ ). The effect size ( $f^2$ ) measures the contribution of variance of each predictor variable excluded from the model, and it is important to note that it is conceptually different from the statistical significance assessed by the bootstrap method (p-value). Therefore, the fact that tax ethics produces a large but statistically insignificant  $f^2$  ( $p = 0.562$ ) suggests that while tax compliance behaviors in structural models share large variances, their unique path coefficients do not reach significant degrees. This is thought to be due to the suppressing effects of multicollinearity and overlapping constructions. The authors recommend that future research re-examine the concept of tax ethics using enhanced indicators to clarify this empirical contradiction.

**Table 9.** Forecast ( $Q^2$ )

	Question 2
Tax Compliance Measures	0,895

Source: Data Processing, 2025

Table 9 shows the results of the predictive relevance test ( $Q^2$ ) for tax compliance behavior, with a  $Q^2$  value of 0.895. This value indicates that when  $Q^2$  exceeds 0, fluctuations in tax compliance behavior can be predicted with high accuracy, suggesting that the research model has excellent predictive relevance. Given the  $Q^2$  value of 0.895, it can be concluded that this model is very effective in predicting and explaining tax compliance behavior.

## Discussion

### Implications of Research Results

#### *The Impact of Tax Awareness on Tax Compliance*

The results of this study reveal that tax awareness makes a positive and significant contribution to the level of taxpayer compliance. This is also evident in the high value of statements that increase individual responsibility for the development of the country by recognizing the importance of paying taxes on time. Tax awareness promotes compliance behavior by understanding daily contribution obligations. These results support research Astuti (2024) which shows that increasing tax awareness directly impacts the level of taxpayer compliance. Tax awareness has been shown to have a significant impact on student compliance. Students who are aware of the importance of taxes as a source of funding for state development tend to have higher adherence to tax obligations. This increase in awareness is greatly influenced by the effectiveness of education that is delivered formally through educational institutions and delivered informally through off-campus media. An education that exposes you to the role and

benefits of taxes in everyday life can deepen your understanding of taxation and foster a positive attitude. For example, public campaigns and seminars that discuss the contribution of taxes to national development can be effective ways to instill such awareness. In addition, the use of digital platforms such as social media can be a very relevant educational tool for students because it is accessible and facilitates communication.

Furthermore, a study by Matshona (2024) showed that tax awareness, tax knowledge, and tax ethics significantly contributed to individual tax compliance rates, explaining up to 71% variation in compliance behavior. This shows that raising awareness and effective educational strategies are inseparable. In the Indonesian context Nasir (2025), it is emphasized that although the younger generation is very active on social media, the tax education materials provided through this platform remain irrelevant, too formal, and not personal. Most students respond positively to the content presented in an interactive format and accessible through a practical, contextual, and user-friendly digital interface. In this context, research in India shows that elements such as financial education, peer influence, and the use of digital tax media directly contribute to shaping students' awareness and attitudes towards tax compliance. These findings highlight the importance of providing digital and contextual formal and informal education that is more in line with the characteristics of the younger generation. This approach makes increasing student tax awareness more effective and ultimately promoting more consistent compliance.

#### *The Impact of Tax Knowledge on Tax Compliance*

The survey results confirm that tax knowledge has a significant impact on tax compliance. A thorough understanding of tax calculation, payment, and reporting procedures has been proven to help taxpayers avoid administrative errors. The highest score comes from the description that good knowledge makes it easier to fulfill tax obligations. These results are in line with the findings that increased tax knowledge drives better taxpayer compliance (Yani & Simbolon, 2023). Tax knowledge also plays a very important role in promoting compliance. Students who understand tax rules and procedures tend to feel confident in their tax compliance (Yani & Simbolon, 2023). The knowledge gained not only helps avoid administrative errors but also increases your sense of responsibility. For this reason, educational institutions can play an important role by offering not only theoretical but also practical learning programs. For example, students may be invited to participate in a tax return settlement simulation or tax case study. This step not only provides hands-on experience but also fosters confidence and a deep understanding of taxation.

Furthermore, research by Amin (2022) revealed that the implementation of formal tax education through special courses by Malaysian universities has a significant impact on improving tax knowledge and student compliance. Participating in tax return completion simulations and tax case studies not only strengthens theoretical understanding but also directly increases confidence in dealing with the tax administration process. That learning based on tax simulations triggers a high level of students' ability to calculate and report taxes, which in turn leads to an increase in "cognitive skills" in tax filing. These findings support that educational institutions need to incorporate practical elements into the taxation curriculum through simulations and case studies, making knowledge not only conceptual but also applied. Therefore, such learning strategies encourage students not only to understand the rules but also to fulfill their tax obligations independently and confidently.

#### *The Impact of Tax System Modernization on Tax Compliance*

This study revealed that tax modernization had a statistically significant but negative impact on tax compliance behavior ( $\beta = -0.280$ ,  $p < 0.001$ ). This negative relationship has been influenced by several previous studies Mardiana (2022) and Dewi (2022) reported positive modernization effects, which are consistent with the results of Pernamasari (2021) reporting ineffective or harmful effects. A plausible explanation is the digital literacy gap among students. The introduction of e-filing and electronic billing systems introduces new administrative complexities that students have not yet been able to handle, potentially leading to frustration and decreased compliance motivation. The DeLone & McLean model Yudha (2021) asserts that poor system usability and unstable technical infrastructure lower user satisfaction, which in turn reduces compliance behavior. These findings suggest that the introduction of a digital taxation system requires adequate user training and technical support, especially for students who are

digital-native but do not have formal tax technology experience.

In addition to capability challenges, technical issues such as server failures, account authentication issues, and unstable internet connections also worsen the user experience. This situation not only hinders electronic tax reporting but also creates frustration and distrust of the system, potentially lowering compliance. To address this issue, educational institutions and tax authorities need to collaborate to provide practical learning media such as online tutorials, hands-on training, and interactive how-to videos that are easy for beginners to understand.

#### *The Impact of Tax Education on Tax Compliance*

The results of the study revealed that tax education had a statistically significant negative impact on tax compliance behavior (tax compliance behavior  $\beta = -0.543$ ,  $p = 0.011$ ). These counterintuitive findings suggest that the form and content of tax education received by students in this sample may not be associated with increased compliance intent. One explanation is that tax education is conducted in a theoretical or abstract format, lacking practical applications or simulation elements, which can lead students to recognize tax-related complexities and risks without increasing awareness of tax complexity or associated risks, and failing to equip them with the ability to act appropriately in compliance.

This is in line with the findings of Werdiningsih (2019), who showed that tax education does not have a positive impact on compliance, and with the contrast between Prasetyo (2023), who found positive effects through practice-oriented programs. Negative coefficients can also reflect the priming effect. Students with tax education may find the tax system burdensome and complex, and may temporarily suppress compliance intent until practical trust is formed. Therefore, educational institutions should prioritize experiential learning approaches such as electronic filing simulations du Preez (2023), transforming tax knowledge into practical compliance skills.

This shows that utilizing simulations not only makes teaching materials more relevant but also helps students directly experience the tax reporting process. Therefore, educational institutions need to consider integrating simulations based on actual tax filings involving the risk of empty or dummy accounts into their curriculum. This strategy allows theoretical learning to develop into a practical experience, equipping you not only with insights but also with the skills and confidence that are essential for future tax compliance.

#### *The Impact of Tax Socialization on Tax Compliance*

This study also shows that tax socialization has a positive impact on tax compliance. Social activities through social media, seminars, and workshops are considered effective in deepening taxpayers' understanding of the tax system. The highest score comes from the statement that socialization builds trust and deepens understanding of the tax system. These findings support research Suardana (2020) that shows that tax socialization plays an important role in increasing taxpayer compliance levels. On the other hand, tax socialization has been proven to be effective in increasing taxpayer awareness (Suardana & Gayatri, 2020). Intensive communication through seminars, social media, and workshops helps students understand their tax obligations. Socialization, including interactive discussions and real-life examples, also has a greater impact because it makes it easier for students to understand.

Furthermore, a study in Indonesia Hidayati (2023) showed that practice-based tax education has a significant impact on tax compliance among students from various ethnic backgrounds. The study shows that a comprehensive tax education approach that balances theory and practice has led to compliance rates increasing by up to 73.5% among certain groups of students

Furthermore, the report OECD (2021) emphasizes that tax education is the most effective. It includes three main cornerstones: formal education, awareness campaigns, and practical support in tax administration. This model is in line with results showing that a combination of simulation of tax regulations, interactive interaction through seminars and social media, and practical technical support such as tutorials and help desks improves student understanding, confidence, and ultimately compliance (Suardana & Gayatri, 2020). Therefore, providing practical practice and intensive interactive communication channels not only enriches the teaching materials but also serves as a bridge to bridge the gap between theory and practical application

in the world of student taxation.

### *The impact of tax ethics on tax compliance*

Contrary to the moral foundation assumed in this study, tax ethics did not have a statistically significant influence on tax compliance behavior ( $\beta = 0.067$ ,  $p = 0.562$ ). These results suggest that, in the context of students, intrinsic moral motivation is not a major factor in obedience intentions. These findings are in line with Rakhman (2024), who also identifies non-positive morality and compliance relationships, suggesting that students are former taxpayers with no formal tax obligations at present and have not internalized tax ethics as relevant values for individuals. The prioritization of external factors such as the socialization of taxes and knowledge over internal morality is in line with social learning theory, arguing that the adoption of behavior in the early stages is more strongly influenced by observed social norms and acquired knowledge than by internalized ethics. The OECD (2019) positions tax morality as a key pillar of long-term voluntary compliance, but the results of this study suggest that representation requires prior experience as an actual taxpayer. Future research should investigate whether the moral aspect becomes more important as students enter the formal labor market.

OECD research confirms that morality is an essential foundation for building a long-term tax culture. OECD (2019) The report states that viewing tax morality as an intrinsic motivation to pay taxes is a key pillar of voluntary compliance strategies, especially in developing countries, and is closely linked to public trust in government and tax fairness

By incorporating discussions of social responsibility, moral values, and public ethics into the curriculum, students see taxes not only as a legal obligation but also as a moral and social contribution. This approach is in line with the findings of cross-cultural experiments Cummings (2006), which suggest that social norms and trust in government can encourage compliant behavior even when enforcement measures are weak. Therefore, integrating moral elements in tax education is not only complementary but also follows the rules and is an important strategy to foster a generation of high integrity and social responsibility.

## **CONCLUSION**

This study aims to analyze the determinants of tax compliance behavior among university students in the Cirebon region using the PLS-SEM approach. The findings indicate that tax awareness and tax knowledge have significant positive effects on tax compliance behavior, suggesting that students who understand the importance of taxation and possess adequate knowledge of tax regulations are more likely to comply with their tax obligations. Tax socialization also demonstrates a strong positive influence, indicating that effective dissemination of tax information through campaigns and educational activities enhances students' awareness and compliance. In contrast, tax system modernization and tax education exhibit significant negative effects on tax compliance behavior, implying that current modernization initiatives and educational approaches may not yet meet students' needs or effectively support compliance, possibly due to implementation challenges and the predominantly theoretical nature of tax education. Meanwhile, tax ethics does not have a significant effect on tax compliance behavior, indicating that students' compliance is influenced more by external factors, such as knowledge, awareness, and socialization, than by internal moral or ethical considerations. Overall, the findings highlight the importance of strengthening tax awareness, improving tax literacy, and enhancing socialization programs while refining tax modernization initiatives and educational strategies to foster better tax compliance among future taxpayers.

Overall, this research model showed high explanatory power ( $R^2 = 0.981$ ) and predictive relevance ( $Q^2 = 0.895$ ). However, it should be noted that very high  $R^2$  values may reflect some general methodological variance, as all constructs are measured at a single point in a self-reported questionnaire from a homogeneous sample of students. This should be interpreted with proper care.

Theoretical implications: This study extends the Theory of Planned Behavior (SDP) to the context of future taxpayers, showing that attitude factors (tax awareness, knowledge) and factors related to subjective norms (tax socialization) are stronger predictors of compliance than the moral dimension in this group. The negative effects of tax education and institutional modernization reveal context-specific barriers and add subtle nuances to the literature by

challenging the universality of previous positive findings.

Practical implications: Tax authorities (DGTs) and educational institutions should collaborate to develop an interactive simulation-based tax education program that bridges the gap between theory and practice. It is recommended to offer digital social campaigns tailored to the student's demographics through an accessible platform. The modernization rollout targeting young potential taxpayers should be accompanied by technical training and guidance for an easy-to-use electronic filing system.

Limitations of the study and future direction: This study has several limitations. First, deliberate sampling limits generalization outside the three Cirebon areas. Second, cross-sectional design prevents causal inference. Third, self-reported responses can be influenced by social desire bias. Fourth, respondents are future taxpayers rather than active ones, which can undermine representations of moral compliance. Future research should use longitudinal designs, incorporate groups of active taxpayers, and explore intermediary mechanisms within the framework of the SDGs (e.g., tax attitudes, awareness of behavioral controls) to deepen understanding of how compliance intent is connected to actual actions.

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### AUTHOR CONTRIBUTION STATEMENT

Rizki Indrawan: Conceptualization, methodology, investigation, data collection, formal analysis, writing—original draft preparation, visualization, and project administration. Amir Hamzah: Supervision, research design validation, methodology review, interpretation of results, writing—review and editing, and final approval of the manuscript.

### REFERENCES

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Amin, S. N., Zaqqeya, P., Buhari, A., Yaacob, A. S., & Iddy, Z. (2022). Exploring the Influence of Tax Knowledge in Increasing Tax Compliance by Introducing Tax Education at Tertiary Level Institutions. 57–70. <https://doi.org/10.4236/ojacct.2022.112004>
- Astuti, R., & Mulyani. (2024). *Analisis Faktor-Faktor yang Mendorong Kepatuhan Wajib Pajak di Kalangan Mahasiswa : Studi Kasus Universitas Pamulang*. 4(2), 513–525.
- Cummings, R. G., Martinez-Vazquez, J., McKee, M., & Torgler, B. (2006). Effects of tax morale on tax compliance: Experimental and survey evidence.
- Dewi Anggadini, S., Lnu, S., Bramasto, A., & Fahrana, E. (2022). Determination of individual taxpayer compliance in Indonesia: A case study. *Journal of Eastern European and Central Asian Research*, 9(1).
- du Preez, H., Hill, T., Coetzee, L., Motsamai, L., & Stark, K. (2023). Exposing students to a simulation of the online platform used by the South African revenue service. *Journal of Research in Innovative Teaching and Learning*, 16(2), 139–152. <https://doi.org/10.1108/JRIT-12-2022-0083>
- Florek, D. (2021). Motywacja do płacenia podatków studentów z pokolenia Z. *Zeszyty Teoretyczne Rachunkowości*, (112), 51-68.
- Hastuti, R. (2014). Tax awareness and tax education: A perception of potential taxpayers. *Tax Awareness and Tax Education: A Perception of Potential Taxpayers*, 5.
- Hair, J. F., Hult, G. T. M., & Ringle, C. M. (2017). A primer on partial least squares structural equation modeling (PLS-SEM).
- Heriana, K. M. A., & Irawan, F. (2024). Analisis Faktor-Faktor yang Memengaruhi Kepatuhan Pajak pada Mahasiswa Akuntansi di Universitas di Pulau Jawa sebagai Potensial Wajib Pajak. *Jurnal Ilmiah Akuntansi dan Finansial Indonesia*, 8(1), 27-51.

- Hidayati, B., Hermanto, F. Y., & Nnamdi, A. O. (2023). Tax education and tax compliance: A multi-ethnic analysis. *JIFA (Journal of Islamic Finance and Accounting)*, 6(1), 34-44.
- Indriani, A., S Aminem, Handayani, E. ., & Saprianto, R. (2024). *Meningkatkan Kesadaran Kaum Muda Terhadap Perpajakan Di Indonesia Melalui Program Sosialisasi Pajak Bagi Mahasiswa Fakultas Ekonomi Universitas Darma Persada*. 5(1), 700-706.
- Kussuari, K., & Boenjamin, P. (2019). Pengaruh Kebijakan Pengampunan Pajak Dan Modernisasi Sistem Informasi Perpajakan Terhadap Kepatuhan Wajib Pajak Orang Pribadi. *Jurnal Informasi, Perpajakan, Akuntansi, Dan Keuangan Publik*, 14(1), 59-80. <https://doi.org/10.25105/jipak.v14i1.5080>
- Linawati, L., & Putra, R. E. (2023). Young generation tax compliance as candidates potential taxpayers. *Jurnal Scientia*, 12(04), 1068-1075.
- Mardiana, A., Lukman, & Holly, A. (2022). Pengaruh Modernisasi Sistem Administrasi Dan Pengetahuan Perpajakan Terhadap Kepatuhan Wajib Pajak (Studi pada Pengusaha Kena Pajak yang Terdaftar di Kantor Pelayanan Pajak Pratama Makassar Utara) THE. *Jurnal Akuntansi*, 16(1), 1-25.
- Matshona, Z., Sibanda, M., & Phesa, M. (2024). Tax knowledge and tax behaviour of individual taxpayers in South Africa: A scoping review. *International Journal of Economics and Financial Issues*, 14(5), 299-316.
- Mohamad, N. M., Zin, N. M., Sulaiman, S., & Abdul, N. Z. (2023). The influence of tax education on tax awareness among secondary school students in Malaysia. *Asian Journal of Research in Education and Social Sciences*, 5(1), 137-150.
- Nasir, N. (2025). The Effectiveness of Tax Socialization through Digital Media: The Perspective of Millennial Taxpayers. *Research of Accounting and Governance*, 3(1), 13-20.
- Nguyen, T. T. D., Pham, T. M. L., Le, T. T., Truong, T. H. L., & Tran, M. D. (2020). Determinants influencing tax compliance: The case of Vietnam. *Journal of Asian Finance, Economics and Business*, 7(2), 65-73.. <https://doi.org/10.13106/jafeb.2020.vol7.no2.65>
- OECD. (2019). Tax Morale: What Drives People and Businesses to Pay Tax?
- OECD. (2021). Building Tax Culture , Compliance and Citizenship.
- Paleka, H., & Vitezić, V. (2023). Tax compliance challenge through taxpayers' typology. *Economies*, 11(9), 219.
- Pernamasari, R., & Rahmawati, S. N. (2021). Analisis penerapan modernisasi sistem administrasi perpajakan terhadap tingkat kepatuhan wajib pajak pada Kantor Pelayanan Pajak Pratama Kembangan Jakarta. *Jurnal Akuntansi, Keuangan, Pajak dan Informasi (JAKPI)*, 1(1), 77-97. <https://doi.org/10.32509/jakpi.v1i1.1346>
- Pratama, M. Y., Susyanti, J., & Bastomi, M. (2024). Pengaruh Moral Pajak, Pengetahuan Pajak Dan Kesadaran Pajak Terhadap Kepatuhan Pajak Generasi Z Sebagai Calon Wajib Pajak (Studi Kasus Pada Mahasiswa di Kota Malang). *E-JRM: Elektronik Jurnal Riset Manajemen*, 13(01), 4064-4074.
- Prasetyo, M. S., & Putri, E. P. (2023). Pengaruh Persepsi Mahasiswa Tentang Pendidikan Pajak dan Pengetahuan Pajak Terhadap Kepatuhan Wajib Pajak (Studi Kasus di STIE Port Numbay Jayapura). *Jurnal Ekonomi Dan Bisnis*, 15(1), 45-52.
- Rakhman, A., & Chamalinda, K. N. L. (2024). Peran Kesadaran Dan Moralitas Dalam Membentuk Kepatuhan Wajib Pajak Orang Pribadi. *Jurnal Ebi*, 6(1), 42-52. <https://doi.org/10.52061/ebi.v6i1.227>
- Rusli, Y. M., & Nainggolan, P. (2021). Pentingnya Pengetahuan Pajak dan Sosialisasi Pajak Kepada Calon Wajib Pajak Masa Depan. *Jurnal Pengabdian dan Kewirausahaan*, 5(2).
- Shofaa, A. A., & Nurhasanah, I. (2023). Analisis Pemahaman Wajib Pajak Penghasilan, Kesadaran Wajib Pajak Dan Sanksi Perpajakan Terhadap Pelaksanaan Wajib Pajak Orang Pribadi (Wp Op) Mahasiswa Universitas Pamulang. *Journal of Social and Economics Research*, 5(2), 99-106.
- Suardana, K. P., & Gayatri, G. (2020). Pengaruh sosialisasi perpajakan, pengetahuan perpajakan dan perhitungan tarif pajak pada kepatuhan pajak mahasiswa pelaku UMKM. *E-Jurnal Akuntansi*, 30(9), 2311.
- Surugiu, M. R., Mazilescu, C. R., & Surugiu, C. (2021). Analysis of the Tax Compliance in the EU: VECM and SEM. *Mathematics*, 9(17), 2170.
- Tiong, K., Ferioka, H., Ismaya, A., Taqi, M., & Muchlish, M. M. (2023). Literasi tentang Kepatuhan

- Pajak bagi Mahasiswa dan Masyarakat Umum. *Dedikasi: Jurnal Pengabdian Masyarakat*, 16(2), 108-116.
- Werdiningsih, P. (2019). *Pengaruh Tingkat Pendidikan, Penerapan E-Registration, E-Billing Dan E-Filing Terhadap Kepatuhan Wajib Pajak Orang Pribadi (Studi Kasus pada WPOP Mahasiswa Reguler 2 Fakultas Ekonomi dan Bisnis di Universitas Mercu Buana)* (Doctoral dissertation, Universitas Mercu Buana Jakarta).
- Yani, R., & Simbolon, S. (2023). Pengaruh Pengetahuan Perpajakan , Sanksi Perpajakan dan Tarif Pajak terhadap Kepatuhan Wajib Pajak UMKM ( Studi Kasus pada Mahasiswa dan Mahasiswi di Universitas Buddhi Dharma ). 6(41), 357–366.
- Yasa, I. N. P., Sinarwati, N. K., & Martadinata, I. P. H. (2020, December). Tax Compliance: Students' Ethical Perspectives. In *5th International Conference on Tourism, Economics, Accounting, Management and Social Science (TEAMS 2020)* (pp. 235-238). Atlantis Press.
- Yudha, N., Widyari, A., Ariyanto, D., Suprasto, H. B., Gede, I. D., & Suputra, D. (2021). Understanding the Impact of e-Filing System Performance on Tax Compliance Using the DeLone and McLean Model. 8(2), 161–180.