



Does Taxpayer Understanding and The Use of E-Filing Affect Taxpayer Compliance? (Tax Volunteer as Moderating Variable)

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Abstract. This study examines the effect of taxpayer understanding and the use of e-filing on the compliance of Individual Taxpayers with tax volunteers as a moderating variable. The method used in this research is quantitative, with data collection techniques carried out through two survey options, offline and online, using a closed questionnaire. The sample of this study consisted of 126 Individual Taxpayers selected using a purposive sampling technique. The results showed that taxpayer understanding has no significant effect on individual taxpayer compliance, the use of e-filing significantly affects individual taxpayer compliance, and tax volunteers do not moderate the influence between tax understanding and the use of e-filing on individual taxpayer compliance. This study has implications in the field of taxation, namely that the government needs to strengthen efforts to encourage the use of e-filing in tax reporting as an effective way to improve taxpayer compliance.

Keywords: Taxpayer Understanding, E-Filing, Taxpayer Compliance, Tax Volunteer.

1 Introduction

The government's primary source of revenue for performing its functions and programs is taxes. Tax funds finance vital sectors, including education, health, infrastructure, and other public services. Not only that, tax revenue also plays an essential role in supporting sustainable economic growth. Over the past two decades, Indonesia's tax ratio has declined from 12% in 2003 to 10.41% in 2022. Indonesia's tax ratio must catch up to that of ASEAN countries such as Vietnam, Malaysia, and the Philippines. In addition, when compared to small countries in the Asia Pacific region, such as Vanuatu and Maldives, Indonesia's tax ratio is also still relatively low [1].

The tax ratio figure reflects citizens' compliance with tax payment obligations and the tax administration's ability to collect tax payments from parties with tax obligations [2]. This indicates that Indonesian citizens' compliance with tax obligations must be revised to ideal levels. The issue of taxpayer compliance has become a severe concern for the Indonesian tax system. From 2017 to 2022, the level

of realization of community compliance in reporting and paying their taxes still needs to be constant every year [3]. Taxpayer compliance is a central point in determining the realization of tax revenue [4]. Therefore, the government undertook various reforms to improve taxpayer compliance in Indonesia, including implementing the self-assessment system, using e-filing, and the tax volunteer program. This research is essential because it can provide a strong foundation for formulating more effective tax policies and implementing appropriate educational strategies to improve overall taxpayer compliance in the future for several vital reasons. First, an in-depth understanding of taxpayers can help the government detail and design more specific tax education programs. Second, e-filing provides detailed insights into how technology can support the tax process efficiently. The findings of this study may be used as a foundation for technological attempts by the government to make tax reporting more convenient for taxpayers. Third, tax volunteers also significantly convey tax-related information to taxpayers, which will undoubtedly affect taxpayer compliance.

This research replicates research by [5] focusing on how two key factors, taxpayer understanding and the use of e-filing, impact individual taxpayer compliance. Additionally, it explores the role of tax volunteers as a potential moderating variable in this relationship. This research is not the first on this topic, as research by [6] aims to investigate how tax understanding influences taxpayer compliance at the East Semarang Primary Tax Service Office. The results demonstrate that a better understanding of taxes has a meaningful and positive impact on taxpayer compliance. [7] according to a study, using tax knowledge and e-filing significantly improves taxpayer compliance. The results of this study, which focuses on individual taxpayers enrolled in KPP Pratama Pekanbaru Tampan, also demonstrate the moderating influence of tax socialization. This strengthens the relationship between e-filing adoption and tax understanding on the one hand and taxpayer compliance on the other. The results of this study underscore the importance of digital tools, tax education, and outreach efforts in improving the level of compliance of individual taxpayers. A study by [8] investigated how e-filing implementation and tax volunteer involvement affected individual taxpayer's compliance. Their results indicated that adopting e-filing systems had a substantial positive impact on taxpayer compliance rates. However, the researchers found that the presence of tax volunteers did not significantly alter the relationship between e-filing usage and taxpayer compliance. In other words, while e-filing improved compliance, tax volunteers' involvement neither strengthened nor weakened this effect. [9] A study was carried out to evaluate the effect of electronic filing on individual taxpayer compliance at the tax office Pratama Denpasar Timur. The researchers showed that adopting e-filing technologies significantly impacted individual taxpayer compliance. The researchers observed a clear and statistically significant relationship between the adoption of e-filing and increased compliance among individual taxpayers in this tax district.

[10] their study examined the relationship between taxpayers' understanding of tax regulations and their compliance with tax laws. The study focused on individual taxpayers registered at Surakarta Primary Tax Office, Indonesia. The findings revealed a strong connection between how well taxpayers comprehended tax rules and

their likelihood of adhering to those rules. [11] state that understanding taxation does not affect taxpayer compliance. The research by [5] examines how taxpayer compliance is affected by two main factors: taxpayers understanding and their use of e-filing systems. The study finds that both factors positively influence taxpayer compliance. The research also considers the role of tax volunteers as a moderating variable. It demonstrates that tax volunteers negatively moderate the relationship between taxpayer understanding and compliance. On the other hand, the relationship between taxpayer compliance and e-filing utilization is favorably moderated.

[12] investigated how the implementation of an e-filing system and tax understanding influence taxpayer compliance, with tax socialization serving as a moderating factor. Their research revealed that both the e-filing system adoption and tax understanding have a positive and substantial impact on MSME taxpayers' compliance levels. Moreover, the research findings indicate that tax socialization plays a substantial moderating role in the relationship between the implementation of e-filing systems and tax understanding among MSME taxpayers.

[13] revealed that implementing e-filing and understanding taxation significantly and positively affect taxpayer compliance. Additionally, the research demonstrated that tax volunteers boost the effect of e-filing system adoption on taxpayer compliance. However, according to the study, there was no proof that tax volunteers influence the connection between MSME taxpayer compliance and tax understanding. The study highlights the complex interactions between technological solutions, tax knowledge, and volunteer support in shaping taxpayer behavior. The association between tax understanding and taxpayer compliance can be moderated by taxation socialization; however, the relationship between the usage of e-filing and taxpayer compliance cannot be moderated. Taxpayer compliance is impacted by tax understanding and the use of the e-filing system [14].

The study by [15] revealed two critical insights about tax compliance. First, they found that using e-filing systems significantly improves how well individual taxpayers follow tax rules. This means that when people use e-filing, they're more likely to pay their taxes correctly and on time. Second, the researchers discovered that tax volunteers play an essential role. These volunteers effectively strengthen the positive link between e-filing use and taxpayer compliance. In other words, when tax volunteers are involved, the benefits of e-filing in improving tax compliance become even more pronounced. This research highlights the value of both e-filing systems and volunteer support in enhancing tax compliance among individuals. Similar research was also conducted by [16], which aims to investigate the effect of e-filing implementation on individual taxpayer compliance at KPP Pratama South Sidoarjo. The study's findings show that adopting e-filing significantly and favorably affects taxpayer compliance.

There are three differences between this research and previous research. First, the previous research was conducted in Bali City, while this research shifts the focus to Batam City. Second, sample differences. The previous study used a sample of taxpayers at the North Badung Tax Office and the Taxation Service, Counseling and Consultation Office (KP2KP) through e-Riset while this study used a sample of staff and lecturers of Batam State Polytechnic. Third, in the previous study, the process of

collecting field data or distributing questionnaires was carried out after the tax volunteer assistance program was completed, while in this study, questionnaires were distributed directly to individual taxpayers during the tax volunteer assistance program.

2 Theory, Literature Review and Hypothesis Development

2.1 Theory Review

Azjen developed the Theory of Planned Behavior (TPB) in the late 1980. This theory was created to enhance and expand the earlier Theory of Reasoned Action (TRA). The TPB built upon the foundations of the TRA, introducing new elements to provide a more comprehensive framework for understanding human behavior. According to [17], a person's desire to execute a behavior is influenced by individual attitudes about the conduct, perceived social factors (subjective norm), and perceived behavioral control. Attitude refers to how a person assesses specific actions or behaviors, whether they are considered beneficial or harmful. Social factors indicate the influence of the social environment in shaping one's behavior. At the same time, perceived behavioral control includes the extent to which a person feels able or challenged to control the behavior, including consideration of past experiences and possible obstacles.

The Technology Acceptance Model (TAM) is a theory that examines the context of technology use and acceptance, particularly the adoption of information systems and new technologies. TAM was first introduced by Davis in 1989. This theory explains how users respond to information technology by considering specific aspects that affect users' acceptance or rejection of technology [18]. [19] revealed that two aspects are believed to be very important in technology acceptance: perceived usefulness and perceived ease of use. Perceived usefulness includes the perception that the technology can increase efficiency and productivity, while perceived ease of use involves individual beliefs about how easy the technology is to use and understand.

2.2 Literature Review

[6] conducted research to directly assess the effect of tax understanding on individual taxpayer compliance at the East Semarang Primary Tax Service Office. The study included a sample of 200 taxpayers, and the researchers analyzed the data using SPSS version 21. The results showed a greater understanding of taxes, significantly and favorably impacting taxpayer compliance. The study underscores the importance of tax understanding in improving the compliance level of individual taxpayers in the East Semarang area. [7] researched how e-filing implementation and tax knowledge affected individual taxpayer compliance at the Tax Service Office Pratama Pekanbaru Tampan. The study also considered tax socialization as a moderating factor. Data was collected through questionnaires given to 100 taxpayers and selected using incidental sampling. The researcher employed Moderated Regression Analysis (MRA) to analyze the data. The findings demonstrated that both e-filing adoption and tax understanding positively and significantly influenced taxpayer compliance.

Furthermore, tax socialization effectively moderates the relationship between e-filing implementation, tax understanding, and taxpayer compliance.

Research by [8] looks at how individual taxpayer compliance is affected by e-filing and whether tax volunteers can have a moderating influence. According to the study, e-filing significantly and positively influences individual taxpayer compliance. However, tax volunteers did not attenuate or change the association between e-filing usage and taxpayer compliance. The researchers gathered information via questionnaires issued to 100 individual taxpayers who Bali State Polytechnic Tax Center Tax Volunteers assisted. The data was analyzed using the Partial Least Squares and SmartPLS 3.0 software. The sample selection approach utilized in this study was purposive sampling. [9] conducted research in Denpasar with a randomly selected sample of 100 respondents, and the hypothesis was tested using multiple regression analysis with SPSS 18.0 software. The study's findings show that e-filing adoption substantially impacts the compliance of individual taxpayers registered with the East Denpasar Tax Office. The introduction of e-filing has proven to be highly beneficial, substantially simplifying the tax payment process for taxpayers.

[10] found that tax understanding considerably affected individual taxpayer compliance, and the study used random sampling to choose samples. The research data were gathered by delivering questionnaires to 60 individual taxpayers enrolled at KPP Pratama Surakarta, which were then analyzed using the SPSS 21.0 for Windows application. [11] performed research on the effect of tax understanding on taxpayer compliance registered at Pratama across the Indonesia Tax Service Office, with a total sample size of 64 respondents. The study's sampling technique was convenience sampling. The research funding was examined via multiple linear regression. The findings demonstrate that tax understanding has little effect on taxpayer compliance.

Research conducted by [5] investigated the relationship between taxpayer understanding, e-filing utilization, and taxpayer compliance. This quantitative study found that taxpayer knowledge and the utilization of e-filing improve taxpayer compliance. Interestingly, this study found that tax volunteers moderated the effect of e-filing usage on compliance but did not moderate the effect of taxpayer understanding. The researchers collected data through e-Riset, distributing questionnaires to 100 individual taxpayers at tax volunteer mentoring locations associated with the Badung Utara Tax Service Office and the Kerobokan Taxation Service, Counseling and Consultation Office (KP2KP). The research was analyzed using Partial Least Square (PLS) with SmartPLS 3.0. A study by [12] examined the impact of e-filing implementation and tax knowledge on taxpayer compliance among MSMEs in Ambon City, with tax socialization as a moderating variable. Using purposive sampling and survey methods, the researchers collected data from local small businesses and analyzed it through Moderate Regression Analysis (MRA). The results demonstrated that both e-filing adoption and tax knowledge significantly and positively influenced taxpayer compliance. Moreover, tax socialization effectively moderates the relationship between these factors and compliance. This research underscores the importance of user-friendly tax systems, tax education, and outreach efforts in improving compliance rates among small businesses in Ambon City.

Research on the compliance of MSME taxpayers in Ambon City was conducted by [13]. The study aimed to investigate the impact of the e-filing system and understanding of taxes on taxpayer compliance, the function of moderating variables, namely tax volunteers, in installing the e-filing system, and understanding taxation. The sampling method used was random sampling involving 100 MSMEs registered as corporate taxpayers. The study used the Moderate Regression Analysis (MRA) technique to analyze the data. The research findings reveal a different picture of tax compliance factors. Although the use of e-filing systems and understanding of taxation have a positive and significant impact on taxpayer compliance, the moderating effect of tax volunteers varies. Interestingly, tax volunteers effectively moderate the relationship between e-filing system usage and compliance. However, contrary to expectations, tax volunteers do not moderate the relationship between tax understanding and compliance. These results highlight the complex interactions between technological solutions, tax knowledge, and human support in influencing taxpayer compliance.

[14] conducted a study that aims to determine how the impact of adopting the e-filing system and tax knowledge on taxpayer compliance with the role of tax socialization as a moderating variable. This study examined tax compliance among 50 MSME respondents in Buring Village, Malang City, using various statistical methods, including descriptive statistics, classical assumption tests, multiple linear regression, and Moderated Regression Analysis (MRA). The research found that e-filing systems and tax understanding positively impacted taxpayer compliance. Interestingly, while tax socialization effectively moderated the relationship between tax understanding and compliance, it did not moderate the effect of e-filing usage on compliance. These findings offer valuable insights into the factors influencing tax compliance in the MSME sector and highlight the complex interplay between technological tools, knowledge, and educational efforts in shaping tax-compliant taxpayer behavior.

Research by [15] examines the impact of e-filing on individual taxpayer compliance. The study, which involved 100 taxpayers registered at the Tax Center UIN Sayyid Ali Rahmatullah Tulungagung, used a questionnaire for data collection and various statistical methods, including classical assumption tests, simple linear regression, t-test, f-test, and Moderated Regression Analysis (MRA). The results showed that the implementation of e-filing positively and significantly affects taxpayer compliance. In addition, tax volunteers were found to effectively moderate the relationship between e-filing adoption and compliance. The results of this study highlight the importance of combining technological solutions and human support in improving tax compliance. [16] investigated the impact of e-filing implementation on individual taxpayer compliance at the Pratama South Sidoarjo Tax Service Office. Their research employed a purposive sampling technique, analyzing data from 57 individual taxpayers. Using SPSS version 24 software for data processing, the study concluded that e-filing adoption significantly and positively influenced individual taxpayer compliance.

2.3 Hypothesis Development

Several studies reveal that the understanding of individual taxpayers has a positive and significant effect on individual taxpayer compliance [6], [7], [10], [5], [12], [13],

and [14]. Theory Planned Behavior (TPB) also explains that attitude is one of three factors influencing a person's intention to behave. Suppose a person has a good understanding of tax obligations and their benefits. In that case, his attitude towards tax compliance is optimistic; in other words, this can motivate individuals to comply and carry out their obligations as taxpayers. Based on the theoretical approach and literature review, the higher the level of understanding of Individual Taxpayers, the higher the level of compliance in reporting taxes. So, the hypothesis formulated is:
H1: Taxpayer understanding has a positive and significant effect on individual taxpayer compliance.

According to the Technology Acceptance Model (TAM), a person's intention to use technology is influenced by two key factors: perceived ease of use and usefulness. [7], [8], [9], [5], [12], [13], [14], [15], and [16], in their research, state that the use of e-filing has a positive effect on taxpayer compliance. Suppose someone considers using e-filing in tax reporting practical and beneficial. In that case, that person may use this technology and tend to be more motivated to comply when reporting taxes. Based on this explanation, the research hypothesis formulated is:
H2: The use of e-filing has a positive and significant effect on individual taxpayer compliance.

[20], his research states that tax volunteers can moderate the relationship between tax knowledge and taxpayer compliance. [7], [12] and [14] also explained that tax socialization moderates the relationship between tax understanding and taxpayer compliance. Based on Theory Planned Behavior (TPB), tax volunteers are considered a factor that forms subjective norms where tax volunteers are providers of information and values related to tax obligations. Through interaction and assistance with taxpayers, tax volunteers help strengthen individual beliefs about the importance of complying with tax regulations. Tax volunteers also help increase understanding of the consequences of tax violations, thus forming subjective norms that encourage individual taxpayer compliance in reporting taxes. Based on this description, the research hypothesis formulated is:
H3: Tax volunteers are able to moderate the taxpayer understanding on individual taxpayer compliance.

[5] and [15], in their research, explain that tax volunteers can moderate the effect of e-filing use on taxpayer compliance. [7] and [12] state that tax socialization moderates the relationship between the application of the e-filing system and MSME taxpayer compliance. Theory Planned Behavior (TPB) states that three factors influence a person's intention to behave, one of which is subjective norms, where, in this case, tax volunteers can be interpreted as a support system that provides support and assistance in the form of assistance to Individual Taxpayers. This shows that the presence of tax volunteers can strengthen the relationship between the use of e-filing and taxpayer compliance. Based on this explanation, the research hypothesis formulated is:
H4: Tax volunteers are able to moderate the use of e-filing on individual taxpayer compliance.

Based on the explanation of the theoretical review, literature, and hypothesis development, the research model can be described as follows:

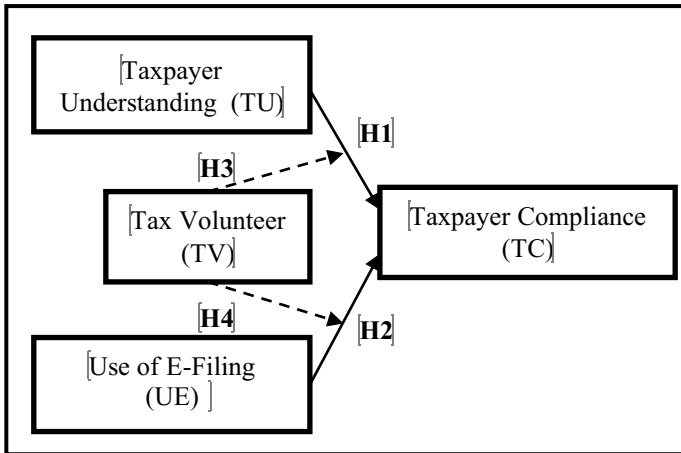


Fig. 1. Research Model

3 Research Methods

The operational definitions of the variables used in this study can be seen in Table 1.

Table 1. Operational Definition of Variables

Variable	Operational Definition	Measurement
Taxpayer Understanding (TU)	Taxpayer understanding aligns with the taxpayer's knowledge of the procedures for calculating, reporting, and depositing taxes owed [5].	Consists of 4 indicators, namely (1) Understanding tax regulations, (2) Understanding rights and obligations, (3) Understanding tax filing and reporting, and (4) Understanding tax sanctions. This variable consists of 5 statement items adapted from [5] and uses a 5-point Likert scale.
E-Filing (UE)	E-Filing is the process of submitting a Tax Return (SPT) electronically via the government website www.pajak.go.id or an Application Service Provider (ASP) [5].	Consists of 3 indicators, namely (1) Ease of use, (2) Benefits of use, (3) Efficiency and effectiveness. This variable consists of 5 statement items adapted from [5] and uses a 5-point Likert scale.
Taxpayer Compliance (TC)	Taxpayer compliance is the condition in which taxpayers can perform all responsibilities and use their taxation rights	Consists of 4 indicators, namely (1) Compliance with registering as a taxpayer, (2) Compliance with timely tax payments, (3)

Variable	Operational Definition	Measurement
Tax Volunteer (TV)	Tax volunteers are students who currently attend undergraduate courses in various professions, have the skills, and are chosen to give tax services voluntarily in assisting taxpayers using e-spt [5].	Compliance with submitting tax returns, and (4) Compliance with timely tax reporting. This variable consists of 4 statement items adapted from [5] and uses a 5-point Likert scale. Consists of 4 indicators, namely (1) Ease of reporting, (2) Tax education, (3) Socialization, and (4) Taxpayer independence. This variable consists of 6 statement items adapted from [5] and uses a 5-point Likert scale.

The data used in this study are primary data collected directly from the source by distributing research questionnaires to individual taxpayers in the Batam State Polytechnic environment. This study uses a purposive sampling technique in sample selection. The population of this research is all staff and lecturers at Batam State Polytechnic, totaling 152 people who have received assistance from tax volunteers from the Tax Center of Batam State Polytechnic. The reason of using Batam State Polytechnic employees as research samples is due to limitations in obtaining taxpayer data from outside Batam State Polytechnic. The number of samples was determined using the Slovin formula, which resulted in a sample size of 110 people.

This research uses a survey method through questionnaires distributed to individual taxpayers. The distribution process utilizes traditional methods (offline) and digital means via Google Forms online platform. The questionnaire used in this study was adapted from [5], in which there is a 5-point Likert scale to measure the level of agreement or perception of respondents on 20 statement items or questions, which range from (1) strongly disagree, (2) disagree, (3) neutral, (4) agree, and (5) strongly agree. The questionnaire consists of two parts; the first part contains the questionnaire's content, while the second part includes the respondents' demographic data. This study conducted a pilot test to evaluate the validity and reliability of the questionnaire used by involving 33 randomly selected people. The questionnaire was tested using the SmartPLS 3.0 application, and the data was tabulated with the help of Microsoft Excel. Partial Least Squares (PLS) analysis typically comprises two main components: the measurement model (outer model) and the structural model (inner model). The outer model examines how constructs relate to their respective indicators in the questionnaire. In contrast, the inner model focuses on the relationships between different constructs, essentially the hypothesis testing process.

4 Results and Discussion

4.1 Data Collection Results

The questionnaire distribution yielded a response rate of 89%, which indicates a fairly high level of participation. Around 93% of the returned questionnaires are eligible for use in analysis or research. Table 2 presents a detailed breakdown of the questionnaire distribution results.

Table 2. Results of Questionnaire Distribution

Description	Total
Questionnaires distributed	152
Non-returned questionnaires	(17)
Returned questionnaires	135
Ineligible questionnaires	(9)
Questionnaires that are eligible and can be processed	126

Source: Primary Data Processing, 2024

4.2 Demographics of Data Collected

Data related to respondent demographics are obtained based on the analysis of 126 processed questionnaires. The demographics of respondents in this study include information on gender, age, and income. Details of this information are presented in Table 3.

Table 3. Respondent Demographics

Variable	Category	Frequency	Percentage
Gender	Male	89	71%
	Female	37	29%
Age	17 – 23	3	2%
	24 – 30	26	21%
	>30	97	77%
Income	<Rp5.000.000	50	40%
	>Rp5.000.000	76	60%

Source: Primary Data Processing, 2024

The data shows that the majority of respondents in this study were male, with a percentage reaching 71%. Most respondents are over 30 years old (77%), with a small proportion in the age range of 24-30 years (21%) and only a few aged 17-23 years (2%). Regarding income, 60% of respondents earn >Rp5,000,000 while the rest <Rp5,000,000.

4.3 Outer Model Evaluation

This outer model measurement is used to assess the validity and reliability of the research instrument, including convergent validity, discriminant validity, composite reliability, and cronbach's alpha. The following is an explanation.

Convergent Validity

Table 4. Outer Loading

Kode Item	Outer Loading	Description
TU.1	0,751	Valid
TU.2	0,806	Valid
TU.3	0,739	Valid
TU.4	0,847	Valid
TU.5	0,828	Valid
TU*TV	1,035	Valid
UE.1	0,905	Valid
UE.2	0,903	Valid
UE.3	0,802	Valid
UE.4	0,920	Valid
UE.5	0,874	Valid
UE*TV	1,406	Valid
TC.1	0,842	Valid
TC.3	0,880	Valid
TC.4	0,862	Valid
TC.5	0,896	Valid
TV.1	0,887	Valid
TV.2	0,733	Valid
TV.3	0,896	Valid
TV.4	0,762	Valid
TV.5	0,841	Valid
TV.6	0,902	Valid

TU: Taxpayer Understanding, UE: Use of E-Filing, TC: Taxpayer Compliance, TV: Tax Volunteer
Source: Data processed with SmartPLS, 2024

Table 5. AVE (Average Variance Extracted)

Variable	AVE	Description
Tax Understanding (TU)	0,633	Valid
Use of E-Filing (UE)	0,777	Valid

Variable	AVE	Description
Taxpayer Compliance (TC)	0,680	Valid
Tax Volunteer (TV)	0,642	Valid
Moderating Effect 1 (TU*TV)	1,000	Valid
Moderating Effect 2 (UE*TV)	1,000	Valid

TU: Taxpayer Understanding, UE: Use of E-Filing, TC: Taxpayer Compliance, TV: Tax Volunteer
Source: Data processed with SmartPLS, 2024

Based on the data presented in Table 4, all items are said to be valid because they have an outer loading value > 0.70 . It's just that there are two items removed from the list of statements or questionnaire questions because the outer loading value is < 0.70 , namely items TC.2 and TV.7, so the questionnaire distributed to all research respondents consists of 20 statement items or questions. The AVE value is also shown > 0.50 in Table 5, which means that convergent validity is fulfilled, referring to [21].

Discriminant Validity

Table 6. AVE Root

	TU*TV	UE*TV	TU	UE	TC	TV
TU*TV	1,000					
UE*TV	0,844	1,000				
TU	-0,125	-0,200	0,796			
UE	-0,272	-0,548	0,590	0,882		
TC	-0,248	-0,334	0,747	0,762	0,825	
TV	-0,283	-0,509	0,637	0,750	0,735	0,801

TU: Taxpayer Understanding, UE: Use of E-Filing, TC: Taxpayer Compliance, TV: Tax Volunteer
Source: Data processed with SmartPLS, 2024

Table 7. Cross Loading

	TU*TV	UE*TV	TU	UE	TC	TV
TU*TV	1,000	0,844	-0,125	-0,272	-0,248	-0,283
TU.1	0,011	0,020	0,751	0,260	0,380	0,238
TU.2	-0,108	-0,200	0,806	0,609	0,649	0,610
TU.3	-0,010	-0,181	0,739	0,527	0,666	0,583
TU.4	-0,149	-0,220	0,847	0,555	0,595	0,580
TU.5	-0,212	-0,145	0,828	0,303	0,595	0,409
UE*TV	0,844	1,000	-0,200	-0,548	-0,334	-0,509
UE.1	-0,262	-0,512	0,531	0,905	0,650	0,753
UE.2	-0,179	-0,481	0,510	0,903	0,604	0,665

	TU*TV	UE*TV	TU	UE	TC	TV
UE.3	-0,189	-0,401	0,488	0,802	0,705	0,529
UE.4	-0,222	-0,479	0,575	0,920	0,740	0,674
UE.5	-0,348	-0,548	0,485	0,874	0,635	0,689
TC.1	-0,129	-0,282	0,658	0,766	0,842	0,570
TC.3	-0,263	-0,249	0,563	0,530	0,880	0,603
TC.4	-0,294	-0,325	0,729	0,754	0,862	0,715
TC.5	-0,321	-0,321	0,643	0,590	0,896	0,681
TV.1	-0,334	-0,469	0,647	0,727	0,676	0,887
TV.2	-0,159	-0,319	0,523	0,569	0,429	0,733
TV.3	-0,320	-0,476	0,589	0,648	0,697	0,896
TV.4	-0,156	-0,417	0,559	0,561	0,478	0,762
TV.5	-0,225	-0,382	0,517	0,599	0,707	0,841
TV.6	-0,214	-0,439	0,447	0,693	0,662	0,902

TU: Taxpayer Understanding, UE: Use of E-Filing, TC: Taxpayer Compliance, TV: Tax Volunteer
 Source: Data processed with SmartPLS, 2024

Table 6 demonstrates that the square root of the AVE is greater than the correlation between latent constructs. Table 7 shows that almost all indicators in this study are valid because they strongly correlate with their latent variables. Except for items TC.2 and TV.7, because < 0.70 [21], the two items were removed from the statements or questionnaire questions list.

Cronbach’s Alpha and Composite Reability.

Table 8. Cronbach’s Alpha and Composite Reability

Variable	Cronbach’s Alpha	Composite Reability	Description
TU	0,902	0,924	Reliable
UE	0,879	0,913	Reliable
TC	0,928	0,946	Reliable
TV	0,856	0,896	Reliable
TU*TV	1,000	1,000	Reliable
UE*TV	1,000	1,000	Reliable

TU: Taxpayer Understanding, UE: Use of E-Filing, TC: Taxpayer Compliance, TV: Tax Volunteer
 Source: Data processed with SmartPLS, 2024

An examination of Table 8 demonstrates that all indicators used in this research meet the reliability criteria. This conclusion is drawn from the fact that cronbach's alpha and composite reliability values exceed the threshold of > 0.70 , as recommended by [21].

4.4 Inner Model Evaluation

R Square and Path Coefficients

According to Table 9 below, the Adjusted R Square value is 0.566, which indicates how well the exogenous variables explain Y is 57%, so it is said that the ability of the taxpayer to understand variables and the use of e-filing in explaining taxpayer compliance is moderate [21]. About 43% of other factors were not measured in this study.

Table 9. R Square and Path Coefficients

	Original Sample	T Statistic	P Values	R Square Adjusted
TU-> TC	0,106	1,141	0,254	0,566
UE-> TC	0,568	4,472	0,000	
TU*TV-> TC	0,093	0,931	0,352	
UE*TV-> TC	-0,006	0,056	0,955	

Significant $\alpha = 5\%$

Source: Data processed with SmartPLS, 2024

H1: The analysis reveals that taxpayer understanding does not significantly impact individual taxpayer compliance, as seen from the t-statistic value ($1.141 < 1.96$) and p-values ($0.254 > 0.05$). Therefore, H1 is not supported.

H2: The statistical analysis provides strong evidence for H2. The t-statistic value ($4.472 > 1.96$) and p-values ($0.000 < 0.05$), the data indicate that the use of e-filing has a significant impact on individual taxpayer compliance. Thus, the second hypothesis is supported.

H3: The analysis indicates that tax volunteers do not serve as a moderating factor in the relationship between taxpayer understanding on individual taxpayer compliance. This conclusion is based on the t-statistic value of ($0.931 < 1.96$) and p-values ($0.352 > 0.05$). Therefore, the data does not support the third hypothesis.

H4: The test results show that tax volunteers do not play a role in moderating the effect of e-filing use on individual taxpayer compliance. This can be seen from the t-statistic value ($0.056 < 1.96$) and p-values ($0.955 > 0.05$). Thus, H4 is not supported.

Table 10. Summary of Hypothesis Test Results

Hypothesis	Relationship	Results
H1	Taxpayer understanding has a positive and significant effect on individual taxpayer compliance	Not Supported
H2	The use of e-filing has a positive and significant effect on individual taxpayer compliance	Supported

Hypothesis	Relationship	Results
H3	Tax volunteers are able to moderate the taxpayer understanding on individual taxpayer compliance	Not Supported
H4	Tax volunteers are able to moderate the use of e-filing on individual taxpayer compliance	Not Supported

The effect of taxpayer understanding on individual taxpayer compliance

The study's findings fail to support H1, indicating that taxpayers' level of understanding does not significantly impact individual tax compliance. This outcome contradicts the predictions of the Theory of Planned Behavior (TPB). According to TPB, an individual's attitudes should influence their intention to comply with tax obligations. However, the data does not align with this theoretical expectation in this case. These findings are consistent with [11] but contradict the findings of [6], which demonstrate that tax understanding influences individual taxpayer compliance. This difference in findings could be due to variations in the respondents' professions, where most of the respondents work as self-employed people who have a higher level of understanding of taxation due to their involvement in business activities, which certainly requires a good understanding of tax obligations while this study characterizes respondents from diverse professional backgrounds such as lecturers from various departments, cleaning service, security, and other Batam State Polytechnic employees who have different levels of understanding of taxation.

The effect of using e-filing on individual taxpayer compliance

Based on the test results, it is found that H2 is supported, which indicates that the use of e-filing affects the compliance of Individual Taxpayers. This can be caused by various factors, such as a flexible system that can be accessed anytime and anywhere, its transparency, and the benefits of using e-filing. This research is consistent with research conducted by [7], [8], [9], [5], [12], [13], [14], [15] and [16] which state that the use of e-filing affects taxpayer compliance. The findings of this research align with the Technology Acceptance Model (TAM) theory, which emphasizes that two crucial aspects encourage a person to use a technology: perceived usefulness and perceived ease of use.

Tax volunteers moderate the effect of taxpayer understanding on individual taxpayer compliance

The test results show that H3 is proven unsupported, where tax volunteers do not moderate the influence between taxpayer understanding and compliance of Individual Taxpayers. The presence or absence of tax volunteers does not affect the level of understanding of individual taxpayers to comply. This finding is not in line with the Theory Of Planned Behavior (TPB), which states that subjective norms, namely the influence of others, such as tax volunteers, should be able to influence individual intentions and behavior in complying with taxes through the tax education provided. One of the factors that can be the cause is the lack of comprehensive education channeled by tax volunteers such as taxation seminar activities to taxpayers given the limited time owned by tax volunteers who are mostly are students. In addition,

taxpayers are not active in seeking information or feel comfortable to ask and ask for help to tax volunteers who are younger and less professionally experienced. This research is reinforced by research conducted by [13] which confirms that tax volunteers do not moderate the effect of tax understanding on taxpayer compliance.

Tax volunteers moderate the effect of e-filing use on individual taxpayer compliance

According to the results of trial H4, the participation of tax volunteers does not moderate the effect of e-filing on individual taxpayer compliance. This finding is not in line with the Theory Of Planned Behavior (TPB), which states that subjective norms, including the influence of others, such as tax volunteers, should be able to influence individual intentions and behavior to comply with their tax obligations through assistance in using e-filing. These results are consistent with research conducted by [8], reveals that tax volunteers moderate the effect of e-filing use on taxpayer compliance. which states similar results, but [15] reveals that tax volunteers moderate the effect of e-filing use on taxpayer compliance.

This difference in findings could be due to the majority of respondents in the previous study who were dominated by the profession of lecturers, especially in FEBI (Faculty of Economics and Islamic Business), who already had a sufficient initial understanding of the use of how to report taxes using e-filing where the presence of tax volunteers acted as an additional resource that helped deepen understanding as well as technical assistance for taxpayers. In contrast, in this study, the sample of respondents is dominated by different professional backgrounds, such as lecturers majoring in electrical engineering, informatics, and machinery, as well as cleaning service, security, and other Batam State Polytechnic staff who are not directly related to taxation have different levels of understanding of the concept of e-filing so that taxpayers find it difficult to understand the guidance provided by tax volunteers.

5 Conclusion

This study provides a theoretical explanation of whether tax understanding and the use of e-filing affect taxpayer compliance. Also, it examines the role of tax volunteers as a potential moderating factor in this relationship. This study reveals several findings. First, taxpayer understanding does not affect individual taxpayer compliance. Second, the implementation of e-filing has a significant impact on the level of compliance of individual taxpayers. Third, the presence of tax volunteers does not moderate the effect of tax understanding and the use of e-filing on taxpayer compliance.

Based on the research outcomes, the following recommendations are proposed: First, the sample coverage should be expanded to all taxpayers who obtain assistance from tax volunteers in Batam City to obtain a more representative picture of the behavior patterns and needs of taxpayers in the Batam City area. Second, it is suggested that other more relevant variables be considered. This can help further explore the factors that influence the behavior and needs of taxpayers in Batam City.

References

1. Maesaroh, "Rasio Pajak RI Bisa Anjlok, Kalah Dari Malaysia & Vanuatu!," *CNBC Indonesia*, 2023. <https://www.cnbcindonesia.com/news/20230127125143-4-408764/rasio-pajak-ri-bisa-anjlok-kalah-dari-malaysia-vanuatu?page=all>, last accessed Oct. 28, 2023.
2. S. S. Arizoni, V. Ratnawati, and Andreas, "Pengaruh Manajemen Laba Akreal, Manajemen Laba Riil Dan Inventory Intensity Terhadap Agresivitas Pajak: Peran Moderasi Foreign Operation," *Bilancia J. Ilm. Akunt.*, vol. 4, no. 1, pp. 35–47, 2020.
3. E. F. Santika, "Ini Rasio Kepatuhan Pelaporan SPT Pajak 2022, DJP Klaim Kenaikan pada 2023," *databoks*, 2023. <https://databoks.katadata.co.id/datapublish/2023/03/02/ini-rasio-kepatuhan-pelaporan-spt-pajak-2022-djp-klaim-kenaikan-pada-2023>, last accessed Oct. 28, 2023
4. M. A. Syakura, "Perilaku Kepatuhan Wajib Pajak Badan," *J. Ilmu Adm. dan Organ.*, vol. 16, no. 2, pp. 96–104, 2014.
5. N. S. Hardika, I. K. J. Askara, and I. M. Wijana, "The Effect of Taxpayer Understanding and Use of E-Filing on Taxpayer Compliance With Tax Volunteer As Moderating Variable," *J. Informasi, Perpajakan, Akuntansi, Dan Keuang. Publik*, vol. 17, no. 1, pp. 95–110, 2022, doi: 10.25105/jipak.v17i1.10147.
6. A. Nurkhin, I. Novanty, M. Muhsin, and S. Sumiadji, "The Influence of Tax Understanding, Tax Awareness and Tax Amnesty toward Taxpayer Compliance," *J. Keuang. dan Perbank.*, vol. 22, no. 2, pp. 240–255, 2018, doi: 10.26905/jkdp.v22i2.1678.
7. A. A. Putri, "Kepatuhan Wajib Pajak: Studi Aspek Penerapan E-Filing, Pemahaman Perpajakan, Kesadaran dan Sosialisasi Pajak," *J. Akunt. dan Ekon.*, vol. 8, pp. 261–267, 2018.
8. I. N. Darmayasa, B. P. Wibawa, and K. Nurhayanti, "E-filling dan Relawan Pajak dalam Meningkatkan Kepatuhan Wajib Pajak Orang Pribadi," *J. Kaji. Akunt.*, vol. 4, no. 2, p. 208, 2020, doi: 10.33603/jka.v4i2.3949.
9. I. P. A. J. Mahendra and I. K. Budiarta, "Pengaruh Penerapan E-Filling Perpajakan, Kualitas Pelayanan, Kesadaran Wajib Pajak, dan Sanksi Perpajakan pada Kepatuhan WPOP," *E-Jurnal Akunt.*, vol. 30, no. 5, p. 1183, 2020, doi: 10.24843/eja.2020.v30.i05.p09.
10. M. Z. Hazmi, S. Suhendro, and R. R. Dewi, "Pengaruh Pemahaman Wajib Pajak, Kualitas Pelayanan Dan Sanksi Perpajakan Terhadap Kepatuhan Wajib Pajak Pada Kpp Pratama Surakarta," *J. Akunt. Univ. Jember*, vol. 18, no. 1, p. 28, 2020, doi: 10.19184/jauj.v18i1.17869.
11. R. Pebrina and A. Hidayatulloh, "Pengaruh Penerapan E-Spt, Pemahaman Peraturan Perpajakan, Sanksi Perpajakan, Dan Kualitas Pelayanan Terhadap Kepatuhan Wajib Pajak," *J. Ilm. Ekon. Dan Bisnis*, vol. 17, no. 1, pp. 1–8, 2020, doi: 10.31849/jieb.v17i1.2563.
12. J. Kesaulya, S. Pesireron, M. F. Situmeang, and A. Nusi, "Peran Sosialisasi Perpajakan Sebagai Pemoderasi, Dari Pengaruh E-Filling System Dan Pengetahuan Pajak Terhadap Tingkat Kepatuhan Wajib Pajak," *J. Maneksi*, vol. 11, no. 2, pp. 342–351, 2022, doi: 10.31959/jm.v11i2.914.

13. F. M. Anakotta, S. Gilby Sapulette, and T. E. Iskandar, “Pengaruh Penerapan E-Filling System Dan Pemahaman Perpajakan Terhadap Kepatuhan Wajib Pajak Dengan Peran Relawan Pajak Sebagai Variabel Moderasi,” *Account. Res. Unit ARU J.*, vol. 4, no. 1, pp. 2774–6631, 2023.
14. L. Saadah, A. Alfanningtias, L. Andiani, and N. Mufarokhah, “Pengaruh Penerapan Sistem E-Filling Dan Pengetahuan Perpajakan Terhadap Kepatuhan Wajib Pajak Dengan Sosialisasi Perpajakan Sebagai Variabel Moderasi,” *J. Manaj. Dirgant.*, vol. 16, no. 1, pp. 103–108, 2023, doi: 10.56521/manajemen-dirgantara.v16i1.917.
15. F. P. Permadi and A. Mauludi, “Pengaruh Penerapan Sistem E-Filing Terhadap Tingkat Kepatuhan Wajib Pajak Orang Pribadi Dalam Pelaporan Spt Tahunan Dengan Relawan Pajak Sebagai Variabel Moderasi Pada Tax Center Uin Sayyid Ali Rahmatullah Tulungagung,” *J. Akunt. dan Pajak*, vol. 24, no. 1, p. 1, 2023, doi: 10.29040/jap.v24i1.9590.
16. S. Asnifah and D. Fahrhani, “Pengaruh Penerapan E-Filing , E-Billing , Sanksi Perpajakan dan Pemandaran NIK terhadap Kepatuhan Wajib Pajak Orang Pribadi pada KPP Pratama Sidoarjo Selatan,” *JlIP (Jurnal Ilm. Ilmu Pendidikan)*, vol. 7, pp. 4616–4628, 2024.
17. I. Azjen, “Reporting Behaviour of People with Disabilities in relation to the Lack of Accessibility on Government Websites: Analysis in the light of the Theory of Planned Behaviour,” *Organ. Behav. Hum. Decis. Process.*, vol. 50, no. 2, pp. 179–211, 1991, doi: 10.47985/dcidj.475.
18. J. Lucyanda, D. A. Fakultas, and E. Unisma, “Pengujian Technology Acceptance Model (Tam) Dan Theory Planned Behavior (Tpb),” *JRAK Agustus*, vol. 2, no. 1995, pp. 1–14, 2010.
19. F. D. Davis, R. P. Bagozzi, and P. R. Warshaw, “Davis1989 (1).Pdf,” no. July 2018, 1989.
20. N. S. Hardika, K. A. B. Wicaksana, and I. N. Subratha, “The Impact of Tax Knowledge, Tax Morale, Tax Volunteer on Tax Compliance,” *Proc. Int. Conf. Appl. Sci. Technol. Soc. Sci. (ICAST-SS 2020)*, vol. 544, pp. 98–103, 2021, doi: 10.2991/assehr.k.210424.020.
21. I. Ghozali and H. Latan, *Partial Least Squares: Konsep, Teknik dan Aplikasi Menggunakan Program SmartPLS 3.0*, 2nd ed. Semarang: Badan Penerbit Universitas Diponegoro Semarang, 2015.

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