

UDC 332

## THE ROLE OF TAX VOLUNTEERS IN IMPROVING TAXPAYER SATISFACTION ON E-FILING SYSTEM APPLICATION

Anjarwi Astri Warih\*, Anggoro Damas Dwi

Taxation Program, Faculty of Administrative Science, University of Brawijaya, Indonesia

\*E-mail: [astrics19@ub.ac.id](mailto:astrics19@ub.ac.id)

### ABSTRACT

The use of information technology is inseparable from the needs of the users. Taxpayers as users of the E-Filing application are greatly helped by technology in making it easier to fulfill their tax obligations. Tax volunteers as parties who assist users in operating this technology are considered to be able to increase taxpayer satisfaction in applying E-Filing. User attitudes and interests in accepting technology can be measured by the Technology Acceptance Model (TAM). This study aimed to examine the determinants of the use of Information Systems, influenced by perceived usefulness and perceived ease of use. This research method used Moderated Regression Analysis (MRA) accompanied by hypothesis testing in order to determine the significant effect on predetermined variables. This research was conducted on taxpayers who reported their 2019 Income Tax Return for the year March 2020 with the help of tax volunteers. The results of this study indicate that the tax volunteers' knowledge transfer is able to moderate the effect of usefulness and ease of use on taxpayer satisfaction. In addition, the results of the regression analysis show that there is a direct effect of usefulness and Ease of use on taxpayer satisfaction.

### KEY WORDS

Tax volunteer, usefulness, ease of use, taxpayer satisfaction.

The development in this era of globalization is marked by various changes in various aspects of human life. For example, the development of technology from year to year has experienced very rapid developments. The changes that occur are mainly due to the various capabilities and potentials of information technology, which allows humans to relate to one another and fulfill the needs to provide and get unlimited information. According to Lucas's opinion quoted in Kadir (2000), information technology is any form of technology that is applied to process and transmit information in electronic forms. Microcomputers, mainframe computers, barcode readers, transaction processing software, spreadsheet software, communication equipment such as telephones, cellphones, touch screens and networks are forms of information technology. Furthermore, Lantip and Riyanto (2011), asserted that information technology is defined as knowledge in the field of computer-based information, and its development is very rapid.

Information technology has various benefits for its users. The use of information technology, according to Thomson in Nasution (2004), should be perceived as a benefit expected by information system users in carrying out their duties or as a behavior in using technology when doing work. This means that the use of information technology cannot be separated from the needs of the users. If the use of information technology can meet their needs, the users' attitude tends to accept the technology, or in other words, the fulfillment of these needs can lead to interest in using the information technology. Davis (1989) in his research developed the Technology Acceptance Model (TAM) to examine the determinants of the use of Information System by users. Research results from Davis indicate that the factors that influence interest in the use of information systems are influenced by perceived usefulness and perceived ease of use.

The use of information technology can be felt not only by individuals, but also by business and government organizations. The utilization of the development and application of information and communication technology also reaches other aspects of government, one of which is the taxation aspect. In the field of taxation, technology is used to provide convenience in providing services and information to its users. A fundamental change related to tax modernization occurred in 2005 through the implementation of a type of service to new taxpayers in the context of submitting a Tax Return (SPT) using electronic (e-filing). An annual Income Tax Return according to the Directorate General of Taxes Regulation No: PER-02 / PJ / 2019 article 1 paragraph 5, hereinafter referred to as Annual Income Tax Return (SPT PPh) is a tax return for a tax year or part of a tax year, which includes Individual Annual Tax Return and Corporate Annual Tax Return. The Submission of SPT by taxpayers is currently done online via e-filing. e-Filing is a method of submitting a tax return through certain channels stipulated by the Directorate General of Taxes.

The use of the e-filing system will make it easier for taxpayers to carry out their tax obligations without having to queue at Tax Service Offices, so it will be more effective and efficient. Furthermore, the delivery of Tax Return (SPT) data can be done anywhere and

anytime. With the ease of fulfilling tax obligations, it is hoped that it can increase taxpayer compliance and satisfaction.



Figure 1 – Target and Realization of 2013-2018 Tax Return (SPT) Compliance

Updates in the submission and reporting of Tax Returns (SPT) can facilitate and benefit the Directorate General of Taxes (DGT) in managing tax data. Therefore, it needs the support of all parties so that the improvement of services to taxpayers continues, and a modern tax administration is achieved. However, the problem is that not all taxpayers know and understand the computerized tax return (SPT) reporting. As can be seen, when reporting the tax return (SPT), there are still many taxpayers who come to the tax service office to report the SPT with the assistance of tax officials. To overcome this problem, the solution that is considered effective is by recruiting tax volunteers from students in universities. Tax Volunteerism is a form of tax awareness inclusion which is a collaboration between the tax authorities and Higher Education institutions.

Community service is one of the Three Pillars of Higher Education, which is of course in line with tax volunteer activities in providing tax education to the public. This tax volunteer activity can also be used as a means of sharpening students' skills in the field of taxation. Therefore, in the process there is a transfer of knowledge from students who act as tax volunteers to taxpayers, so that taxpayers are satisfied with the programs that have been provided by the government. Based on the existing problems, this study will focus on the role of tax volunteers in transferring knowledge to taxpayers related to the reporting of a tax return (SPT) using the e-filing system. It is hoped that this research can become a reference for future research.

Formulation of the Problems:

1. Is there an effect of tax volunteers' transfer knowledge on the relationship between perceived usefulness and taxpayer satisfaction?
2. Is there an effect of tax volunteers' transfer Knowledge on the relationship between the perceived ease of use and taxpayer satisfaction?
3. Is there any direct effect of perceived usefulness on taxpayer satisfaction?
4. Is there a direct effect of perceived ease of use on taxpayer satisfaction?

## LITERATURES REVIEW

### Information Technology

Lucas in Kadir (2003) defined information technology as any form of technology that is applied to process and transmit information in electronic forms. Meanwhile, according to Alter in Kadir (2003), information technology includes hardware and software to carry out one or a number of data processing tasks such as capturing, transmitting, storing, retrieving, manipulating or displaying data. However, Martin in Kadir (2003) argues that information technology is not only limited to computer technology (hardware and software) used to process and store information but also includes communication technology to transmit information.

### Technology Acceptance Model (TAM)

TAM was introduced in 1989 by Davis F. D, where TAM itself is an adaptation of Theory of Reasoned Action (TRA) developed by Ajzen and Fishbein in Jogiyanto (2007). According to TAM, a person's actual use of the technology system (actual usage) is influenced by the user's behavioral intention to use, attitude toward using, perceived usefulness and perceived ease of use of the system. In addition, external factors (external variables) can also influence the intention and actual use as an effect that is mediated by perceived usefulness and perceived ease of use.

Davis stated that there are various variables that can influence individual use of the system, but perceived usefulness and perceived ease of use are the two most important factors (Davis, 1989).

1. Perceived ease of use. Davis (1989) described the perceived ease of use as "the degree to which a person believes that using a particular technology would be free from effort" . Davis, F.D in Nasution (2004) explained that ease of use is a level where someone believes that computers can be easily understood. According to Goodwin and Silver in Nasution (2004: 5), the intensity of use and interaction between the user and the system can also indicate ease of use. The more frequently used systems indicate that they are more familiar, easier to operate and easier to use by users.
2. Perceived Usefulness. Davis (1989) defined the perceived usefulness as "the degree to which a person believes that using a particular system would enhance his or her job performance" . TAM states that the perception of benefit will be affected by the perception of ease of use where when users find technology easy to use, they consider technology as something that can provide benefits (is useful) to them.

### Tax Volunteers

In Canada, there is a Community Volunteer Income Tax Program (CVITP), which includes a wider range of service activities and even tax returns for eligible taxpayers. A similar program exists in the US, called the Volunteer Income Tax Assistance (VITA) Program founded in 1971 by Gary Iskowitiz at California State University Northridge. The initial concept of the program was to assist local taxpayers with the preparation of free tax returns in an effort to provide services to the community and hands-on learning experiences for students. This program has grown from a small group of accounting students to a national program with more than 92,000 volunteers preparing 3.2 million returns each year. In Indonesia, there is a Tax Volunteer program called Tax Volunteers. This activity is a synergy between the Directorate General of Taxes and universities in order to increase tax awareness through empowering young Indonesian generations.

### Taxpayer Satisfaction

Satisfaction is someone's feeling of pleasure or disappointment that comes from a comparison between his impression of the performance (or results) of a product and their expectations (Kotler, 2005). Customer satisfaction is strongly influenced by the level of service, and according to Moenir (1998), to satisfy the person or group of people being served, there are four main requirements, namely (1) polite behavior, (2) the proper delivery to convey something related to what the person concerned should receive, (3) appropriate delivery time, and (4) warm hospitality.

Supporting factors that are no less important than satisfaction include the awareness of officials or officers involved in public services, regulations that form the basis of service work, organizations which are tools and systems that enable the operation of service activity mechanisms, income that can meet the minimum life, skills of the staff, and the facilities in carrying out service duties. In the context of taxation, if government officials improve the quality of service according to the expectations of taxpayers (WP), then public compliance will increase in relation to tax payments (Ancok, 1988).

### Hypotheses

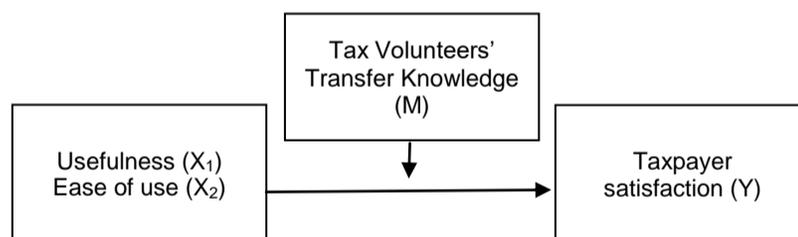


Figure 1 – Hypothesis Model

- H<sub>0</sub> = It is assumed that the tax volunteers' transfer knowledge (M) is able to moderate the effect of Usefulness (X<sub>1</sub>) on Taxpayer Satisfaction (Y);
- H<sub>1</sub> = It is assumed that the tax volunteers' transfer knowledge (M) is able to moderate the effect of Ease of Use (X<sub>2</sub>) on taxpayer satisfaction (Y);
- H<sub>2</sub> = It is assumed that usefulness (X<sub>1</sub>) has a direct effect on taxpayer satisfaction (Y);
- H<sub>3</sub> = It is assumed that ease of Use (X<sub>2</sub>) has a direct effect on taxpayer satisfaction (Y).

### METHODS OF RESEARCH

This study was a quantitative study using a Moderated Regression Analysis (MRA) method accompanied by hypothesis testing in order to determine the significant effect on predetermined variables. This research was conducted on taxpayers who reported their 2019

Income Tax Return for the year March 2020 with the help of tax volunteers. The population in this study were all taxpayers who reported their tax returns (SPT) using e-filing. Meanwhile, the samples in this study were taxpayers who carried out activities related to e-filing tax returns with the help of tax volunteers at the Faculty of Administrative Sciences, Universitas Brawijaya. The sample size used in this study was the Slovin's Formula.

### Operational Definition of Variable Measurement

In this study, there are independent variables, a dependent variable and a moderator variable:

1. The independent variables. The independent variables in this study are the Perceived Ease of Use (X1), and Perceived Usefulness (X2),
  - a. Elements for Measuring Perceived Ease of Use. Perceived ease of use is how much technology is felt to be relatively easy to understand and use. The elements of perceived ease of use are: easy to understand; easy to use.
  - b. Elements for Measuring Perceived Usefulness. Perceived usefulness is the degree to which the users think that by using a system, it will be useful in increasing their activity. The perceived usefulness measures used are: very useful; useful; neutral; useless; and very useless.
2. Dependent Variable. The dependent variable in this study is user satisfaction, which is the user's assessment of filling time, content accuracy, format, and ease of use. Satisfaction is the overall affective response to the perceived difference between prior expectations and performance after usage. The elements chosen to measure user satisfaction are adapted from previous research. These elements are: self-efficacy; repeat visits; personalization; perceived Risk; and enjoyment. This measure of user satisfaction uses a dummy variable, namely 1 for taxpayers who are satisfied with their tax return reporting (SPT) using e-filing in their next tax return report and 0 for taxpayers who are not satisfied with tax returns using e-filing in their next reporting.
3. Moderator Variable. The moderator variable in this study is knowledge transfer. Knowledge transfer is defined as an exchange of knowledge between two individuals; one person communicates knowledge, while another assimilates that knowledge (Jacobson, 2006). The main element that is focused on knowledge transfer is being able to explain, encode and communicate knowledge to other people, to groups and especially to organizations.

## RESULTS AND DISCUSSION

### Research Instrument test

Reliable research results must be based on reliable information. Accurate information can only be obtained if the research information used meets the feasibility of being a data collection tool. Before measuring the variables under study, the measuring instrument is first tested by testing its validity and reliability so that the data obtained can be trusted and its truth is recognized.

Table 1 – Validity Test of Research Instrument

Variable	Item	Count-R	Critical-R	Conclusion
Usefulness (X1)	X1.1	0,864	0,183	Valid
	X1.2	0,908	0,183	Valid
Easy of Use (X2)	X2.1	0,878	0,183	Valid
	X2.2	0,910	0,183	Valid
Transfer Knowledge (M)	M.1	0,636	0,183	Valid
	M.2	0,725	0,183	Valid
	M.3	0,767	0,183	Valid
	M.4	0,726	0,183	Valid
	M.5	0,833	0,183	Valid
Taxpayer Satisfaction (Y)	Y.1	0,616	0,183	Valid
	Y.2	0,776	0,183	Valid
	Y.3	0,700	0,183	Valid
	Y.4	0,683	0,183	Valid
	Y.5	0,617	0,183	Valid
	Y.6	0,671	0,183	Valid
	Y.7	0,690	0,183	Valid
	Y.8	0,558	0,183	Valid
	Y.9	0,406	0,183	Valid
	Y.10	0,531	0,183	Valid
	Y.11	0,625	0,183	Valid
	Y.12	0,584	0,183	Valid
	Y.13	0,707	0,183	Valid
	Y.14	0,398	0,183	Valid
	Y.15	0,492	0,183	Valid

Based on the table above, it can be seen that all question items on the Research Instrument have a validity coefficient > critical point (0.183). The analysis can be continued in further testing if the research variables are declared reliable.

**Reliability Test**

Reliability testing is aimed at measuring the extent to which the level of consistency of measurements from one respondent to another respondent, or in other words the extent to which the questions can be understood so as not to cause different interpretations in understanding the question. A set of questions to measure a variable is said to be reliable and successful in measuring the variable we measure if the reliability coefficient is greater than or equal to 0.600.

Table 2 – Reliability Test of Research Instrument

Variable	Alpha Coefficient	Remark
Usefulness (X1)	0.721	Reliable
Ease of Use (X2)	0.745	Reliable
Tax Volunteers' Transfer Knowledge (M)	0.767	Reliable
Taxpayer Satisfaction (Y)	0.871	Reliable

Based on the table above, it can be seen that the reliability coefficient for the usefulness (X1) is 0.721, ease of use (X2) is 0.745, tax volunteers' knowledge transfer (M) is 0.767, and taxpayer satisfaction (Y) is 0.871. the reliability coefficient value is greater than the critical value (0.600), so that all research variables are declared reliable; thus, the instrument can be continued for further analysis.

**Descriptive Analysis**

Descriptive analysis technique aims to explain the overall data collected by describing, grouping, and classifying into tables, which are then given an explanation based on the most dominant and weakest indicators. The research data were obtained by researchers from respondents' answers to a number of questions, namely the respondents' answers to the questions in the questionnaire that supported the research. This section presents the frequency distribution of the scores for each variable item and the mean of each variable item. To describe the mean value of each item, indicators and variables in this study use criteria with class intervals that are obtained from the calculation results:

$$\frac{(Highest\ Answer\ Score - Lowest\ Answer\ Score)}{Number\ of\ Classes/Categories}$$

The score for the respondents' answers in this study refers to a 4-point scale on the Likert scale (Sugiyono, 2004), so that the highest respondent's answer value is 4 and the lowest answer value is 1. The number of classes / categories used in the preparation of the criteria is adjusted to the scale used. i.e. 4 classes, so the class interval is (4-1): 4 = 0.75. Meanwhile, the basis for the interpretation of the mean value used in this study refers to the interpretation of the score according to Sujana (2001), and that used by Kuncoro (2007). Thus, the criteria for describing the mean value that has been obtained by each item, indicator, and variable can be described in Table 3 as follows:

Table 3 – Basis for Interpretation of Indicator Scores in Research Variables

No	Score	Interpretation
1	1.00-1.74	Very low/poor
2	1.75-2.49	Low/poor
3	2.50-3.24	High/good
4	3.25-4.00	Very high/very good

**Overview of Usefulness (X1) Variable**

Usefulness (X1) is measured using 2 question items. Each answer has a value, and then the answer score is accumulated which is then used to categorize the variables based on the average respondent's answers. The following shows the frequency distribution of respondents' responses to the usefulness (X1) variable.

Table 4 – Distribution of Respondents' Responses to Usefulness Variable (X1)

No	Item on Usefulness (X1)	F	Answer Choice				Mean	Category
			SS	S	TS	STS		
1	Tax Return Reporting (SPT) with e- Filling is more effective and efficient than SPT reporting using paper.	F	86	25	0	2	3.73	Very high
			% 76.1	22.1	0.0	1.8		
2	Taxpayers are able to report Tax Returns (SPT) via e - filling independently in the next tax year	F	50	53	9	1	3.35	Very high
			% 44.2	46.9	8.0	0.9		
Accumulation of Respondents' Answers		F	136	78	9	3	3.54	Very high
			% 60.18	34.51	3.98	1.33		

The table above is the respondents' response to the usefulness (X1) variable. Based on the respondents' answers, it can be seen that the most dominant indicator is in question number

1, with the highest average (Mean) of 3.73 (classified in the very high category), namely the statement regarding `` Tax Return Reporting (SPT) with e- Filling is more effective and efficient than SPT reporting using paper. ``Specifically, the majority of respondents as many as 86 people or 76.1% answered strongly agree. Meanwhile, the weakest indicator is found in question number 2, with the lowest average (Mean) of 3.35 (classified in the very high category), namely the statement regarding `` Taxpayers are able to report Tax Returns (SPT) via e -filling independently in the next tax year ``. Specifically, the majority of respondents as many as 53 people or 46.9% answered agree.

The results show that the accumulated average (Mean) of all answers per item in the usefulness (X1) variable is 3.54. So, it can be concluded that in general the usefulness variable (X1) is included in the very high category.

#### Overview of Ease of Use Variable (X2)

The ease of use variable (X2) is measured using 2 question items. Each answer has a value, and then the answer score is accumulated which is then used to categorize the variables based on the average respondents' answers. The following shows the frequency distribution of respondents' responses to the ease of use variable (X2).

Table 5 – Distribution of Respondents' Responses to the Ease of Use Variable (X2)

No	Item on Ease of Use (X2)		Answer Choice				Mean	Category	
			SS	S	TS	STS			
1	Information provided regarding e-filling by tax volunteers is easy to understand	F	96	16	1	0	3.84	Very high	
		%	85.0	14.2	0.9	0.0			
2	Reporting Tax Returns (SPT) with e-filling is easy to understand and easy to use	F	81	32	0	0	3.72	Very high	
		%	71.7	28.3	0.0	0.0			
Accumulation of Respondents' Answers			F	177	48	1	0	3.78	Very high
			%	78.32	21.24	0.44	0.00		

The table above is the respondents' responses to the Ease of use (X2) variable. Based on the respondents' answers, it can be seen that the most dominant indicator is in question number 1, with the highest average (Mean) of 3.84 (classified in the very high category), namely the statement regarding `` Information provided regarding e-filling by tax volunteers is easy to understand. `` Specifically, the majority of respondents as many as 96 people or 85% answered *strongly Agree*. Meanwhile, the weakest indicator is found in question number 2, with the lowest average (Mean) of 3.72 (classified in the very high category), namely the statement regarding `` Reporting Tax Returns (SPT) with e-filling is easy to understand and easy to use. ``. Specifically, the majority of respondents as many as 81 people or 71.7% answered *strongly agree*.

The results show that the accumulated average (Mean) of all answers per item in the Ease of use variable (X2) is 3.78. So, it can be concluded that in general the Ease of use variable (X2) is included in the very high category.

#### Overview of Tax Volunteers' Knowledge Transfer Variable (M)

The tax volunteers' transfer knowledge variable (M) is measured using 5 question items. Each answer has a value, and then the answer score is accumulated which is then used to categorize the variables based on the average respondents' answers. The following is the frequency distribution of respondents' responses to the tax volunteers' transfer knowledge (M) variable.

Table 6 – Distribution of Respondents' Responses to the Tax Volunteers' Transfer Knowledge Variable (M)

No	Item on Tax Volunteers' Transfer Knowledge		Answer Choice				Mean	Category	
			SS	S	TS	STS			
1	Tax volunteers is very helpful in tax return report	F	105	8	0	0	3.93	Very high	
		%	92.9	7.1	0.0	0.0			
2	Tax volunteers can help in filling in e-filing	F	107	6	0	0	3.95	Very high	
		%	94.7	5.3	0.0	0.0			
3	Is the knowledge of tax volunteers on the job good?"	F	93	19	1	0	3.81	Very high	
		%	82.3	16.8	0.9	0.0			
4	Do you think that oral and written communication of tax volunteers is good?	F	103	10	0	0	3.91	Very high	
		%	91.2	8.8	0.0	0.0			
5	Are tax volunteers proactive in serving you?	F	106	7	0	0	3.94	Very high	
		%	93.8	6.2	0.0	0.0			
Accumulation of Respondents' Answers			F	514	50	1	0	3.91	Very high
			%	90.97	8.85	0.18	0.00		

The table above is the respondents' responses to the Tax Volunteers' Transfer Knowledge (M) variable. Based on the respondents' answers, it can be seen that the most dominant indicator is in question number 2, with the highest average (Mean) of 3.95 (classified in the very high category), namely the statement regarding "Can tax volunteers help you in filling in e-filing?" Specifically, the majority of respondents as many as 107 people or 94.7% answered strongly agree. Meanwhile, the weakest indicator is found in question number 3, with the lowest average (Mean) of 3.81 (classified in the very high category), namely the statement regarding "Is the knowledge of tax volunteers on the job good?" Specifically, the majority of respondents as many as 93 people or 82.3% answered strongly agree.

The results show that the accumulated average (Mean) of all answers per item in the tax volunteers' transfer knowledge (M) variable is 3.91. So, it can be concluded that in general the tax volunteer transfer knowledge (M) variable is included in the very high category.

#### Overview of Taxpayer Satisfaction (Y)

The taxpayer satisfaction variable (Y) is measured using 15 question items. Each answer has a value, and then the answer score is accumulated, which is then used to categorize the variables based on the average respondents' answers. The following shows the frequency distribution of respondents' responses to the taxpayer satisfaction variable (Y).

Table 7 – Distribution of Respondents' Responses to Taxpayer Satisfaction Variable (Y)

No	Item on Tax Satisfaction (Y)	Answer Choice	Answer Choice				Mean	Category
			SS	S	TS	STS		
1	The role of tax volunteers in assisting the tax return (SPT) filing is very satisfying	F %	104 92.0	9 8.0	0 0.0	0 0.0	3.92	Very high
2	Are tax volunteers professional in carrying out their tasks?	F %	95 84.1	17 15.0	1 0.9	0 0.0	3.83	Very high
3	Do tax volunteers assist you well?	F %	106 93.8	7 6.2	0 0.0	0 0.0	3.94	Very high
4	Is teamwork among tax volunteers good?	F %	96 93.8	17 6.2	0 0.0	0 0.0	3.85	Very high
5	Are the work skills of tax volunteers good?	F %	94 83.2	19 16.8	0 0.0	0 0.0	3.83	Very high
6	Are tax volunteers good at solving the problem well?	F %	100 88.5	13 11.5	0 0.0	0 0.0	3.88	Very high
7	Do tax volunteers have the ability to analyze well?	F %	90 79.6	23 20.4	0 0.0	0 0.0	3.80	Very high
8	Do tax volunteers work quickly when assisting you?	F %	102 90.3	10 8.9	0 0.0	1 0.9	3.88	Very high
9	Do the tax volunteers behave politely when assisting you?	F %	107 94.7	6 5.3	0 0.0	0 0.0	3.95	Very high
10	Do tax volunteers use effective communication when assisting you?	F %	98 86.7	14 12.4	1 0.9	0 0.0	3.86	Very high
11	Are volunteers able to master the task and technology well?	F %	97 85.8	15 13.3	1 0.9	0 0.0	3.85	Very high
12	Are tax volunteers open-minded while assisting you?	F %	98 86.7	14 12.4	1 0.9	0 0.0	3.86	Very high
13	Do tax volunteers remain calm while assisting you?	F %	100 88.5	13 11.5	0 0.0	0 0.0	3.88	Very high
14	Do tax volunteers keep the confidentiality of your data?	F %	101 89.4	9 8.0	3 2.7	0 0.0	3.87	Very high
15	Are tax volunteers committed to their job?	F %	105 92.9	8 7.1	0 0.0	0 0.0	3.93	Very high
Accumulation of respondents' answers		F %	1493 88.08	194 11.45	7 0.41	1 0.06	3.88	Very high

The table above is the respondents' responses to the taxpayer satisfaction variable (Y). Based on the respondents' answers, it can be seen that the most dominant indicator is in question number 9, with the highest average (Mean) of 3.95 (classified in the very high category), namely the statement regarding "Do the tax volunteers behave politely when assisting you?". Specifically, the majority of respondents as many as 107 people or 94.7% answered strongly agree. Meanwhile, the weakest indicator is found in question number 7, with the lowest average (Mean) of 3.8 (classified in the very high category), namely the statement regarding "Do tax volunteers have the ability to analyze well?" Specifically, the majority of respondents as many as 90 people or 79.6% answered strongly agree.

The results show that the accumulated average (Mean) of all answers per item in the Taxpayer Satisfaction variable (Y) is 3.88. So, it can be concluded that in general the taxpayer satisfaction variable (Y) is included in the very high category.

In accordance with the formulation of the problems, research objectives, hypotheses and types of data collected, the analysis method used in this study is Moderated Regression Analysis. Regression analysis is used to determine the magnitude of the influence between independent variables on the dependent variable before being moderated (directly) or after being moderated (involving the interaction of the independent variable with the moderator variable).

### Moderation Regression Analysis

In this study, the analysis used to test the proposed hypothesis is Moderated Regression Analysis, which is a regression that involves moderating variables in building a relationship model. After passing the analysis procedure, a summary of the overall analysis results is presented as follows.

Table 8 – Summary of Moderation Regression Analysis Testing

Regression Model	Variable	Coefficient regression	Simultaneous hypothesis		Partial hypothesis		Conclusion	
			F-count	p-value	t-count	p-value		
Model 1 (before moderation)	Constant	37.901	51.773	0.000	6.077	0.000	Has significant effect	a
	Usefulness (X <sub>1</sub> )	1.337						
	Ease of Use (X <sub>2</sub> )	1.426						
Coefficient of determination (R <sup>2</sup> )= 0.485 (48.5%)								
F-test is significant (p-value <0.05)								
Model (before moderation)	Constant	46.984	102.218	0.000	0.165	0.869	Has significant effect	no
	Usefulness (X <sub>1</sub> )	3.292						
	Ease of Use (X <sub>2</sub> )	-7.420						
	Tax volunteers' transfer knowledge (M)	0.806						
	M*X <sub>1</sub> interaction	-0.768						
	M*X <sub>2</sub> interaction	2.098						
Coefficient of determination (R <sup>2</sup> )= 0.827 (82.7%)								
F-test is significant (p-value <0.05)								

Based on the results of the moderation regression analysis above, there are 2 regression equation models as follows.

$$Y = 37.901 + 1.337 X_1 + 1.426 X_2 + e$$

$$Y = 46.984 + 3.292 X_1 + (-7.420) X_2 + 0.806 M + (-0.768) X_1 + 2.098 X_2 + e$$

In equation 1 (Model 1: Before moderation / Direct) it is known that the coefficient of determination (R<sup>2</sup>) is 0.485 (48.5%), meaning that before moderation this equation contributes to satisfaction (Y) at only 48.5%. while the other 51.5% is another factor not observed in this equation. In equation 2 (Model 2: after being moderated) it is known that the coefficient of determination (R<sup>2</sup>) is 0.827 (82.7%), meaning that after being moderated by the tax volunteers' transfer knowledge (M) this equation together contributes to satisfaction (Y) at 82.7%. the other 17.3% are other factors not observed in this equation. Thus, it can be concluded that in general the effect after being moderated simultaneously is stronger than that before being moderated.

### Simultaneous Hypothesis Test (F test)

The statements of the simultaneous hypotheses:

- H<sub>0</sub> = All independent variables together have no significant relationship (have no effect) on the dependent variable.
- H<sub>a</sub> = all independent variables together have a significant effect on the dependent variable.

Based on the results of estimation and hypothesis testing simultaneously (Test F), in equation 1 (Model 1: Before moderation / Direct), it is known that the calculated F value is 51.773 with a p-value of 0.000. With a margin of error ( $\alpha$ ) of 5% and degrees of freedom  $v_1 = 110$  ( $n - (k + 1)$ ) and  $v_2 = 2$ , in equation 1 the F table value is 3.079. Due to the value of F count  $>$  F table ( $51.773 > 3.079$ ), then  $H_0$  is rejected or  $H_a$  is accepted, meaning the usefulness (X1) and Ease of use (X2) variables directly and together have a significant effect on satisfaction (Y).

In equation 2 (Model 2: after moderation), it is known that the calculated F value is 102.218 with a p-value of 0.000. With a margin of error ( $\alpha$ ) of 5% and degrees of freedom  $v_1 = 107$  ( $n - (k + 1)$ ) and  $v_2 = 5$ , the F-table value is 2.299. Due to the value of F-count  $>$  F-table ( $102.218 > 2.299$ ). then  $H_0$  is rejected or  $H_a$  accepted, meaning usefulness (X1), ease of use (X2), tax Volunteers' knowledge transfer (M) as well as  $M * X_1$  interaction and  $M * X_2$  interaction together have a significant effect on satisfaction (Y). Furthermore, to find out the partial hypothesis testing (t test), it is described based on the number of regression equation models formed, as described below.

### Partial Hypothesis Test (t test)

The t test is used to determine whether each independent variable forming the regression model has a significant effect on Y. The independent variable forming the regression model is concluded to have a significant effect if the value of  $t\text{-count} > t\text{-table}$  or  $t\text{-count} < -t\text{-table}$  or significance value (p-value)  $< 0,05$ . The general statements of the partial hypothesis are as follows:

$$H_0: |t\text{-count}| < t\text{-table} \quad | : X_i \text{ affects } Y, \text{ but not significant}$$

$$H_a: |t\text{-count}| > t\text{-table} \quad | : X_i \text{ significantly affects } Y$$

Where:  $X_i$  = Independent variable; Y = Dependent variable.

#### T test in equation 1 (Model 1: Before moderation / Direct)

In equation 1, it is known that the t table is 1.982, where at the level of significance / margin of error ( $\alpha$ ) of 5% with 110 degrees of freedom ( $n-k-1$ ), the t table is 1.982.

Table 9 – Partial Hypothesis Test (t test) In equation 1

Independent Variables	t-count	P-value	Remark
Usefulness (X1)	6.077	0.000	Significant
Ease of Use (X2)	4.520	0.000	Significant

Based on the table above, it can be seen the estimation results and hypothesis testing in equation 1 (Model 1: Before moderation / Direct).

1. Based on the table above, the t-count for the usefulness (X1) variable is 6.077, while the t-table with degrees of freedom is 110 ( $n-k-1$ ) = 1.982. When compared, the value of  $t\text{-count} > t\text{-table}$  ( $6,077 > 1,982$ ). This test shows that  $H_0$  is rejected, so it can be concluded that usefulness (X1) directly has a significant effect on satisfaction (Y).
2. Based on the table above, the t-count of the ease of use variable (X2) is 4.52, while the t-table with degrees of freedom is 110 ( $n-k-1$ ) = 1.982. When compared, the value of  $t\text{-count} > t\text{-table}$  ( $4.52 > 1.982$ ). This test shows that  $H_0$  is rejected, so it can be concluded that Easy of use (X2) has a significant effect on satisfaction (Y).

#### T test in equation 2 (Model 2: after moderation)

In equation 2, it is known that the t table is 1.982, where at the level of significance / margin of error ( $\alpha$ ) of 5% with 107 degrees of freedom ( $n-k-1$ ), the t table is 1.982.

Table 10 – Partial Hypothesis Test (t test) In equation 2

Independent Variables	t-count	p-value	Remark
Usefulness (X1)	2.258	0.026	Significant
Ease of Use (X2)	-2.420	0.017	Significant
Tax Volunteers' Knowledge Transfer	0.165	0.869	Not significant
$MX_1$ interaction	-2.009	0.047	Significant
$MX_2$ interaction	2.640	0.010	Significant

Based on the table above, it can be seen that the estimation results and hypothesis testing in equation 2 (Model 2: after moderation):

1. Based on the table above, the t-count for the Usefulness (X1) variable is 2.258, while the t-table with degrees of freedom is 107 ( $n-k-1$ ) = 1.982. When compared, the value of  $t\text{-count} > t\text{-table}$  ( $2.258 > 1.982$ ). This test shows that  $H_0$  is rejected, so it can be concluded that usefulness (X1) has a significant effect on satisfaction (Y).
2. Based on the table above, the t-count for the ease of use variable (X2) is -2.42, while the t-table with degrees of freedom is 107 ( $n-k-1$ ) = -1,982. When compared, the value of  $t\text{-count} < -t\text{-table}$  ( $-2.42 < -1,982$ ). This test shows that  $H_0$  is rejected, so it can be concluded that ease of use (X2) has a significant effect on satisfaction (Y).

count  $< t$ -table (-2.42  $< -1,982$ ). This test shows that  $H_0$  is rejected, so it can be concluded that Ease of use ( $X_2$ ) has a significant effect on satisfaction ( $Y$ ).

3. Based on the table above, the  $t$ -count for the tax volunteers' transfer knowledge variable ( $M$ ) is 0.165, while the  $t$ -table with degrees of freedom is 107 ( $n-k-1$ ) = 1.982. When compared, the value of  $t$ -count  $< t$ -table (0.165  $< 1.982$ ). This test shows that  $H_0$  is accepted, so it can be concluded that the tax volunteers' knowledge transfer ( $M$ ) has no significant effect on satisfaction ( $Y$ ).
4. Based on the table above, the  $t$ -count for the  $M.X_1$  Interaction variable is -2.009, while the  $t$ -table with degrees of freedom is 107 ( $n-k-1$ ) = -1,982. When compared, the value of  $t$ -count  $< t$ -table (-2.009  $< -1,982$ ). This test shows that  $H_0$  is rejected, so it can be concluded that  $M.X_1$  interaction has a significant effect on satisfaction ( $Y$ ).
5. Based on the table above, the  $t$  count of the  $M.X_2$  Interaction variable is 2.64, while the  $t$  table with degrees of freedom is 107 ( $n-k-1$ ) = 1.982. When compared, the value of  $t$  count  $> t$  table (2.64  $> 1.982$ ). This test shows that  $H_0$  is rejected, so it can be concluded that  $M.X_2$  interaction has a significant effect on satisfaction ( $Y$ ).

### The Identification of Moderation Types

In order to determine the category of moderating variables, the significance values of  $M$  (Moderator Variable) and  $M * X$  (Interaction of Independent Variables with Moderator Variables) will be classified based on the following Moderation Type criteria.

Table 11 – Moderation Type Criteria

No	Criteria	Moderation Type	Conclusion
1	M: not significant M*X: significant	Pure moderator	A pure moderator variable: interacts with a predictor variable without being a predictor variable
2	M: significant M*X: significant	Quasi moderator	A quasi moderator: interacts with a predictor variable and also becomes a predictor variable
3	M: not significant M*X: not significant	Homologiser moderator	A variable assumed to be a moderator: This variable does not interact with a predictor variable and does not have any significant relationship with a dependent variable
4	M: significant M*X: not significant	Predictor moderator	This moderator serves as a predictor variable in the model relationship formed.

Source: Sharma et al (1981) in Ghozali, Imam (2009), Solimun (2011).

An effect is declared significant by the criteria of  $t$ -count  $> t$ -table, or if it is negative then  $t$ -count  $< t$ -table, where it is known that  $t$ -table in equation 2 is 1.982. Based on the results of regression analysis as tested in equation 2 (Model 2: after moderation), the following types of moderation are obtained:

Table 12 – Identification of Moderation Types in Equation 2 (Model 2: after moderation)

Effect	Variable	t-count	Result	Moderation Type
M moderates $X_1$ on $Y$	$M$	0.165	Not significant	Pure Moderation
	$M*X_1$	-2.009	Significant	
M moderates $X_2$ on $Y$	$M$	0.165	Not significant	Pure Moderation
	$M*X_2$	2.640	Significant	

Based on the results of the identification of the moderation types above, it can be concluded that the tax Volunteers' transfer knowledge ( $M$ ) variable is stated as Pure Moderator variable, that is, the moderator can interact with (independent) predictor variables without having to be a predictor variable.

### CONCLUSION

After the authors hold a discussion on the role of tax volunteers in increasing taxpayer satisfaction with the application of the e-filing system, the authors in this chapter will try to draw a conclusion and provide suggestions based on the descriptions that the authors have put in the previous chapter.

1. The results of the moderation analysis state that the tax volunteers' knowledge transfer ( $M$ ) is able to moderate the effect of usefulness ( $X_1$ ) on taxpayer satisfaction ( $Y$ ), with a  $p$ -value of 0.047  $< 0.05$  (Significant). Based on the results of the identification of the moderation types, it turns out that the tax volunteers' knowledge transfer ( $M$ ) in this pair of relationships is declared to have a role as a pure moderator variable.
2. The results of the Moderation analysis state that the tax volunteers' knowledge transfer ( $M$ ) is able to moderate the effect of ease of use ( $X_2$ ) on taxpayer satisfaction ( $Y$ ),

namely with a p-value of 0.010 <0.05 (significant). Based on the results of the identification of the Moderation type, it turns out that the tax volunteers' knowledge transfer (M) in this pair of relationships is declared to have a role as a pure moderator variable.

3. The results of the regression analysis state that there is a direct effect of Usefulness (X1) on taxpayer satisfaction (Y), namely with a p-value of 0.000 (significant).
4. The results of the regression analysis state that there is an effect of ease of use (X2) directly on taxpayer satisfaction (Y), namely with a p-value of 0.000 (significant).

## REFERENCES

1. Ancok, D. (1988). Teknik Penyusunan Skala Pengukuran. Yogyakarta: Pusat Penelitian Kependudukan Universitas Gajah Mada.
2. Augusty, F. (2006). Metode Penelitian Manajemen: Pedoman Penelitian untuk skripsi, Tesis dan Disertasi Ilmu Manajemen. Semarang: Universitas Diponegoro.
3. Carr, L. C., Bateman, J. P., & Navlakha, J. S. (2008). They Call For Help, But Don't Always Listen: The Development of the User-Help Desk Knowledge Application Model. Proceeding of the Fourteenth Americas Conference on Information Systems, 1-12.
4. Chen, Z., & Xu, X. (2010). Study on Construction of Knowledge Management System Based on Enhancing Core Competence of Industrial Clusters. International Journal of Business and Management, 5(3), 217–222.
5. Lantip, D. P., & Riyanto. (2011). Teknologi Informasi Pendidikan. Yogyakarta: Gava Media.
6. Ghozali, I. (2009). EKONOMETRIKA: Teori, Konsep dan Aplikasi dengan SPSS 17. Semarang: Badan Penerbit Universitas Diponegoro.
7. Jacobson. (2006). An Evaluation of Knowledge and Gaps Related to Impacts of Freshwater and Marine Aquaculture on the Aquatic Environment. EVS Environment Consultants. Canada.
8. Kadir, A. (2003). Pengenalan Sistem Informasi (1<sup>st</sup> Ed). Yogyakarta: ANDI.
9. O'Brien, J. A., & Marakas, G. M. (2009). Introduction to Information Systems (15<sup>th</sup> Ed). New York: McGraw-Hill.
10. Solimun. (2011). Modul Statistika: Analisis Variabel Moderasi dan Mediasi. Malang: Universitas Brawijaya Press.
11. Sugiyono. (2011). Metode Penelitian Kuantitatif, Kualitatif dan R&D. Bandung: Alfabeta.
12. Tobing, P. L. (2007). Knowledge Management: Konsep, Arsitektur dan Implementasi. Yogyakarta: Graha Ilmu.
13. Wibowo, A. (2006). Kajian tentang Perilaku Pengguna Sistem Informasi dengan Pendekatan Technology Acceptance Model (TAM). Jakarta: Universitas Budi Luhur.