Jurnal ASET
(Akuntansi Riset)

Journal homepage: http://ejournal.upi.edu/index.php/aset/

# The Modification of The Delone and Mclean Model: System Quality, Information Quality, and Tax Literacy on E-Filing User Satisfaction

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## ABSTRACT

This study aimed to determine the effect of system quality, information quality, and tax literacy on the e-Filing system's user satisfaction among employees at the Universitas Pendidikan Indonesia (Indonesian University of Education-UPI). This study employed an explanatory survey method by collecting primary data in a questionnaire. The hypothesis testing of this study implemented simple linear regression analysis with the SPSS Statistics 25 software tool. The results of the study, it was found that each variable which is system quality, information quality, tax literacy affect user satisfaction e-Filing system at Universitas Pendidikan Indonesia (Indonesian University of Education-UPI). Employees at Universitas Pendidikan Indonesia with PTNBH status have perception that e-Filing system's could be a benefit as taxpayersin in reporting SPT of the use e-Filing system. This study is expected to get insight of the e-Filing system. With this study could gain improvement of understanding in the use of e-Filing system at Universitas Pendidikan Indonesia (Indonesian University of Education-UPI). This study could evaluate the success of the e-Filing system uses model Delone and McLean by modifying several other variables.

## ARTICLE INFO

***Article History:***
*Submitted/Received 06 Jul 2023*
*First Revised 07 Aug 2023*
*Accepted 28 Oct 2023*
*First Available online 01 Nov 2023*
*Publication Date 01 Dec 2023*

***Keyword:***
*E-filing,*
*Information quality,*
*System quality,*
*Tax literacy,*
*User satisfaction.*

## 1. INTRODUCTION

Digital transformation has impacted the rapid development of information technology. These conditions urge the Indonesian government to carry out digital transformation. The government has implemented administrative digitalization in public finance by applying a tax administration digitalization system. The Directorate General of Taxes (DGT) has created the e-Filling system to assist taxpayers in fulfilling their tax reporting obligations. Annual Tax Returns (SPT) are reported through the Directorate General of Taxes website in real-time or through the e-Filing system. Following the decision of the Director General of Taxes Number PER-02/PJ/2019 concerning The Procedures for Submission, Receipt, and Processing of SPT, the taxpayers must submit SPT via e-Filing (Direktur Jenderal Pajak, 2019). The implementation of the e-Filing system is aimed to help facilitate the administration of taxpayers in fulfilling their tax obligations in reporting SPT through the DGT online website. Thus, it can be done anytime and anywhere and help increase the ease of doing business. In addition to making it easier for taxpayers, the e-Filing system can save time and costs in calculating, filling in, and reporting SPT. The enforcement of the e-Filing system is expected to increase taxpayer compliance. Nevertheless, this tax administration digitalization system still needs to improve its services with the support of all parties.

Based on **Table 1**, the results of reporting SPT through the website have increased. It can also be seen that in 2019 taxpayers who reported SPT using e-Filing had reached 93 percent, and in 2020 it increased to 97 percent. This percentage means taxpayers have widely implemented Indonesia's electronic SPT reporting system. Nevertheless, some taxpayers still need help implementing the system in fulfilling their obligation to report SPT. Some taxpayers are unfamiliar with the e-Filing system and must possess the necessary skills to use e-Filing system (DDTCNews, 2020). This phenomenon also happened at the Indonesian University of Education-UPI (Staf Direktorat Keuangan UPI, 2021).

**Table 1.** Annual tax returns (spt) periodic 2019-2020

| Year | Electronic SPT Reporting System | Percentage | Total SPT Reporting |
|---|---|---|---|
| **2019** | 11.320.083 | 0,93 | 12.118.558 |
| **2020** | 10.603.141 | 0,97 | 10.976.038 |

Source: (Director General of Taxes, 2020)

Furthermore, with the status of UPI as PTN-BH (State-Owned University with Legal Entity), it is quite an anomaly if many employees still experience tax underpayment in their tax reporting. This happens because PTN-BH educational institutions are different from other educational institutions, where they have their policies regarding their financial reporting. UPI's tax obligations are to cut PPH 21 employees, and the government pays UPI employees and deducts and reports them. UPI and the government calculate their respective PTKP (Annual Non-Taxable Income). The e-Filing system in its SPT reporting considers PTKP originating from government income. It also adds income from the community so that it is subject to a higher progressive rate due to the PTKP calculation being deducted from the income that has been combined (UPI Directorate of Finance Staff, 2021). For this reason, it is necessary to re-identify how the electronic reporting system is in the UPI environment with PTNBH status.

Delone and McLean's Information System Success Model (IS) is a measurement of information system success that has developed significantly (DeLone and McLean, 2016). There are six

DOI: https://doi.org/10.17509/jaset.v15i2
p- ISSN 2086-2563 e- ISSN 2541-0342

components in testing the success of information systems using the Delone and McLean Model: system quality, information quality, use, user satisfaction, individual impact, and organizational impact. Delone and McLean argues that each component in the Information Systems (IS) success model has interdependent relationships.

User or customer satisfaction is a condition where users get feedback on the ability of a system to operate according to user expectations (Wulanjayanti and Usman, 2019). According to Anol Bhattacherjee (2001), Expectation Confirmation Theory (ECT), in determining intentions toward the sustainability of information systems, makes several theoretical adaptations. First, users have initial expectations about particular products or services before using them based on previous experience and existing knowledge and through interaction with members of different communication channels. Second, they will accept and use it if they find the product or service useful. Third, they appraise the perceived performance of the product/service based on initial expectations and decide the extent to which those expectations are confirmed.

In increasing user satisfaction, several driving factors can be done, for instance, increasing the quality of information and system (Veeramootoo *et al.*, 2018). According to DeLone and McLean (2016) system quality is one of the characteristics that a product must have in a system. Information quality is a measurement of information that has value for system users that comes from a system with relevant characteristics (DeLone and McLean, 2016). Tax literacy is also needed to help facilitate the use of the e-Filing system (Cvrlje, 2015). Tax literacy is an individual's ability to understand tax information by reading and following up on this information to make a decision (Sari, 2019).

Based on this explanation, the researcher formulated the following problems: (1) Testing the effect of the quality of the e-Filing system on user satisfaction; (2) Testing the effect of e-Filing information quality on user satisfaction; (3) Testing the effect of tax literacy on user satisfaction. The outcomes of this study are meant to provide suggestions or input for DGT to evaluate the performance of the e-Filing information system in order to make it easier for taxpayers to use it. In addition, it is expected to add insight into taxpayers regarding the e-Filing system so that they continue to improve compliance in reporting SPT.

## 2. METHODS

This research employed an explanatory survey method. According to Jogiyanto Hartono M., (2018) the survey method is implemented by collecting primary data in a questionnaire containing questions addressed to respondents in writing. Meanwhile, explanatory relates to the nature of the analysis, which studies the causal relationship between one variable and another through hypothesis testing.

### 2.1. Variables and Measurements

Independent and dependent variables were involved in this study. The first independent variable consists of system quality measured using five dimensions: system reliability, system flexibility, system integrity, system accessibility, and response time with 10 question items (Nelson *et al.*, 2005). Its scope consists of the reliability of a system that is operated, the ability of the system to flexibly make appropriate changes to meet user needs, the security and accuracy of the system being used that have been guaranteed, and the response that is fast and timely to the requests for information.

The second independent variable, the quality of information, was measured using four dimensions with eight question items consisting of several topics: the integration relating to the protection of information produced by the system so that it is free from incorrect information or

DOI: https://doi.org/10.17509/jaset.v15i2
p- ISSN 2086-2563 e- ISSN 2541-0342

not relevant to the tax law regarding the tax treatment of PTN-BH, the information that has accuracy and completeness so that the truth is not doubted and can be in accordance with expectations, the provision of appropriate and relevant information so that users can operate a system and enforce their responsibilities, and the expected information is available when needed and has been updated according to what has been determined (Floropoulos *et al.*, 2010).

The third independent variable, tax literacy, was measured using three dimensions with six question items consisting of understanding of taxpayers to identify factors that are relevant to decision making, knowledge of taxation systems and processes by knowing tax requirements, making the right decisions to enforce their tax obligations (Bornman and Wassermann, 2018).

In addition, the dependent variable of this study is user satisfaction which was measured using five dimensions with eight question items consisting of the expectations desired by users for the information system to be met, the results of the information system performance have met the expectations and needs of users, the information system is effective and efficient in helping operate the system this information, the information system presented meets user needs, and the information system shown gives satisfaction to users and can be useful (Wang and Liao, 2008).

This study employed primary data obtained directly through a questionnaire with a Likert scale. The data were assessed using a five-point Likert scale with values of (5) very good, (4) good, (3) fair, (2) poor, and (1) very poor. The validity assessment of the answers to this questionnaire was carried out using the Product Moment correlation between the values of each item from all respondents and their total value. The minimum requirement criteria for question items to be considered valid are positive validity index values and a value above 0.3. Reliability testing was carried out using the Cronbach Alpha formula with the help of SPSS 25 software. The questionnaire was considered reliable when the positive reliability coefficient was greater than 0.70.

### 2.2. The Data Analysis Technique

#### 2.2.1. Data Normality Test

The data test was used to assess the level of normality of data distribution. This research is to test the normal distribution using the Kolmogorov-Smirnov Test. Theaassessment oftthe Kolmogrov-Smirnov testtis thatiiftthe significanceeis below 0.05, itmmeanssthat the databbeing testeddhas assignificant difference frommthe standard normal data and is said to be not normallyddistributed, and vice versa.

#### 2.2.2. Simple Regression Analysis

The testing of the data hypothesis analysis used in this study employed simple regression analysis. The simple regression formula used in this study was:

$$Y = a + bx$$

Explanation:

Y = Expected user satisfaction
a = Constant
b = Regression coefficient
X1,2,3 = System Quality, Information quality, dan Tax Literacy.

#### 2.2.3. Hypothesis Testing

Hypothesis testing tests the relationship of two or more variables expressed as a statement (Sekaran, 2006). The hypothesis testing in this study was:

DOI: https://doi.org/10.17509/jaset.v15i2
p- ISSN 2086-2563 e- ISSN 2541-0342

Hypothesis 1:
H0: β < 0 System quality does not affect user satisfaction
Ha: $\beta \geq 0$ System quality affects user satisfaction
Hypothesis 2:
H0: β <0 Information quality does not affect user satisfaction
Ha: $\beta \geq 0$ The quality of information affects user satisfaction
Hypothesis 3:
H0: β < 0 Tax literacy does not affect user satisfaction
Ha: $\beta \geq 0$ Tax literacy affects user satisfaction

The decision criteria used in testing this hypothesis were as follows:

(i) If the value of tcount > ttable, it means that variable X affects variable Y
(ii) If the value of tcount > ttable, it means that variable X does not affect variable Y

### 2.3. The Coefficient of Determination

The coefficient of determination ($R2$) is an indicator used in measuring how great the independent variable determines the dependent variable. The value of Kd is between 0 to 100 (0 <= Kd<=100). If the value of Kd = 0, there is no effect of variable X on variable Y. If the value of Kd = 100 means that the variation (rising and falling) of the dependent variable Y is 100% influenced by the independent variable (variable X).

## 3. RESULTS AND DISCUSSION

This research employed a survey method conducted on the Universitas Pendidikan Indonesia employees, including lecturers and staff in each unit, as the research sample. From the data collected, 100 respondents were obtained, then analyzed using correlation and regression analysis techniques.

### 3.1. The Validity and Reliability Test

From the results of the validity test of the 32 question items for the four variables, it can be stated that all of them are valid, which means those are above the lowest criterion limit or the coefficient> 0.256. From the results of the validity analysis, the validity coefficients were spread between 0.552 and 0.838.

From the reliability test results, the reliability coefficient results of the three variables show a value greater than 0.70. Based on **Table 2**, it is known that the results of the questionnaires that have been distributed can be relied upon to become a measuring tool in this study.

**Table 2.** Results of the validity test

| No | Variable | $r_{alpha}$ | $r_{tabel}$ | Description |
|---|---|---|---|---|
| 1. | System Quality | 0,916 | 0,7 | Reliable |
| 2. | Information Quality | 0,892 | 0,7 | Reliable |
| 3. | Tax Literacy | 0,785 | 0,7 | Reliable |
| 4. | Satisfaction e-Filing | 0,905 | 0,7 | Reliable |

Source: Primary Data Processed, 2021

DOI: https://doi.org/10.17509/jaset.v15i2
p- ISSN 2086-2563 e- ISSN 2541-0342

Based on the data normality test, a significant result was obtained at 0.053, where the result was greater than 0.05, so this result can prove that the data is normally distributed.

The following are the results of multiple regression analysis using SPSS Statistics 25 software shown in **Table 3**.

**Table 3.** Multiple regression analysis

| Coefficients[a] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Model** | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 3.099 | 1.581 | | 1.961 | 0.053 | | |
| | System Quality | 0.111 | 0.065 | 0.154 | 1.714 | 0.090 | 0.296 | 3.373 |
| | Information Quality | 0.456 | 0.086 | 0.488 | 5.293 | 0.000 | 0.282 | 3.548 |
| | Tax Literacy | 0.431 | 0.080 | 0.341 | 5.395 | 0.000 | 0.602 | 1.662 |
| **a. Dependent Variable: User Satisfaction** | | | | | | | | |

Source: SPSS.25, 2021

Based on the results in **Table 3**, the regression equation is obtained as follows:

Y=3,099 + 0,111 + 0,456 + 0,431, meaning that:

- A constant value of 3.099 means that the constant value of the user satisfaction variable is 3.099
- The value of the regression coefficient X1 is 0.111, indicating that for every 1% addition to the system quality value, the user satisfaction value increases by 0.111. Therefore, the effect of the system quality (X1) on user satisfaction (Y) is positive, this is reflected by the results of a positive coefficient value.
- The value of the regression coefficient X2 is 0.456, indicating that for every 1% addition in the value of information quality, the value of user satisfaction increases by 0.456. Therefore, the effect of the system quality (X2) on user satisfaction (Y) is positive, this is reflected by the results of a positive coefficient value.
- The value of the X3 regression coefficient is 0.431, indicating that for every 1% addition in the tax literacy value, the user satisfaction value increases by 0.431. Therefore, the effect of the system quality (X3) on user satisfaction (Y) is positive, this is reflected by the results of a positive coefficient value.

The following are the results of coefficient of determination using SPSS Statistics 25 software shown in **Table 4**.

**Table 4.** The result coefficient of determination

| Model Summary | | | | |
|---|---|---|---|---|
| **Model** | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| **1** | .877[a] | 0.770 | 0.763 | 2.31261 |
| **a. Predictors: (Constant), Tax Literacy, System Quality, Information Quality** | | | | |

Source: SPSS.25, 2021

### 3.2. The Effect of System Quality On E-Filing User Satisfaction

In this study, the results of the tcount value (see **Table 5**) were 1.714 > 1.661 ttable, proving that the first hypothesis was accepted. That is, the higher the quality of the information system, the higher the satisfaction of the users of the system. This shows that UPI employees, as taxpayers who use the e-Filing system, consider it necessary to have a quality system in terms of system reliability, system flexibility, system integrity, accessibility, and response time to the e-Filing system to increase user satisfaction in using the system. The results of this study are in line with research executed by Wulanjayanti and Usman (2019), Veeramootoo *et al.* (2018), Xu and

DOI: https://doi.org/10.17509/jaset.v15i2
p- ISSN 2086-2563 e- ISSN 2541-0342

Du (2018), Abrego Almazán *et al.* (2017), and Tam and Oliveira, (2016) which demonstrates that a good quality system will provide satisfaction to users in operating the information system.

### 3.3. The Effect of Information Quality On E-Filing User Satisfaction

In this study, the results of the tcount value were 5.293 > 1.661 ttable, proving that the second hypothesis was accepted. That is, the higher the quality of information, the higher the satisfaction of users of the system. The results of this study are in line with research performed by Christanti (2020), Hatta Hambali (2020), Veeramootoo *et al.*, (2018), Alzahrani *et al.*, (2017), Abrego Almazán *et al.*, (2017), which shows that the quality of information affects user satisfaction. This study's results demonstrate that the quality of information with output data that is complete, accurate, reliable, and up-to-date can increase user satisfaction in carrying out their obligations to report SPT.

### 3.4. The Effect of Tax Literacy On E-Filing User Satisfaction

In this study, the results of the tcount value were 5.395 > 1.661 ttable, proving that the third hypothesis was accepted. That is, the higher the tax literacy, the higher the satisfaction of system users. This study's results align with research performed by Bornman and Wassermann, (2018) and Cvrlje, (2015) which state that tax literacy can affect system user satisfaction e-Filing. According to Bornman and Wassermann, (2018) tax literacy is fundamental knowledge about taxation that taxpayers need to understand to understand the functions and benefits of paying taxes to improve reporting SPT using e-Filing.

**Table 5.** The result test t

| Coefficients[a] | | | | | | |
|---|---|---|---|---|---|---|
| **Model** | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 3.099 | 1.581 | | 1.961 | 0.053 |
| | System Quality | 0.111 | 0.065 | 0.154 | 1.714 | 0.090 |
| | Information Quality | 0.456 | 0.086 | 0.488 | 5.293 | 0.000 |
| | Tax Literacy | 0.431 | 0.080 | 0.341 | 5.395 | 0.000 |
| **a. Dependent Variable: User Satisfaction** | | | | | | |

Source: SPSS.25, 2021

## 4. CONCLUSION

This study established that system quality, information quality, and tax literacy separately or partially affect user satisfaction with the e-Filing system within the Universitas Pendidikan Indonesia. Of the three independent variables studied, the quality of information has a dominant influence in influencing e-Filing system user satisfaction in the UPI environment.

In addition, system quality, information quality, and tax literacy jointly or simultaneously influence e-Filing system user satisfaction in the UPI environment. The outcomes presented that system quality, information quality, and tax literacy had a 77% effect on user satisfaction; the remaining 23% was explained or influenced by other variables not examined.

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p- ISSN 2086-2563 e- ISSN 2541-0342