Measuring the Success of Corporate Annual Tax Online Reporting: Applying the Delone & McLean Information System Success Model

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Abstract. E-SPT is one application created by the Directorate General of Taxes to help reporting annual tax return by both individuals and corporations. It helps reduce time and cost of taxpayers to submit their taxes and pay it on time. The research is conducted to measure the success of corporate annual tax reporting using the DeLone & McLean model of IS Success. Data were collected from online questionnaires from 115 users who have experience in filing corporate annual tax reporting as samples. The data were analyzed using Smart PLS software. The result showed that two hypothesis, which are information quality positively affects system use and service quality positively affects user satisfaction are rejected, and the conclusion is E-SPT is successful in helping taxpayers to pay their corporate annual tax.

1 Introduction

E-government systems make the delivery of public services more effective and help various government departments to be able to increase productivity and reduce costs (W. Bhuasiri et al., 2016). In the past, individuals had to use the service of public accountants to help with their tax preparation, but the introduction of new technologies has changed tax preparation methods (B. Chiang and J. Limato, 2017), such as the usage of various softwares and applications to help tax preparation. E-SPT has the main purpose to improve public service by using tax online reporting through the internet. The benefit is reduced cost and time that are required by taxpayers to submit and pay tax return on time (L. D. Prawati and M. S. Dewi, 2018). By using this system tax return reporting could be more reliable and secure. After the taxpayer submits and pays a tax return they will receive notification electronically.


A form of E-government to help with the reporting of annual tax returns is SPT Electronic Application (E-SPT), an application that is created by the Directorate General of Taxes which is used by Taxpayers for reporting and submitting SPT (Annual Tax Return). Indonesia uses a system, namely the Self Assessment System, where taxpayers play a role in calculating, depositing, and reporting taxes owed to the Directorate General of Taxes. This application makes it more convenient for taxpayers to report annual tax return. We could not find any research on E-SPT so we could only compare it to the closely related electronic tax filing research. That is why this research on E-SPT is important to measure the success of it.

1.1 Objectives

In this study, we would like to look at the application of E-SPT using the Delone & McLean Model to test the success of Indonesia's E-SPT Application. This article’s function is to find out the success of Indonesia's annual tax return app, E-SPT. This topic is interesting because not many countries use E-SPT to report taxes, using the DeLone & McLean model. The framework of DeLone & McLean model consists of three parts of instruments, which are technical, semantic, and effectiveness success to measure the success of the Information System (S. Mardiana et al., 2015). It has been used in many studies covering various topics, for example the study of IT governance for enterprises (E. W. N. Bernroeder, 2008).
and online learning system (H. F. Lin, Ph.D, 2007). Delone & McLean model is suitable to measure the success of E-SPT because it evaluates which parts of a system should be improved or retained and helps us to know whether the system has a positive impact on the user or not.

## 2 Literature Review

IS has a big impact in businesses, for example nowadays companies often use IS technology, but they don't have any method to measure the success of their IS technology (W. H. DeLone and E. R. McLean, 2014). Therefore, a model of information system success is needed to measure the success of an information system technology. IS Success Model is a theory that explains the relationship among the six variables of Information systems to measure success models (W. H. DeLone and E. R. McLean, 1992).

There are many models used to measure IS Success Model like the TAM model, DeLone & McLean model, UTAUT generation 3, UMEGA, and other measurements. DeLone & McLean model is one of the models that is used the most to test the success of the IS (J. Iivari and E. Trisnawati, 2005). In 1992, William H. DeLone and Ephraim R. McLean conducted a study review of the literature of IS and proposed a model IS success model.

In this success model, there are six information system variables that are connected (Y. S. Wang and Y. W. Liao, 2008). This model explains that success could be represented by: a. system quality, b. information quality, c. usage of the system, and d. user’s satisfaction, because of that the IS will affect both individual and organizational impact (J. H. Wu and Y. M. Wang, 2006).

Many researchers like Goodhue and Thompson (1995), Seddon and Kiew (1996), Guimaraes and Igbaria (1997), McGill, Hobbs, & Klobasried (2003), tried to use DeLone & McLean to test the model’s validity to various systems (Y. S. Wang and Y.W. Liao, 2008). They said that use of the system must be separated from usefulness, even though a system is used by many, it doesn't mean the system is useful (J. Iivari, and E. Trisnawati, 2005). Therefore, many researchers again conducted research to update a new better model.

DeLone & McLean IS Success Model explains system variables are all connected to measure IS, so if one variable is wrong then all is disrupted (W. H. DeLone and E. R. McLean, 2003). This model explains system quality will have impact on the use of the system and user satisfaction, information quality will also affect the system use and user satisfaction (W. H. DeLone and E. R. McLean, 1992).

Delone & McLean conducted research again to update a new better model in 2003. In the updated DeLone & McLean IS Success Model, there are six information system dimensions that are connected to measure information systems: 1. Information Quality, 2. System quality, 3. Service Quality, 4. Usage Intention/System Use, 5. User Satisfaction, and 6. Net System Benefit (Y. S. Wang and Y. W. Liao, 2008). The difference from the old model is the use of the system must be separated from the usefulness.

DeLone-McLean Success IS Model explains that system quality will have impact on the usage of system and user’s satisfaction, information quality will also affect the use of the system and user satisfaction (W. H. DeLone and E. R. McLean, 1992; W. H. DeLone and E. R. McLean, 2003). The updated DeLone & McLean IS Success Model is more frequently used and many researchers tried to use in many studies various topics to test the model’s validity to various systems, such as Assessing eGovernment systems success (J. Iivari and E. Trisnawati, 2005). Measuring e-Commerce Success (W. H. DeLone and E. R. McLean, 2014). Measuring Online Learning Systems Success (H. F. Lin, Ph.D, 2007). and other researchs.

Until now there isn't any research on E-SPT so we can only study closely related electronic tax filing research. E-Filing is an online tax reporting system of Annual Tax Return by using an online tax application, the benefit is Taxpayers can report tax online anytime. If the SPT is filled correctly, and sent electronically, the Directorate General of Taxes will send an invoice to the taxpayers. Further research is needed to perfect the research E-SPT.

### Hypotheses

This research is conducted to test the success of E-SPT by the variable of DeLone & McLean Success Model. According to the DeLone & McLean Success Model, this research explains that the quality of information, system, and service, and the, intention of usage/use of system, user satisfaction, and net system benefit affect the success of the E-SPT system.

![Fig. 1. DeLone & McLean Success Model updated model](image-url)
2.1 Information quality, system use, and user satisfaction

Information quality is the quality of the information that the system could deliver, store, or produce. Many researchers observed the relation among quality of information, usage intentions, and user’s satisfaction. Researchers found that the information quality could be measured by the accuracy, the timeliness, the completeness, the relevance, and consistency of information (W. H. DeLone and E. R. McLean, 2003). From the study, information quality has positive impact on usage of system and user’s satisfaction. Information Quality can be used for making decisions, for example, information quality is very necessary for taxpayers to report all tax data calculations correctly and on time (A. H. Aldholay et al., 2018).

H1a Information quality has positive effect on system use of E-SPT
H1b Information quality has positive effect on user satisfaction with E-SPT

2.2 System quality, system use, and user satisfaction

System quality refers to the whole quality of a system. The studies that tried to test the relationship of system quality, intentions of usage, and user satisfaction, found that the system quality could be measured by the ease-of-use, the functionality, the reliability, the flexibility, the data quality, the portability, the integration, and importance of a system (W. H. DeLone and E. R. McLean, 1992). From the study, system quality could affect tax online reporting, and has positive effects to system usage and has a significant effect to user satisfaction. System Quality consists of completeness, ease of use, fast response, and reliability to help complete a job (A. H. Aldholay et al., 2018).

H2a System quality has positive effect on system use of E-SPT
H2b System quality has positive effect on user satisfaction with E-SPT

2.3 Service quality, system use, and user satisfaction

Information systems are frequently evaluated by the quality of the service given. The quality of service of the system is commonly evaluated in an information system. Many researchers study that Service quality is measured on products, not on services of the function of the information system (W. H. DeLone and E. R. McLean, 2003). From the study, service quality has good impacts on system usage, and has a significant good influence on user satisfaction, because users will be satisfied with good quality of service. Service Quality will be evaluated by the quality of service delivered, whether it can meet user expectations (A. H. Aldholay et al., 2018).

H3a Service quality has positive effect on system use of E-SPT
H3b Service quality has positive effect on user satisfaction with E-SPT

2.4 User satisfaction, system use, and net system benefits

User satisfaction is an important method to measure the opinion of customers of the information system. When there is a need for the usage of information system, User satisfaction should cover the whole user experience of the application and is an important way to test the opinion of users of the information system (W. H. DeLone and E. R. McLean, 2003). System Use explains how users learn how to use information systems properly and correctly.

User Satisfaction explains how users evaluate the information system before using it and compare it to actual performance. Net Benefit is a result received by the company because of the impact on the usage of information systems. Net benefits are variables of information system results and user satisfaction. From the study, net system benefits has positive effects on system use, and has a significant good influence on user’s satisfaction (A. H. Aldholay et al., 2018).

H4 System use has positive effect on net system benefits of E-SPT
H5 User satisfaction has positive effect on net system benefits of E-SPT

3 Methods

This study uses survey research design by distributing questionnaire to respondents. Unit of analysis is the variables of the system. The questionnaire of this study was distributed through social media to Corporate E-SPT users who have experience in using Corporate E-SPT. The population of this study was 115 people in Jakarta and Tangerang, and the data were obtained from online questionnaires by using a non-probability convenience sampling technique. The data were analyzed using SmartPLS software. The questionnaire was created by analyzing the factors that are present in the research model and is based on 6 variables: 1. Information Quality (IQ), 2. System Quality (SYSQ), 3. Service Quality (SRVQ), 4. Usage Intentions/System Use (UI/SU), 5. User Satisfaction (US), and 6. Net
Benefits (NB) to measure the validity of data (L. D. Prawati et al., 2019). The questions are measured by a scale consisting of six points; Totally disagree, very disagree, disagree, agree, very agree, totally agree. The study started in February 2022 and the questionnaire was distributed to respondents between February and April 2022.

4 Data Collection

According to the profile of 115 respondents, 75 (65.2%) are male and 40 (34.8%) are female; 54 (47%) work as accountant, 31 (27%) as tax consultant, 27 (23.5%) as others, and 3 (2.6%) as tax office employee; 87 respondents (75.7%) are 20-30 years old, 23 (20%) are 30-40 years old, 3 (2.6%) are 40-50 years old and 2 (1.7%) are over 50 years old; 21 respondents (18.3%) are high school graduates, 9 (7.8%) have associate degree, 74 (64.3%) have bachelor’s degree, and 11 (9.6%) have master’s degree. According to their experience 53% of respondents have used E-SPT for less than one year, 33.9% 1-3 years and 13% have more than three years of experience using E-SPT.

5 Results and Discussion

According to the findings in this study, 6 out of 8 hypotheses are confirmed. Hypothesis 1a which proposes that information quality affects system use is not supported, hypothesis 2a which proposes system quality affects system use is supported, hypothesis 3a which proposes service quality affects system use is supported, hypothesis 1b which proposes information quality affects user satisfaction is supported, hypothesis 2b which proposes system quality affects user satisfaction is supported, hypothesis 3b which proposes service quality affects user satisfaction is not supported, hypothesis 4 which proposes system use affects net system benefit is supported, and hypothesis 5 which proposes user satisfaction affects net system benefit is supported.

5.1 Numerical Results

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Latent Variable</th>
<th>Coefficient</th>
<th>t value</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>H1a</td>
<td>Information Quality - System_Use</td>
<td>0.100</td>
<td>0.78</td>
<td>Hypothesis Not Supported</td>
</tr>
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5.2 Graphical Results

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<tr>
<th>Cronbach's Alpha</th>
<th>rho_A</th>
<th>Composite Reliability</th>
<th>Average Variance Extracted</th>
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5.3 Proposed Improvements

Until now there isn't any research on E-SPT so we can only study closely related electronic tax filing research. That is why it is interesting to do a research E-SPT to measure the success of it. Further research is needed to perfect the research E-SPT, and to help improve the tax online system in Indonesia. DeLone-McLean Success Model is suitable to measure the success of E-SPT because it can evaluate systems that should be improved or maintained, and helps us to know whether the system has a positive impact on the user or not. Information systems are successful if the information quality and system quality can make users satisfied so the user is willing to use it again and can have a positive impact to users.

6 Conclusion

The study of measuring the success of corporate annual tax online reporting using Delone & McLean IS Model shows that information quality does not affect system use significantly and service quality does not have impact on the user satisfaction for the application. The overall result shows that E-SPT does help taxpayers to report their corporate annual tax, by making the process simpler and more practical.

References