THE IMPACT OF TAX E-FILING SYSTEM QUALITY ON TAXPAYER SATISFACTION: PERCEIVED USEFULNESS AS MEDIATOR

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Abstract

Tax e-filing system quality is vital, directly shaping tax process efficiency and user convenience. This study aims to examine the effect of tax e-filing system quality on taxpayer satisfaction using perceived usefulness as a mediating variable. To gather data, 300 questionnaires were distributed to taxpayers, resulting in participation from 230 respondents. The findings of our study demonstrated a positive effect of tax e-filing system quality on both user satisfaction and perceived usefulness, and that perceived usefulness has a positively significant effect on user satisfaction. Furthermore, this study confirmed that perceived usefulness as a mediating variable in the e-filing system quality and user satisfaction relationship. The study enhances tax system theory by revealing the mediating role of perceived usefulness, and it practically suggests improving e-filing systems for increased taxpayer satisfaction and efficient tax collection.

INTRODUCTION

The Internet has become an integral part of organizational life. An Internet connection enables the worldwide distribution of information and facilitates all forms of organizational activities, and organizations can use information technology to manage activities and create sustainable competitive advantages (Alzahrani, 2019; Verhoef et al., 2021; Kristianto et al., 2021; Rusmana et al., 2023). The development of Internet applications has led many researchers to analyze various aspects of user behavior. As a crucial subject in the field of information systems, user satisfaction has received much investigation (Vaezi et al., 2016; Ningityas & Indrayani, 2022). Given the essential role of users in the function of information systems, it is necessary to understand the problems experienced by users when interacting with the system. Among the numerous theoretical perspectives applied to the study of user satisfaction, most academics understand and evaluate the effectiveness of an information system at the user level using the DeLone & McLean model (1992). This framework emphasizes that information quality and system quality are the main determinants of individual satisfaction. As a result, the model presupposes that various factors that impact both the individual and the organization influence user behavior with regard to an information system.
One information system that has received much attention from researchers in Indonesia is the annual tax reporting information system known as the e-filing (i.e., electronic filing) system. This has become an important component of modern tax administration, offering convenience and efficiency for taxpayers. One of the important factors affecting the user experience and implementation of the system is quality: good system quality can significantly impact how taxpayers interact with the system, which in turn affects their overall satisfaction, adoption rate, and compliance.

E-filing systems are typically web-based platforms or software applications that users access through web browsers or dedicated apps. Internet connectivity is essential to access these systems. E-filing relies on the Internet as a fundamental component of its functionality. Internet connectivity enables the complete e-filing process, which encompasses digitally submitting forms, documents, or information to pertinent authorities. E-filing systems are widely used for tax purposes, allowing individuals and businesses to electronically submit their tax returns, pay taxes, and receive refunds. Tax e-filing has many benefits compared with manual tax reporting, including time efficiency, remote online tax reporting at any time, and proof of reporting that is secure and easy to manage. E-filing simply requires the taxpayer to complete their tax return online, after which they will receive a receipt via email. This eliminates the risk of taxpayers losing their tax return receipt as it can be stored in their email.

Previous studies of e-filing systems have reviewed the two types of quality that affect user satisfaction. The first of these qualities is system quality. Many information systems fail due to technical factors, and many contain syntax errors, logical errors, and even information errors. Neglecting system quality is likely to contribute to the dropout rates of e-learning systems (Rostaminezhad et al., 2013). System quality has proven to be strongly associated with system use (Mailizar et al., 2021), and numerous studies have confirmed that system quality is an antecedent of user satisfaction (Sultono et al., 2016; Laumer & Weitzel, 2017; Vijai, 2018; Salam et al., 2018; Haddad, 2018; Savitri, 2019; Nirwanto & Andarwati, 2019; Normalindasari & Solichin, 2020; Dirgantari et al., 2020; Pratiwi & Mujadilah, 2021; Nuryanti et al., 2021; Sopalatu et al., 2021; Almajali et al., 2022; Chalik & Faturrahman, 2022), while only a few have found insignificant results (Pratama et al., 2021; Al-Okaily et al., 2021; Suryanto et al., 2023). The second type of quality is service quality, which is maintained by the service provider, such as an information systems department or organization, an internet service provider, or information technology support employees (Mangoting et al., 2018).

Further research can build on past research using the technology acceptance model (TAM) (Davis, 1989). To explain users’ behavioral intention, TAM relies on two user assumptions: perceived usefulness and perceived ease of use. Perceived usefulness is the most crucial factor in a tax e-filing system as users will intend to use the tax e-filing system if they consider it to be useful. The potential of a certain program, system, or technology to improve performance and impact how future tasks and work are completed is known as perceived usefulness (Ridwan et al., 2019; Andarwati et al., 2020; Alkhawaja et al., 2022). The extent to which the use of a technology is thought to benefit its users can be measured by perceived utility. The advantages of information technology can be measured by the impact perceived by users when performing their jobs. Thus, an individual’s awareness of the advantages of adopting a certain electronic filing system increases the likelihood that they will do so. In short, they will adopt the electronic filing system due to their confidence in its value; similarly, they will not use a system if they believe it to be less useful. Perceived usefulness is indicated to mediate the relationship between system quality and user satisfaction, but the results remain inconsistent. According to Nirwanto & Andarwati (2019), Savitri (2019), Andarwati et al. (2020), and Rezvani et al. (2022), perceived usefulness mediates the relationship between system quality and user satisfaction; however, Tiana et al. (2019) and Shim & Jo (2020) found no mediation effect.

This study was conducted for two purposes. First, the existing studies on the topic reported inconclusive results regarding the effect of system quality on user satisfaction. Moreover, some existing research produced various findings regarding the mediating effect of perceived usefulness on the relationship between system quality and user satisfaction. In addition, previous research on e-filing focused primarily on the independent variables of intention and behavior. This study contributes to the literature by examining user satisfaction. When users are satisfied with the e-filing system, they are more likely to trust that it is secure, reliable, and accurate. Thus, high user satisfaction can contribute to promoting trust and confidence in the system, thereby encouraging more users to transition from traditional filing methods.

Second, previous studies examined the three variables in different contexts: Nirwanto & Andarwati (2019) and Andarwati et al. (2020) focused on accounting information systems, Kim & Lee (2014) focused on personal robots, Savitri (2019) focused on ERP-based software, Tiana et al. (2019) focused on accounting software, Shim & Jo (2020) focused on online health information sites, and Rezvani et al. (2022) focused on library applications. This research adds a body of knowledge to the empirical study of TAM theory, especially in the Indonesian context.
Given that the Indonesian tax system relies heavily on the tax e-filing system, it is crucial to conduct research on user satisfaction with e-filing in the Indonesian context. E-filing systems are developed to facilitate the electronic submission of documents and forms, often replacing traditional paper-based processes. Understanding customer satisfaction aids in enhancing the system in accordance with user demands and preferences, ensuring that it is user-friendly and efficient. User reviews and satisfaction scores offer insightful data on the benefits and drawbacks of the e-filing system. Developers and administrators can improve the system’s functionality and user experience by identifying areas where users are unsatisfied or encounter problems. Furthermore, understanding user satisfaction might highlight areas in which taxpayers require more training or assistance to use the e-filing system successfully.

METHODS

The purpose of this study was to use hypothesis testing to examine the causal relationship between the variables under investigation. This study used a quantitative research design with a causal relationship through path coefficients analysis. For the primary data collection method, a questionnaire was distributed among taxpayers listed with the Tax Service Office in Kepanjen, Malang, Indonesia. The questionnaire consisted of two important parts. The first part collected respondents’ demographic information, including age, gender, and level of education. In this study, tax e-filing system quality functions as the independent variable, perceived usefulness as the intervening variable, and user satisfaction as the dependent variable. Accidental sampling was adopted as the sampling method. A response rate of 76.67% was achieved following the distribution of 300 questionnaires, 230 of which were completed and returned.

In the data collection process, questionnaires were distributed directly to the respondents with the valuable assistance of tax officers. These tax officers played a crucial role in facilitating the distribution process, ensuring that the questionnaires reached the intended participants. System quality, which as explained above is a characteristic of the tax e-filing system. The measurement of tax e-filing system quality using measurement adapted from Ahn (2007). This measurement comprises six key dimensions: design, navigation, response time, security, availability, and functionality. Perceived usefulness was evaluated using a six-item measurement adapted from Davis (1989). These items, namely work more quickly, job performance, increase productivity, effectivenes, make job easier, and useful. Taxpayer satisfaction was assessed using a three-item measurement adapted from Xu & Du (2018). The three items of measurement are satisfied with the services provided by tax e-filing system, contented with the services provided by tax e-filing system, and like the services provided by tax e-filing system. Respondents typically rate their agreement with each statement on a Likert scale, ranging from "Strongly Disagree" to "Strongly Agree".

Regarding data analysis, this study employed PLS-SEM and a variance-based method with structural equation modeling (partial least square path modeling), which does not require many assumptions or a large sample size. In addition, the PLS method can explain latent variables and is measured using manifest variables. PLS has several advantages, including the ability to model multiple dependent and independent variables, capability for handling multicollinearity among independent variables, and capability for making stronger predictions.

RESULTS

Table 1 presents the demographic characteristics of the 230 respondents who participated in this study.

As shown in Table 1, 10.43% of respondents were aged 0–30 years, 31.74% were aged 30–39 years, 30% were aged 40–49 years, and 27.83% were aged 50> years. The proportion of male respondents (61.30%) was greater than that of female respondents (38.70%). Regarding the highest education level achieved by respondents, 24.35% of respondents graduated from elementary, secondary, or high school; 13.91% had attained a diploma, 40% had attained a bachelor’s degree, and 21.74% had attained a master’s or doctorate degree.

The results of the path coefficient output (Table 2) indicate that the effect of tax e-filing system quality on taxpayer satisfaction is significant, with a T-statistic value of 4.999406 > T-table of 1.960 and a significant level of 0.00 < 0.05 (α = 5%). The original sample estimate value is 0.357770, demonstrating that the direction of the effect is positive. Thus, it can be concluded that system quality has a significant positive impact on taxpayer satisfaction. Therefore, H1 is supported.

Hypothesis 2 states that the tax e-filing system quality positively influences the perceived usefulness. The path coefficient in Table 2 above shows a T-statistic value of 42.954874 > T-table of 1.960 and a significant level of 0.00 < 0.05 (α = 5%). The value of the original sample is 0.863778. Thus, it can be concluded that tax e-filing system quality positively affects perceived usefulness. Therefore, H2 is supported.
The results of the output path coefficient in this study indicate that perceived usefulness has a significant effect on taxpayer satisfaction, a $T$-statistic value $(8.481041) > T$-table $(1.960)$, and a significant level of $0.00 < 0.05 (\alpha = 5\%)$. The original sample estimate value is $0.556829$, which shows that the direction of the effect perceived usefulness on user satisfaction is positive. Thus, it can be concluded that perceived usefulness has a significant positive effect on taxpayer satisfaction. Therefore, H3 is supported.

In analyzing the role of perceived usefulness as a mediating variable between tax e-filing system quality and taxpayer satisfaction, both paths must be significant. Table 2 demonstrates that both the first path (the effect of tax e-filing system quality on perceived usefulness) and the second path (the effect of perceived usefulness on user satisfaction) are significant. Thus, it can be concluded that perceived usefulness mediates the effect of tax e-filing system quality on taxpayer satisfaction. Therefore, H4 is supported.

**DISCUSSION**

This study aimed to examine the impact of tax e-filing system quality on taxpayer satisfaction using perceived usefulness as a mediating variable. The research revealed that system quality is important for achieving overall software system success and is considered a crucial factor for all parties involved in the development of the system project, including developers, users, and project managers. The quality of the e-filing system is based on the set of features that users feel must be included in tax e-filing to improve the delivery of their tax performance, and the extent to which these expectations are fulfilled. The major results of the study are discussed below.

First, based on the information systems model, system quality is an important characteristic that can affect user satisfaction and intention to use in the context of tax e-filing systems. A perceived high level of system quality results in a high level of user satisfaction. A high-quality system is one that provides clear and accessible user support, including documentation, tutorials, and help resources. Additionally, adequate support options further contribute to user satisfaction by addressing questions and concerns. Furthermore, using the e-filing system can occasionally result in mistakes or issues for taxpayers; high-quality systems effectively inform users of problems, offer step-by-step guidance for problem-solving, and facilitate quick recovery, all of which increase taxpayer satisfaction. The findings of this research align with those of previous studies, specifically regarding the impact of system quality on user satisfaction (e.g., Pratiwi & Mujadilah, 2021; Almajali et al., 2022; Chalik & Faturohman, 2022; Suryanto et al., 2023).

Second, tax e-filing system quality positively influences perceived usefulness. System quality is primarily based on the system itself. By displaying high data and system quality, a system can increase perceived usefulness among various users, including individuals, groups of individuals, and organizations. A high-quality tax e-filing system streamlines the submission process for tax documents and forms. Due to the reduced time and effort required, users can complete their tasks more efficiently and effectively. This enhanced efficiency directly contributes to users perceiving the system as useful for achieving their tax filing goals. System quality can be further increased by providing a user-friendly interface with clear instructions and intuitive navigation. When users can easily understand how to use the system, locate the required information, and navigate the process with ease, they are more likely to view the system as a useful tool. This finding supports prior research that found that high system quality, as indicated by the benefits provided by the system output, can affect perceived usefulness (Nirwanto & Andarwati, 2019; Alsabawy et al., 2016; Andarwati et al., 2020; Rezvani et al., 2022; Alkhawaja et al., 2022).

Third, the perceived usefulness of e-filing positively influences taxpayer satisfaction due to the direct impact of how taxpayers perceive the benefits and value gained from using electronic filing systems to complete tax-related tasks. When taxpayers perceive e-filing as useful, this aligns with their needs and enhances their overall tax filing experience, leading to greater satisfaction. E-filing allows taxpayers to file their tax returns electronically, thereby eliminating the need for paper forms and physical submission, resulting in a quick, easy filing process; consequently, the perceived utility of e-filing is high. Taxpayers highly appreciate the convenience of filing taxes from their homes or workplaces, leading to elevated satisfaction levels with the e-filing system. The results of this study align with empirical evidence presented in previous studies, specifically that perceived usefulness influences user satisfaction (Amin & Abolghasemi, 2014; Martins et al., 2014; Ariff et al., 2014; Daud et al., 2018; Haddad, 2018; Hartono et al., 2019; Sidik & Utomo, 2019; Rezvani et al., 2022).

Fourth, perceived usefulness mediates the impact of tax e-filing system quality on taxpayer satisfaction. The findings of this study indicate that higher system quality increases perceived usefulness and, consequently, taxpayer satisfaction. Perceived usefulness plays a pivotal role in mediating the relationship between tax e-filing system quality and taxpayer satisfaction. A high-quality system enhances perceived usefulness, which subsequently influences positive outcomes and ultimately facilitates higher levels of satisfaction among taxpayers. This mediation process promotes understanding of the psychological mechanisms by which system quality impacts user satisfaction in the context of tax e-filing. Taxpayers who perceive a tax e-filing system as useful...
are more likely to experience positive outcomes, such as efficient tax filing, accurate calculations, and reduced effort. These positive outcomes contribute to an enhanced overall tax filing experience, which in turn increases satisfaction. The findings of this study are consistent with those of previous research, which demonstrated that perceived usefulness can act as a mediating variable (Kim & Lee, 2014; Nirwanto & Andarwati, 2019; Savitri, 2019; Andarwati et al., 2020; Rezvani et al., 2022). It can be said that higher system quality will result in higher perceived usefulness and ultimately increase taxpayer satisfaction.

CONCLUSIONS

The conclusions from this study can be deduced as follows based on the explanation of the research findings and discussion. First, tax e-filing system quality has a significant positive effect on taxpayer satisfaction. Second, the tax e-filing system quality has a significant positive effect on perceived usefulness. Third, perceived usefulness has a significant positive effect on taxpayer satisfaction. Fourth, perceived usefulness mediates the relationship between tax e-filing system quality and taxpayer satisfaction.

This study contains five limitations. First, the sample data were obtained from a single tax office, namely that of Kepanjen; in future studies, a larger sample size can be obtained from different tax offices. Second, this study used questionnaire as the primary data collection method, which is a self-report measure that can lead to common method biases; further research can employ both questionnaires and in-depth interviews. Third, when measuring user satisfaction in the tax e-filing system, the study considered only two variables. Fourth, This study employed a snapshot research method, and future investigations could broaden their scope by including more taxpayers from various tax offices. Fifth, longitudinal evidence might improve our understanding of the causality and interrelationships between variables that are important for promoting acceptance and use of e-filing systems.

This study carries significance in both theoretical and practical dimensions. The theoretical implications of this research are its contributions to the validation and extension of the TAM theory in the context of tax e-filing systems. By examining how specific attributes of system quality impact perceived usefulness and user satisfaction, the study provides empirical evidence to support or refine the TAM framework. In addition, it can contribute to the broader body of technology adoption research by providing insights into the factors driving the adoption and use of tax e-filing systems. It can elucidate the role of perceived usefulness as a key driver of technology adoption and its influence on user satisfaction. Meanwhile, the practical implications are that the findings can guide the design and improvement of tax e-filing systems. By identifying which quality attributes have the most significant impact on perceived usefulness and satisfaction, developers can focus their efforts on enhancing these aspects and thus creating more effective, user-friendly systems. Moreover, tax authorities can use the findings of this study to develop communication strategies that emphasize the specific benefits of using high-quality e-filing systems. Highlighting attributes that enhance perceived usefulness can lead to more effective communication campaigns.

REFERENCES


