The Role of Tax Complexity, Prior Experience, and Perceived Risk in Continuance Usage of E-filing

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Abstract

The purpose of this study is to validate an extended integrated model of e-filing continuance usage. The base model, which has its theoretical basis in the IS Success Model and Expectancy-Confirmation Model (ECM), is extended by including three moderators: tax complexity, prior experience with other e-government services, and perceived risk. The data collected from 300 e-filing users in the Philippines. Hypotheses were tested using PROCESS Macro for SPSS. Results suggested that tax complexity has a moderating effect on the relationship between system quality and satisfaction, while perceived risk has a moderating effect on the relationship between satisfaction and continuance intention.

Key words: e-filing, continuance usage, IS success model, expectation confirmation model

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1. Introduction

E-government is generally defined as the government's application of information and communication technologies (ICTs) in providing information and services to citizens, businesses, and other government agencies (Layne & Lee, 2001; Silcock, 2001). Using web-based applications, and more recently, mobile applications (Hung et al., 2013), government-to-citizen interactions have become more efficient and transparent. An impressive e-government service is electronic tax filing or e-filing. Taxpayers with computer and internet access can file and pay their taxes electronically, which is more time-saving and economical than traditional manual filing (Liang & Lu, 2013). Furthermore, unlike manual filing, which is prone to errors in detail and calculation (Wang, 2003), e-filing allows taxpayers to edit the information before submission and to pay electronically. Likewise, e-filing is beneficial for governments. For tax collection agencies, e-filing is far more convenient than manual filing since data is automatically transferred into their computer system (Chang et al., 2005).

Since the commercialization of the internet in the 1990s, the literature on e-government has rapidly expanded (Reddick, 2009). Specifically, researchers have focused on identifying factors that affect the acceptance of different e-government services. However, given their benefits to both the government and its constituents, it is essential to study not only adoption but also continuance usage. While adoption is a significant first step toward the success of an information system (IS), its benefits can only be reaped with its repeated use rather than first use (Bhattacherjee, 2001). Furthermore, several studies have focused on citizens' continuance intention, but intention may not always accurately predict behaviors. It is essential to examine continuance behavior because the goal must be to predict factors that affect actual behavior and not only intention (Bhattacherjee et al., 2008). Moreover, researchers who

study IS continuance usage borrowed constructs from technology adoption theories (Akram et al., 2019; Venkatesh et al., 2011). However, these theories and models may not adequately explain continuance usage behavior since they were developed to explain pre-adoption and not post-adoption behaviors (Veeramootoo et al., 2018).

To address these gaps in the literature, this study integrates two prominent models examining post-adoption behaviors – the updated IS Success Model (DeLone & McLean, 2003) and the extended Expectation-Confirmation Model (ECM) (Bhattacherjee et al., 2008). This study also extends the integrative model by adding tax complexity, prior experience with other e-government services, and perceived risk as moderating variables. The integrative model aims to examine continuance behavior toward e-filing in the context of a developing country such as the Philippines.

2. Literature and Framework

2.1 IS Success Model

A widely cited model useful in explaining IS post-adoption behavior is the IS Success Model developed by DeLone and McLean (2003). Originally developed in 1997, DeLone and McLean's extended model presented interrelated constructs that assess the 'net benefits' of IS. This study adopts four constructs from the updated IS Success Model (information quality, system quality, service quality, and satisfaction). Because the ultimate goal of this research is to predict continuance behavior, 'intention to use' and 'net benefits' were omitted and replaced with 'continuance behavior' from the extended ECM.

2.2 Expectation-Confirmation Model (ECM)

The ECM was rooted in the expectation-disconfirmation theory (EDT) developed by Oliver (1980) in the marketing literature, which attempted

to explain the antecedents of customer satisfaction in product repurchase and service continuance. Drawing from this theory, Bhattacherjee (2001) proposed a model examining the predictors of continuance intention. Realizing that intention may not always accurately predict behaviors, Bhattacherjee et al. (2008) extended this model by linking continuance intention to behavior. Since its inception, several studies have adopted, extended, and empirically tested the ECM in the context of e-learning, mobile applications, and e-commerce. This study adopts two constructs from this model, namely 'satisfaction' and 'continuance behavior.'

2.3 Moderating Variables

This study extends the integrative model by adding three moderators: tax complexity, prior experience, and perceived risk. Tax complexity was inspired by the task complexity construct in the User Participation Model by McKeen et al. (1994), prior experience was adapted from the Theory of Innovation Adoption by Rogers (2010), perceived risk was based on the work of Bauer (1960) on consumer behavior as risk-taking. Researchers extend existing models for several reasons. First, original models might not adequately explain complex human behaviors, especially when applied in varying contexts. Second, as technology evolves, new factors affecting behavior must be investigated. Third, some variables may not directly or indirectly affect behavior but may strengthen or weaken the relationship between the independent and dependent variables.

2.4 Electronic Tax Filing in the Philippines

In the Philippines, some government services can now be done electronically by both businesses and individuals, such as tax filing. Electronic filing was first implemented in the Philippines in 2001 with the launching of the Electronic Filing and Payment System or eFPS (Bureau of Internal Revenue,

2001). Developed and maintained by the Bureau of Internal Revenue (BIR), the eFPS allows the electronic processing and transmission of tax return information and taxes through the BIR website. It also allows online payment of tax liabilities through internet banking facilities.

The eFPS provides several benefits to taxpayers. However, data from the BIR show that in 2015, only 1% of registered taxpayers used the system. In 2019, the number of filers dropped to 0.9%. The low usage rates are partly due to a lack of awareness about the service and its unreliability (OECD, 2017). Several users experienced technical problems while using the eFPS, which could be costly in some instances. For instance, a malfunction caused a local company to submit its withholding taxes payment three times in 2002. The subsequent lawsuit to reclaim the overpaid taxes took five years (Rafal, 2012).

Moreover, the current user coverage of eFPS only includes certain types of taxpayers. Some of these include large taxpayers, top 5,000 individual taxpayers, top 20,000 private corporations, etc. To accommodate more individuals and small businesses, the BIR launched the electronic BIR Forms or 'eBIRForms' in 2012 (Bureau of Internal Revenue, 2012). The eBIRForms package is a downloadable software developed primarily to provide taxpayers with accessible and convenient service through easy preparation. According to the BIR, "the eBIRForms is an alternative mode of preparing tax returns which deviates from the conventional manual process of forms that are highly susceptible to human error."

The package allows taxpayers to accomplish or fill out the forms offline, then submit them online. Taxpayers can directly encode data, validate, save, delete, view, and print tax returns. The package has automatic computations and can validate information inputted by taxpayers. Unlike the eFPS that can be used by limited types of taxpayers, the eBIRForms can be used by all taxpayers and can be downloaded without charge on the BIR's website. However, similar to the eFPS, the eBIRForms suffers from low adoption rates.

Only 4% of registered taxpayers used the system in 2015. Although the number of filers doubled to 8% in 2019, it is still relatively low, having only three tax filing options.

Because of the low adoption rates, the government has repeatedly appealed to the public to use online filing. The importance of e-filing became even more evident in 2020, amid the COVID-19 pandemic. As the coronavirus disease spread across the globe, the Philippine Government imposed a total lockdown in Luzon (the northernmost island in the Philippines) on March 16 (Official Gazette, 2020). Government agencies were encouraged to adopt alternative working arrangements, leading to a skeletal workforce in the tax bureau. Furthermore, strict home quarantine was implemented in all households, and the movement of people must be limited to accessing necessities and work.

Due to the unprecedented situation, the tax bureau appealed to the public to utilize electronic tax filing and payment facilities such as the eFPS and eBIRForms to avoid physical contact and reduce the spread of infections (Department of Finance, 2020). Knowing that most taxpayers are not well-versed in e-filing, the tax bureau has also set up tax filing assistance centers in district offices to help taxpayers with concerns related to the two online platforms (Parrocha, 2020). The necessity to appeal to adopt e-filing and to set up assistance centers specifically for e-filing have shown how the Philippines has been underutilizing the system despite its availability for several years.

2.5 Hypotheses Development

2.5.1 Information Quality

Information quality captures the characteristics of the content provided on the system and includes issues related to information relevance, timeliness, accuracy, completeness, and consistency (DeLone & McLean, 1992; Seddon, 1997). In the context of e-filing, information quality refers to how good the information in the eBIRForms is in aiding taxpayers in filing and

paying their taxes, with as little external help as possible (Chen et al., 2015). This may include instructions on how to use the system, guidelines on how to fill out the forms, tax filing deadlines, etc. In the eBIRForms, there are over fifty different forms that taxpayers need to choose from depending on what type of taxpayer they are (employed, self-employed, corporation, etc.) and what type of tax they are filing (income, estate, excise, etc.). As taxpayers want to guarantee that they are using the right forms, doing the correct procedure, and filing before the deadline, information must be complete, accurate, clear, and up-to-date (Chen, 2010).

Information quality plays a vital role in user satisfaction (DeLone & McLean, 1992). When the information provided by the system is deemed helpful by the taxpayers, their satisfaction in using the system increases. On the contrary, taxpayers are unlikely to be satisfied if the information provided in the system is not useful in tax filing and payment. Several previous studies have proven the causal relationship between the two (Chen, 2010; Chen et al., 2015; DeLone & McLean, 2003; Floropoulos et al., 2010). Based on the preceding theoretical and empirical discussion, the following hypothesis is proposed:

H1: Information quality positively influences user satisfaction.

2.5.2 System Quality

System quality refers to users' perception of the technical performance of the IS (Chang et al., 2005), which can be assessed with its adaptability, availability, reliability, response time, and usability (DeLone & McLean, 1992; Seddon, 1997). It pertains to how well the users can use the system with as much ease and as minimal problems encountered as possible (Chen et al., 2015). In the context of e-filing, the system must be easy to use (Wang & Liao, 2008), quick to respond (Chen, 2010), reliable, and secure (Teo et al., 2008). As tax

filing is already a complex task by itself, the system must not be complicated to use to guarantee that taxpayers choose e-filing over manual filing. This issue might be especially applicable to people who are less computer literate. Chen (2010) also claims taxpayers try to delay filing their taxes until a few weeks before the deadline, partly to delay the payment for as long as possible. This is why the system must ensure its usability and fast responsiveness despite the large quantities of users at the same time.

Higher system quality may result in higher user satisfaction on e-filing systems (Chen, 2010; DeLone & McLean, 2003; Rana et al., 2015; Teo et al., 2008). When the e-filing system has a good system quality, users can easily find their way through the website or application and are more likely to achieve their objectives. Therefore, their satisfaction level increases. On the other hand, an e-filing system that is unreliable, slow, and difficult to use results in unsatisfied users. Based on the preceding theoretical and empirical discussion, the following hypothesis is proposed:

H2: System quality positively influences user satisfaction.

2.5.3 Service Quality

Service quality captures the characteristics of the overall support delivered by the service provider that can be assessed by its assurance, empathy, and responsiveness (DeLone & McLean, 2003). This construct has only been added to the extended IS success model as a response to researchers' suggestions to not only focus on the product quality but also the service quality. An e-government system is essentially created to provide some form of service to its citizens. It is therefore critical to evaluate its service quality (Chen et al., 2015). In the context of e-filing, these services may include updating account information, answering inquiries, providing feedback, and handling applications (Chen, 2010; Teo et al., 2008). In the Philippines, waiting for a response from government offices might take days or weeks. In some

instances, it is impossible to reach some government office's telephone lines. It is also likely that email inquiries are left unanswered. Since the main function of e-government is to streamline services and make citizens' lives easier, it is essential that government offices, as providers, show a willingness to assist taxpayers and resolve their problems constructively.

Service quality is found to affect user satisfaction. Higher service quality can guide users in successfully filing taxes electronically and leave them satisfied. On the other hand, users may be unsatisfied and resort to using manual tax filing if they cannot resolve their problems through the website or application or feel that the staff behind the system is unwilling to provide sincere help. This relationship has been validated in several studies on e-filing (Chen, 2010; DeLone & McLean, 2003; Floropoulos et al., 2010; Rana et al., 2015; Stefanovic et al., 2016; Teo et al., 2008). Based on the preceding theoretical and empirical discussion, the following hypothesis is proposed:

H3: Service quality positively influences user satisfaction.

2.5.4 User Satisfaction

User satisfaction is the pleasurable or positive emotional state derived from a subjective evaluation of the expectation-performance discrepancy (Bhattacherjee, 2001; Seddon, 1997). When the performance of an IS exceeds the user's expectation, it results in user satisfaction. In turn, user satisfaction can translate into return users. Given the importance of user satisfaction in the success of products and services, it has been adopted by two of the most prominent models in IS success and continuance - the ECM and the IS success model. The ECM posits that satisfaction influences users' intentions and behavior to continue using a system while dissatisfied users stop using it (Bhattacherjee, 2001; Bhattacherjee et al., 2008). Similarly, the IS success model suggests that higher user satisfaction will lead to higher intention to

use and eventually actual usage (DeLone & McLean, 2003). In the context of e-government, satisfaction is derived from citizens' pleasant experiences due to the fulfillment of their routine tasks. Users' satisfaction with e-government services and their continued usage assure the success of public services, including e-filing (Akram et al., 2019; Teo et al., 2008).

Several e-filing studies based on the ECM and the IS success have empirically tested the effect of user satisfaction on users' intention to continue using an IS. While many studies have yielded a positive association between the two, other studies have resulted in the opposite. This study proposes a direct relationship between satisfaction and continuance intention. Based on the preceding theoretical and empirical discussion, the following hypotheses are proposed:

H4: User satisfaction positively influences continuance intention.

2.5.5 Continuance Intention

Continuance intention or users' intention to continue using IS has received considerable attention from scholars in the two decades, particularly after Bhattacherjee introduced the ECT in 2001. A majority of theory-based research on IS use has focused mainly on the initial acceptance. However, studies have proven that the long-term viability of an IS, and its eventual success depends on its continued use rather than first-time use (Bhattacherjee, 2001). This is rather true in the context of e-government. The success of e-government will be accounted for by citizens' continued use of e-services (Teo et al., 2008). While the ultimate goal of IS continuance is to predict behavior rather than intention, rational theories of human behavior such as Theory of Reasoned Action (TRA) and Theory of Planned Behavior (TPB) posit intention as the most salient predictor of behavior (Bhattacherjee et al., 2008).

2.5.6 Tax Complexity

Complexity, particularly of a task, arises from the ambiguity, uncertainty, and lack of structure surrounding business practice (McKeen et al., 1994). The level of complexity is higher when tasks are “fuzzy and ill-defined” while the level of complexity is lower when tasks are “patterned and orderly” (Daft et al., 1987; McKeen et al., 1994). Task complexity has been widely studied in management information systems, particularly its effects on software development. The contingency model by Naumann et al. (1979) posits that a higher level of complexity decreases the level of assurance of achievement of goals. Building upon this model, McKeen et al. (1994) developed a user participation model and found that task complexity and system complexity have moderating effects on the user participation - user satisfaction relationship. That is, as the levels of task complexity and system complexity increase, the effect of user participation on user satisfaction weakens. The model makes an important contribution to the body of research on information system success by differentiating task complexity from system complexity. Even though a task is perceived as less complex, a system can still be complex due to how it was developed or the user’s lack of training on the technology. On the contrary, a system can be perceived as less complex, but the task can still be perceived as complex, depending on the user’s understanding of the subject.

Building upon the abovementioned studies, this study incorporates tax complexity in continuance usage. In the context of tax filing, tax complexity pertains to the perceived sophistication of the tax system (Saad, 2014). Similar to the user participation model, this study differentiates the complexity of the tax system and the complexity of the e-filing system. While e-filing complexity refers to the perceived level of difficulty in operating the system (Liang & Lu, 2013), tax complexity refers to the various dimensions of the tax systems – particularly the computation, forms, legislation, procedures, etc. (AICPA, 1992;

Carnes & Cuccia, 1996; Cox & Eger III, 2006; Saad, 2014) Several studies conducted in different countries showed that when tax computation is tedious and complicated, tax laws are difficult to interpret, tax forms use incomprehensible terms, and the procedures for filing, payment, or claiming a refund are too many, taxpayers might perceive the tax system to be complex which could lead to their non-compliance (Milliron, 1985; Saad, 2014). Several studies have shown how tax complexity influence taxpayers' decisions, particularly their tax compliance. However, only a few have explored this variable in IS adoption and continuance usage, particularly how it moderates relationships. This study proposes including tax complexity in assessing the continuance usage of e-filing, specifically how it moderates the relationship between the IS quality dimensions and continuance usage/satisfaction.

Some tax systems are inherently complex. Even if the e-filing system provides relevant, timely, accurate, complete, and consistent information, taxpayers might still experience difficulties doing complex computations or keeping track of the rapidly changing rules and regulations. This is especially true in the Philippines, where tax reform is being implemented from 2018 until 2022. Tax rates have been changing every year. The computation and rule complexities that taxpayers experience might influence how they perceive the quality of information. They might feel that the information provided in the system is not helpful, leading to decreased satisfaction. On the contrary, when the computation is simple, and the rules are understandable, users might perceive the information as helpful, leading to increased satisfaction. Based on the preceding theoretical discussion, the following hypothesis is proposed:

H5: Tax complexity moderates the relationship between information quality and satisfaction.

Tax complexity might also moderate the relationship between system quality and satisfaction. The e-filing software might be easy to use and quick to respond. However, suppose the electronic forms are too long and contain terminologies that regular citizens find difficult to understand. In that case, taxpayers might feel that the system is not user-friendly, leading to decreased satisfaction. On the other hand, if the forms are easy to understand and quick to fill out, taxpayers might find the system easy to interact with, leading to increased satisfaction. Based on the preceding theoretical discussion, the following hypotheses are proposed:

H6: Tax complexity moderates the relationship between system quality and satisfaction.

Similarly, tax complexity might moderate the relationship between service quality and satisfaction. The overall experience of taxpayers in using the e-filing system would reflect the citizens' perception of the government's service quality. If they find the procedure complex despite the promise of efficiency, they might think that the government service is not good enough, affecting their satisfaction. This might lead taxpayers to use alternatives such as hiring a tax agent or manual filing. Based on the preceding theoretical discussion, the following hypotheses are proposed:

H7: Tax complexity moderates the relationship between service quality and satisfaction.

2.5.7 Prior Experience with Other E-Government Services

Prior experience has been found to significantly influence consumers' decision to adopt an innovation (Rogers, 2010). This is particularly relevant to technology, specifically the internet, where prior experience has been found to have a significant direct and indirect influence on users' IS adoption. For instance, Yoh et al. (2003) found that prior internet usage experience

directly influences consumers' intention to shop for clothing online. For its indirect effects, studies have found that favorable experience with online technology leads to a higher level of trust in new online services or applications. In turn, a higher level of trust positively affects their decision to adopt an IS.

Similarly, studies on e-government adoption have found that users' prior experience with government services affects their decision to use an e-government service (Kumar et al., 2007). Warkentin et al. (2002) found that previous experience with other e-government services strongly affects citizens' trust in e-government, which, in turn, affects their adoption decision. Meanwhile, Chen et al. (2015) found that prior experience with offline government services directly affects citizens' trust in e-government websites, which, in turn, influences the three IS quality dimensions (information quality, system quality, and service quality). Several studies investigating the effects of prior experience with offline or online government services on adoption have been done. Still, its effects on continuance intention have yet to be extensively explored.

This study argues that while satisfaction directly affects users' intention to continue the e-filing system, their prior experience with other e-government services might moderate this relationship. Even if users are satisfied with the e-filing system, having unfavorable experiences with other e-government services might negatively affect their intention to continue using it. On the other hand, even if users are not satisfied with the e-filing system, their favorable experiences with other e-government services might positively affect their intention to continue using the system. It is important to determine whether prior experience with other e-government services affects their attitude toward e-filing, despite having different functions and service providers. If so, it could mean that their satisfaction toward one service can reflect on other services. Based on the preceding theoretical and empirical discussion, the following hypotheses are proposed:

H8: Prior experience with other e-government services moderates the relationship between satisfaction and continuance intention.

2.5.8 Perceived Risk

The concept of perceived risk was originally introduced by Bauer in 1960 to explain consumer behavior. Consumers cannot anticipate the consequences of their purchasing activities, “some of which at least are likely to be unpleasant” (Bauer, 1960). Consumers’ perception of risk comes from the uncertainty and magnitude of outcomes. After being validated as a strong predictor of consumer behavior, it has been adopted in several other areas, including IS. Risk in IS refers to individuals’ awareness of potential losses, particularly monetary loss and privacy loss (Pavlou, 2003). In the context of e-filing, perceived risk pertains to the citizens’ beliefs that they might encounter privacy and security issues in filing and paying taxes electronically due to the impersonal and unpredictable nature of internet-based technology (Schaupp et al., 2010).

Due to the lack of face-to-face interaction and weak cybersecurity, taxpayers might be reluctant to use online tax filing than paper-based tax filing, especially since they provide confidential information (Akram et al., 2019). It is significant to assess the influence of perceived risk as uncertainties in using the e-filing system or other e-government services may influence citizens’ confidence in public service. Previous studies have proven that perceived risk significantly influences user adoption and initial usage of e-filing (Schaupp & Carter, 2010; Schaupp et al., 2010). However, only a few studies have examined its significant effects on continuance usage (Akram et al., 2019; Veeramootoo et al., 2018).

This study considers the role of perceived risk in continuance usage of e-filing as users may still be concerned with their personal information privacy when determining whether to continue using the service. Moreover, cyberattacks can happen at any time. In the Philippines, several government agencies such as the Department of Health and Central Bank reported cyberattacks in August 2016 and April 2016, respectively (Omorog & Medina, 2018), proving that risk

might still be present after initial use, particularly in developing countries with relatively weak cybersecurity. When taxpayers' risk perceptions remain, they could discontinue the use of e-filing, which could lead to its failure.

The perceived risk might not always have a significant direct relationship with behavior. Several studies have examined e-filing usage and found significant levels of trust on the internet and in the government (Chen et al., 2015; Teo et al., 2008). When trust increases, risk perceptions may decrease. However, instead of a direct impact, it has been found to have moderating effects on e-filing (Thominathan & Ramayah, 2013). Specifically, this study aims to explore how it affects the relationship between satisfaction and continuance intention. Previous studies on e-filing have validated the positive association between satisfaction and continuance intention. However, they do not consider users' risk perceptions in this relation. This study argues that compared with high perceived risk, low perceived risk strengthens the relationship between satisfaction and continuance intention. This means that the effects of satisfaction on continuance intention may differ for the various levels of risk perceptions. Based on the preceding theoretical and empirical discussion, the following hypotheses are proposed:

H9: Perceived risk moderates the relationship between satisfaction and continuance intention.

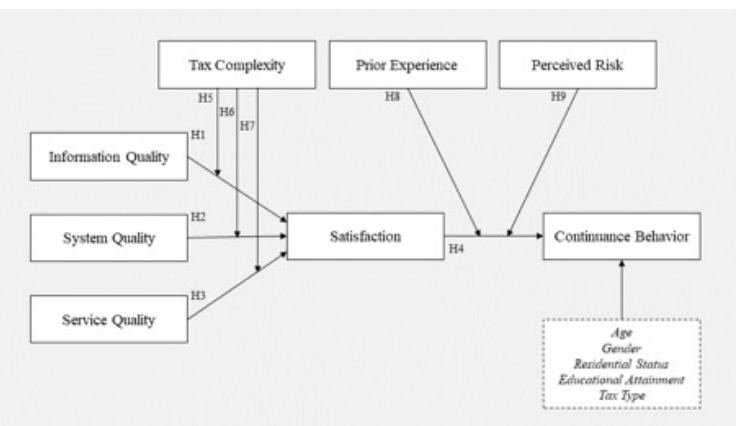

Figure 1. Conceptual Model

3. Method

3.1 Instrument Development and Data Collection

All constructs were operationalized using validated items adapted from previous studies. Some items were slightly rephrased to fit the Philippine context, considering that the items' essence was retained. All constructs were measured using a seven-point Likert scale ranging from strongly disagree (1) to strongly agree (7). A pilot test was conducted with respondents consisting of academic professors and Filipino taxpayers. Slight modifications in the choice of words were made according to the respondents' comments and suggestions.

A web-based survey was used to collect primary information. Since this study's core objective is to examine continuance usage rather than first-time usage, the respondents were initially asked whether they have previously used the e-filing system. Only those who answered 'yes' were asked to proceed with the survey. Within two months, a total of 300 responses were collected. This study exceeded the recommended sample size of Fritz and MacKinnon (2007) for bias-corrected bootstrap testing, which is 148, to achieve 0.8 statistical power (α=0.26 and β= 0.26). Furthermore, the sample size in this study is comparable to the number of respondents in similar previous studies. For instance, an e-filing continuance usage study conducted by Chen et al. (2015) in the Philippines had 234 respondents, Teo et al. (2008) had 214 respondents, Wang and Liao (2008) had 119 respondents, Chen (2010) had 278 respondents, and Floropoulos et al. (2010) had 340 respondents.

Demographic data shows that most survey respondents were female, ages 21-30, living in Metro Manila, and bachelor's degree holders. More than half of the respondents have used the eBIRForms to file individual income tax returns, while the rest used it to file corporate income tax returns.

Table 3.1.1

Measurement Items

Constructs	Measurement Items	Adapted From
Information Quality (INQ)	The eBIRForms provides accurate information. The eBIRForms provides sufficient information. The eBIRForms provides reliable information. The eBIRForms provides clear information.	Teo et al. (2008)
System Quality (SYQ)	The eBIRForms is user-friendly. The eBIRForms is easy to navigate. When I prepare and file my tax return, the operation of the eBIRForms is reliable. I can download and use the eBIRForms without problems at any time within the tax collection deadline.	Chang et al. (2005) Veeramootoo et al. (2018)
Service Quality (SEQ)	The eBIRForms provides an improved quality of taxation services. The eBIRForms simplifies and standardizes the taxation process. The eBIRForms ensures the reduction of time for completion of tax filing. The BIR staff is never too busy to respond to my inquiries/ requests.	Chen (2010) Veeramootoo et al. (2018)
Satisfaction (SAT)	The eBIRForms has met my expectations in filing my returns. The eBIRForms adequately meets my needs of interacting with the BIR. The eBIRForms is efficient in fulfilling my needs of interacting with the BIR. Overall, I am satisfied with the eBIRForms.	Teo et al. (2008) Veeramootoo et al. (2018)
Tax Complexity (TC)	The terms used in tax return forms are easy for people like me to understand. Tax laws, rules, and regulations are easy for people like me to understand. I have no difficulties keeping up with the changing tax rules and regulations. I have no difficulties computing my taxable income and allowances.	Saad (2009) Saad (2014)
Prior Experience (PE)	When I used a different e-government service, the service process was easy to follow. When I used a different e-government service, the whole transaction was performed in a reasonable amount of time. When I used a different e-government service, I was able to perform and finish my task without issue. When I used a different e-government service, the staff answered my questions promptly.	Chen et al. (2015)

Perceived Risk (PR)	I will feel uneasy psychologically if I use the internet to file my tax. Using the e-filing system may cause my personal information to be stolen. I think it would be unsafe to use the eBIRForms because of privacy and security concerns. I believe that there could be negative consequences by using the e-filing system.	Akram et al. (2019) Carter and Belanger (2005) Schaupp et al. (2010)
Continuance Intention (CI)	I intend to continue using the eBIRForms rather than discontinue it. I intend to continue using the eBIRForms rather than use any alternative means. I intend to use the eBIRForms for my tax filing next year.	Teo et al. (2008) Veeramootoo et al. (2018)

Table 3.1.2

Characteristics of Respondents

Demographics	Category	Number	%
Age	20 or less	4	1.33
	21-30	175	58.33
	31-40	60	20
	41-50	42	14
	51-60	18	6
	Over 60	1	0.33
Gender	Female	217	72.33
	Male	81	27
	Others	2	0.66
Residential Status	Metro Manila	189	63
	Outside Metro Manila	111	37
Educational Attainment	Doctoral Degree	8	2.67
	Master's Degree	24	8
	Bachelor's Degree	236	78.67
	Diploma Course	16	5.33
	High School Diploma	16	5.33
Taxpayer Type	Corporate	129	43
	Individual	171	57

4. Results and Findings

4.1 Measurement model

This study followed the two-step modeling approach to SEM recommended by Anderson and Gerbing (1988). Before testing the proposed model, a confirmatory factor analysis (CFA) was carried out to test the scale's reliability and validity using MPlus (See Table 4.1.1). An assessment of the measurement model's overall goodness-of-fit exhibited an adequate model fit as the indices met the recommended levels (See Table 4.1.3).

After assessing the psychometric properties of the latent constructs, multiple regression using PROCESS Macro for SPSS was utilized to test the proposed model. Since the model has three independent variables, the researcher ran Model 4 (Mediation) and Model 35 (Moderated Mediation) three times each. The three mediation models yielded consistent results. All of the IS quality dimensions, information quality ($b = 0.7077$, $p < 0.001$), system quality ($b = 0.5318$, $p < 0.001$) and service quality ($b = 0.8910$, $p < 0.001$) were found to have significant effects on satisfaction. The results also showed a significant association between satisfaction and continuance intention for all three models ($b = 1.2843 / 1.3941 / 1.2274$, $p < 0.001$). Tax complexity only had a moderating effect on the relationship between system quality and satisfaction ($b = 0.0251$, $p < 0.01$). Tax complexity did not affect the relationships of information quality and service quality with satisfaction. Among prior experience and perceived risk, only perceived risk was found to moderate the relationship between satisfaction and continuance intention ($b = -0.1476 / 0.1564 / -0.1504$, $p < 0.01$).

Table 4.1.1

Descriptive Analysis, Validity, and Reliability Result

Construct	Items	Mean	SD	Standardized Factor Loading	CR	AVE	α
INQ	INQ1	5.24	1.491	0.912	0.95	0.81	0.952
	INQ2	4.95	1.535	0.890			
	INQ3	5.15	1.489	0.932			
	INQ4	4.76	1.618	0.873			
SYQ	SYQ1	4.80	1.611	0.897	0.92	0.74	0.916
	SYQ2	4.86	1.542	0.915			
	SYQ3	5.00	1.623	0.854			
	SYQ4	4.45	1.718	0.769			
SEQ	SEQ1	4.85	1.566	0.942	0.91	0.71	0.900
	SEQ2	4.98	1.493	0.919			
	SEQ3	4.98	1.561	0.885			
	SEQ4	3.80	1.724	0.619			
SAT	SAT1	4.71	1.442	0.943	0.97	0.89	0.971
	SAT2	4.61	1.451	0.964			
	SAT3	4.62	1.415	0.938			
	SAT4	4.76	1.452	0.933			
CI	CI1	4.95	1.408	1.009	0.93	0.82	0.948
	CI2	4.81	1.513	0.829			
	CI3	4.86	1.527	0.861			
TC	TC1	3.29	1.478	0.876	0.92	0.74	0.926
	TC2	3.69	1.506	0.922			
	TC3	3.78	1.456	0.818			
	TC4	4.50	1.496	0.821			
PR	PR1	3.67	1.497	0.774	0.93	0.78	0.933
	PR2	4.01	1.512	0.883			
	PR3	3.75	1.567	0.935			
	PR4	3.87	1.589	0.935			
PE	PE1	4.43	1.476	0.872	0.94	0.79	0.945
	PE2	4.55	1.447	0.925			
	PE3	4.41	1.478	0.857			
	PE4	4.34	1.434	0.895			

Note: SD = standard deviation; CR = composite reliability; AVE = average variance extracted; α = Cronbach's alpha

Table 4.1.2

Correlation Matrix

	INQ	SYQ	SEQ	SAT	CI	TC	PR	PE
INQ	1.000							
SYQ	0.752	1.000						
SEQ	0.767	0.807	1.000					
SAT	0.742	0.817	0.900	1.000				
CI	0.563	0.619	0.682	0.758	1.000			
TC	-0.485	-0.627	-0.648	-0.607	-0.460	1.000		
PR	0.191	0.074	0.074	0.077	0.058	-0.023	1.000	
PE	0.324	0.455	0.423	0.408	0.309	-0.599	0.143	1.000

Fit Indices for Measurement and Structural Models

Fit Index	Recommended Criteria	Measurement Model
Chi-Square / D.F.	<3.0	2.7
CFI	>0.90	0.939
TLI	>0.90	0.928
RMSEA	<0.08	0.077
SRMR	<0.08	0.044

Note: D.F. = degrees of freedom; CFI = comparative fit index; TLI = Tucker-Lewis index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual

4.2 Hypotheses Testing

This subsection analyzes the data acquired from the 300 respondents. After assessing the psychometric properties of the latent constructs, multiple regression using PROCESS Macro for SPSS was utilized to test the conceptual model. Since the proposed model has three independent variables, the researcher ran Model 4 (Mediation) and Model 35 (Moderated Mediation) three times each. Table 3.3.1 shows the results for information quality (X1), Table 3.3.2 shows the results for system quality (X2), and Table 3.3.3 shows the results

for service quality (X3). The three mediation models yielded consistent results. All three quality dimensions – information quality, system quality, and service quality significantly affected satisfaction. Meanwhile, satisfaction significantly affected continuance intention.

Similarly, the three moderated mediation models yielded consistent results, particularly on the relationship of satisfaction with continuance intention, along with the moderating effects of prior experience with other e-government services and perceived risk. Of the nine hypotheses proposed, six were supported. The baseline model hypothesizes that the three IS quality dimensions (information quality, system quality, and service quality) individually and positively affect user satisfaction. In turn, user satisfaction positively affects continuance behavior. All of the IS quality dimensions, information quality ($b = 0.7077$, $p < 0.001$), system quality ($b = 0.5318$, $p < 0.001$) and service quality ($b = 0.8910$, $p < 0.001$) were found to have significant effects on satisfaction. The results also showed a significant association between satisfaction and continuance intention for all three models ($b = 1.2843 / 1.3941 / 1.2274$, $p < 0.001$).

For the moderators, tax complexity only had a moderating effect on the relationship between system quality and satisfaction ($b = 0.0251$, $p < 0.01$). Tax complexity did not affect the relationships of information quality and service quality with satisfaction. Among prior experience and perceived risk, only perceived risk was found to have a moderating effect on the relationship between satisfaction and continuance intention ($b = -0.1476 / 0.1564 / -0.1504$, $p < 0.01$).

Table 4.2.1

Regression Analysis Results – Information Quality (X1)

	Model 1 (Mediation)				Model 2 (Moderated Mediation)			
	SAT		CI		SAT		CI	
	B (SE)	p	B (SE)	p	B (SE)	p	B (SE)	p
Age	0.1066	0.0742	-0.0332	0.5881	0.0781	0.1522	(0.0562)	0.9317
	(0.0595)		(0.0612)		(0.0544)			
Gender	-0.2058	0.0920	-0.0185	0.8825	-0.2501	0.0247*	(0.1152)	0.2761
	(0.1218)		(0.1252)		(0.1108)			
Residence	-0.1872	0.1116	0.1968	0.1036	-0.1481	0.1660	(0.1098)	0.1075
	(0.1173)		(0.1205)		(0.1066)			
Education	0.0389	0.5596	0.0803	0.2401	0.0678	0.1660	(0.0626)	0.0435*
	(0.0666)		(0.0682)		(0.0606)			
Tax Type	-0.3334	0.0048**	-0.2822	0.0210*	-0.2812	0.0098**	(0.1126)	0.0109*
	(0.1172)		(0.1216)		(0.1082)			
INQ	0.6794	0.0000***			0.7077	0.0000***		
	(0.0395)				(0.1048)			
INQ*TC					-0.0442	0.0645		
					(0.0238)			
SAT			0.5972	0.0000***			1.2843	0.0000***
			(0.0598)				(0.1338)	
SAT*PE							-0.0263	0.2616
							(0.0233)	
SAT*PR							-0.1476	0.0000***
							(0.0220)	
Model Statistics								
R^2	0.5159		0.5166		0.6038		0.6058	
Overall Model F (F)	52.0392	0.0000	44.5747	0.0000	55.4424	0.0000	40.2281	0.0000
df	(6, 293)		(7, 292)		(8, 291)		(11, 288)	

INQ = Information Quality, TC = Tax Complexity, PE = Prior Experience with Other E-Government Services, PR = Perceived Risk, SAT = Satisfaction, CI = Continuance Intention

$p < 0.05$ *

$p < 0.01$ **

$p < 0.001$ ***

Table 4.2.2

Regression Analysis Results – System Quality (X2)

	Model 1 (Mediation)				Model 2 (Moderated Mediation)			
	SAT		CI		SAT		CI	
	B (SE)	p	B (SE)	p	B (SE)	p	B (SE)	p
Age	0.1707	0.0013**	-0.0354	0.5725	0.1542	0.0027**	0.0031	0.9566
	(0.0525)		(0.0627)		(0.0511)		(0.0575)	
Gender	-0.2690	0.0130*	-0.0058	0.9639	-0.2922	0.0054**	-0.1174	0.3173
	(0.1077)		(0.0627)		(0.1044)		(0.1172)	
Residence	0.0505	0.6285	0.2243	0.0680	0.0473	0.6406	0.1965	0.0784
	(0.1043)		(0.1224)		(0.1013)		(0.1113)	
Education	0.0205	0.7278	0.0741	0.2844	0.0318	0.5794	0.1192	0.0605
	(0.0589)		(0.0691)		(0.0573)		(0.0633)	
Tax Type	-0.0126	0.9030	-0.2158	0.0760	0.0117	0.9082	-0.2396	0.0339*
	(0.1033)		(0.1212)		(0.1016)		(0.1124)	
SYQ	0.7370	0.0000***			0.5318	0.0000***		
	(0.0344)				(0.0945)			
SYQ*TC					0.0251	0.0038**		
					(0.0228)			
SAT			0.7024	0.0000***			1.3941	0.0000***
			(0.0685)				(0.1410)	
SAT*PE							-0.0180	0.2167
							(0.0233)	
SAT*PR							0.1564	0.0000***
							(0.0221)	
Model Statistics								
R^2	0.6210		0.5028		0.6473		0.5962	
Overall Model F (F)	80.0232	0.0000	42.1916	0.0000	66.7563	0.0000	28.6599	0.0000
df	(6, 293)		(7, 292)		(8, 291)		(11,288)	

SYQ = System Quality, TC = Tax Complexity, PE = Prior Experience with Other E-Government Services, PR = Perceived Risk, SAT = Satisfaction, CI = Continuance Intention

$p < 0.05$ *

$p < 0.01$ **

$p < 0.001$ ***

Table 4.2.3

Regression Analysis Results – Service Quality (X3)

SEQ = Service Quality, TC = Tax Complexity, PE = Prior Experience with Other E-Government

	Model 1 (Mediation)				Model 2 (Moderated Mediation)			
	SAT		CI		SAT		CI	
	B (SE)	p	B (SE)	p	B (SE)	p	B (SE)	p
Age	0.1372	0.0012**	-0.0114	0.8545	0.1241	0.0028**	0.0221	0.6982
	(0.0419)		(0.0619)		(0.0411)		(.0570)	
Gender	-0.1819	0.0349*	-0.0339	0.7872	-0.2086	0.0138*	-0.1380	0.2348
	(0.0858)		(0.1255)		(0.0842)		(0.1159)	
Residence	0.1944	0.0207*	0.2889	0.0190*	0.1790	0.0297*	0.2467	0.0285*
	(0.0836)		(0.1225)		(0.0819)		(0.1120)	
Education	0.0480	0.3075	0.0857	0.2101	0.0593	0.1981	0.1258	0.0462*
	(0.0469)		(0.0683)		(0.0460)		(0.0628)	
Tax Type	-0.2039	0.0137**	-0.2657	0.0284*	-0.2025	0.0138*	-0.2677	0.0177*
	(0.0822)		(0.1206)		(0.0817)		(0.1122)	
SEQ	0.8606	0.0000***			0.8910	.0000***		
	(0.0288)				(0.0801)			
SEQ*TC					-0.0274	0.1463		
					(0.0188)			
SAT			0.5051	0.0000***			1.2274	0.0000***
			(0.0848)				(0.1472)	
SAT*PE							-0.0214	0.3580
							(0.0233)	
SAT*PR							-0.1504	0.0000***
							(0.0220)	
Model Statistics								
R^2	0.7596		0.5168		0.7717		0.6027	
Overall Model F (F)	154.2602	0.0000	44.6091	0.0000	122.9329	0.0000	39.7217	0.0000
df	(6, 293)		(7, 292)		(8, 291)		(11, 288)	

Services, PR = Perceived Risk, SAT = Satisfaction, CI = Continuance Intention

p < 0.05 *

p < 0.01 **

p < 0.001 ***

4.3 Control Variables

Previous studies revealed contradicting results on the impact of demographic characteristics on e-government usage. For instance, Stefanovic et al. (2016) found that gender, age, and income had no significant impact on Serbian citizens' intention to use. On the other hand, Venkatesh et al. (2011) found a significant impact of gender, education, and income on Indian citizens' e-government usage. Therefore, this study incorporated the demographics of Filipino citizens such as 'age,' 'gender,' 'residency status,' 'education,' and 'tax type' as control variables. For information quality, education and tax type had an impact on continuance intention. For system quality, only tax type had an impact on continuance intention. For service quality, residency status, education, and tax type had an impact on continuance intention.

5. Conclusion and Discussion

Based on the literature on IS success, specifically on the IS Success Model and the ECM, this study presented an extended integrated model on e-filing continuance usage. This extended integrative model was empirically tested in the context of a developing country such as the Philippines, where internet infrastructure and connectivity are yet to be improved. Moreover, it was applied in the context of a country with a perceived complex tax system – which explains why tax reform is currently in place. The direct effects of the three IS quality dimensions (information quality, system quality, service quality) on satisfaction were tested. In turn, the direct effect of satisfaction on continuance behavior was tested. Using multiple regression, results showed that all IS quality dimensions (information quality, system quality and service quality) affected user satisfaction.

Hypothesis 1 that proposed a positive relationship between information quality and user satisfaction was accepted by the study findings. This result is consistent with previous research (Chen, 2010; Chen et al., 2015; DeLone &

McLean, 2003; Floropoulos et al., 2010). Unlike other e-filing systems in other countries, the information provided by the eBIRForms is limited to guidelines and instructions for filling out forms. There is no information on how to use the system nor relevant updates regarding tax filing deadlines. Taxpayers still need to look for supplemental information on the tax bureau's website and social media account. As users need to access other platforms for information, this could affect their satisfaction with the e-filing system. Furthermore, even though citizens repeatedly use the tax filing software, the need for relevant, timely, accurate, complete, and consistent information remains. This might be particularly true for taxpayers who only use the e-filing system once a year.

Findings provided support for Hypothesis 2, proposing a relationship between system quality and user satisfaction. This finding is in line with the findings of Teo et al. (2008), Wang and Liao (2008), Rana et al. (2015), and Chen (2010). Despite being familiar with navigating the software after repeated use, users might expect software updates that add more useful functions to further ease the process. For instance, the oldest version of the eBIRForms only allowed taxpayers to fill out the forms electronically but did not have the option to submit tax returns online. In the succeeding versions, the eBIRForms included the online submission function. The improvements over the years can increase satisfaction, even for repeat users. Furthermore, for web-based IS, users focus specifically on ease of access and loading speed. Because several taxpayers delay filing returns until a few days before the deadline (Chen, 2010), complaints about the inaccessibility of the eBIRForms when it is near the tax filing deadline have been raised by several users online. The unpredictable internet traffic might lead to either quick or slow navigation. Worse, the software might not be accessible at all. This could affect user satisfaction during each use.

Hypothesis 3 was likewise accepted. Results suggested that service quality significantly influenced satisfaction which is coherent with the findings of Wang and Liao (2008), Floropoulos et al. (2010), Rana et al. (2015), and Stefanovic et al. (2016). This finding also supports the long-established argument in the marketing literature that service quality is a significant antecedent of customer satisfaction. This proves that service quality is important not only for offline services but for online services as well. The ultimate goal of digitalizing tax filing is to ensure that e-filing is more efficient and more effective than the traditional method. Users expect efficiency and effectiveness in every use and not only during the initial usage. Furthermore, different issues can still arise despite repeated use. These may be issues related to the tax system or the information system. When these issues arise, users expect that the service provider can help them resolve their problems. Especially since there is a lack of face-to-face interaction in using the e-filing system, the service provider must ensure that they can respond and provide assistance to users in a timely manner each time.

Satisfaction was found to be a significant determinant for continuance behavior, providing support for Hypothesis 4. Several e-filing studies have proven that satisfaction is an important antecedent to continuance intention (Chen, 2010; Veeramootoo et al., 2018; Akram et al., 2019). In turn, it is continuance intention that influences continuance behavior. However, this study found that satisfaction itself can influence behavior and not only intention. This corroborates Bhattacherjee and Lin's (2015) finding after extending the original ECM and linking satisfaction directly to continuance behavior. This result finds that it is important for governments to collect feedback from users and improve their services to make them satisfied. Because eventually, user satisfaction can assure the success of public services, including e-filing.

Findings rejected Hypothesis 5, disproving the moderating effects of tax complexity on the relationship between information quality and satisfaction.

The complexity of the tax system did not influence taxpayers' perception of the information in the e-filing system, hence, affecting their satisfaction. As discussed above, information quality did not influence satisfaction, partly because the eBIRForms only provides very little information and partly because information becomes less important as they become more familiar with the system. Therefore, tax complexity did not affect how they perceive the quality of the information.

Similarly, results rejected Hypothesis 7 that proposed a moderating effect of tax complexity between the relationship of service quality and satisfaction. The procedural dimension of the tax system might not be complex for taxpayers. Therefore, tax complexity did not affect how they perceived the service quality of the eBIRForms. This finding proves that the eBIRForms is indeed effective in simplifying and standardizing the taxation process, therefore, improving the quality of taxation services.

While findings rejected the moderating effects of tax complexity on information quality and service quality, Hypothesis 6 was accepted. Results found that tax complexity had a moderating effect on the relationship between system quality and satisfaction. This validates the argument of this study that the complexity of the tax system is different from IS complexity. The eBIRForms might be easy to navigate, but if the forms are too long and contain terminologies that are difficult to understand, users might mistake this complexity as a shortcoming of the e-filing system. In turn, this might lead to a decreased satisfaction. The complexity of tax filing as a task is another issue that has to be addressed separately. If not, it will be difficult to improve user satisfaction and make them continuously use e-filing despite enhancing the UI/UX of the system. The Philippine tax system is notoriously complex because of the frequent changes in law, numerous rules and exceptions, the need to submit various reports and instructions to different authorities in a prescribed format. Since simplifying the tax system is a rigorous and long process, the tax bureau can start by providing

citizens with increased access to tax filing training. When they understand the law better, they can use the e-filing system with ease. On the other hand, the tax bureau can improve the eBIRForms by integrating tax filing rules into the system, guiding users while filing.

Prior experience with other e-government services had no moderating effect on the relationship between satisfaction and continuance behavior, rejecting Hypothesis 8. Previous studies showed that users with prior experience on the same IS, especially if satisfied, would be more likely to return to use e-government services (Kumar et al., 2007). Furthermore, other studies showed that prior experience with offline government services affects users' trust in the online version (Chen et al., 2015). Pleasurable experience translates into higher trust in the online version, affecting users' decisions to use the system. However, this study tested whether prior experience with other e-government services affects users' satisfaction with the e-filing system and their decision to reuse it. Results found that users' pleasurable or unpleasurable experiences with other services did not reflect on their satisfaction toward the e-filing system. Because different government bodies deliver different e-government services, users in the Philippines do not see the services provided by one entity but by separate entities. Their satisfaction or dissatisfaction with one service delivery does not necessarily reflect on the others.

Perceived risk, on the other hand, was found to have a moderating effect on the same relationship, validating Hypothesis 9. This corroborates with the findings of Veeramootoo et al. (2018) and Akram et al. (2019) that perceived risk is still present during the post-adoption stage. The unpredictable nature of the internet causes fears among users despite repeated use of the e-filing system. Even though taxpayers are satisfied with the IS, their decision to continue using the system might be affected by fear. This is particularly relevant to countries with weak cybersecurity like the Philippines. This conveys that service providers must consistently improve cybersecurity even after several

users have already adopted the IS because user confidence toward an IS fluctuates, affecting their decision to keep using the system.

6. Implications

This study is significant in three ways. From a theoretical perspective, it contributes to the literature on IS continuance usage by integrating selected constructs of two prominent post-acceptance models in IS – the IS Success Model and Expectation-Confirmation Model (ECM). This study responds to the call of several researchers to use more relevant theories, and models in studying IS continuance intention and behavior instead of borrowing constructs from the technology acceptance and adoption literature.

Furthermore, it makes an important theoretical contribution by extending the integrative model by introducing moderators that can strengthen or weaken the relationships - namely, tax complexity, prior experience, and perceived risk. As suggested by researchers, existing models must be extended by adding new external variables to explain emerging phenomena, especially since information systems evolve constantly. Furthermore, the results of hypotheses testing may vary in the context and sample characteristics. Adding moderators are useful in explaining why results in some studies are accepted while rejected in others. This study shows that in the context of a developing country such as the Philippines, the effects of citizens' perception of domestic laws and cybersecurity reflects on their decision to adopt or reuse technology. From a contextual perspective, this study contributes to a better understanding of e-filing usage in the context of a developing country. The Philippines, for instance, still has relatively low technology adoption and usage rates. Furthermore, its cybersecurity is weaker compared to its neighbors. Studies conducted in other countries showed that perceived risk was lessened after initial use. Therefore, it might not be relevant in studying continuance usage anymore. However, this study proved that there are antecedents that could be

only applicable to some countries, particularly those with weak cybersecurity. Lastly, from a practical standpoint, this study can provide significant insights for governments, particularly tax collection agencies, on how to enhance their IS and non-IS services, to promote continued use by the citizens. While enhancing the user interface and user experience of electronic tax filing is an important goal, it is equally important to focus on issues such as simplifying the tax system and improving cybersecurity. If these issues are fixed, citizens' satisfaction with e-government services will increase, resulting in enhanced usage.

7. Limitations and Recommendations for Future Studies

First, the model has its theoretical foundation in the ECM and IS Success Model. Although the study included variables relevant to e-filing continuance usage, it omitted some important constructs that can potentially explain user behavior. For instance, the constructs 'disconfirmation,' 'post-usage usefulness,' 'IT self-efficacy,' and 'facilitating conditions' were originally in the extended ECM but were not included in the model. Future studies can consider extending the study by including these constructs or introducing new ones such as trust, habit, etc.

Second, due to restraints known to the researcher, this study only has 300 cases as a sample. Although some researchers argued that this number is an acceptable sample size, larger samples more closely approximate the population. Furthermore, accessing a more specific sample might affect the significance of the relationships of the variables. For instance, focusing on tax agents or professionals might yield different but interesting results.

Third, the tax complexity construct is limited to studies on e-filing. Researchers can introduce new factors that capture the complexity of the task and differentiate them from the complexity of the IS. For instance, the effects of lesson/module difficulty can be tested in the context of electronic learning or e-learning.

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