Jurnal Multidisiplin Sahombu
Volume 5, Number 04, 2025, DOI 10.58471/jms.v5i04
ESSN 2809-8587 (Online)
https://ejournal.seaninstitute.or.id/index.php/JMS/index

Extension of Utaut's Theory on Central Java, Indonesia's Acceptance of Tax E-Filling Applications

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Article Info
Keywords:
Personal Taxpayers,
Tax E-Filing,
UTAUT

ABSTRACT
This study investigates the utilization of computer programs for online tax filing among individual taxpayers in Central Java. This study surveyed taxpayers in the region by using the Purposive Sampling Method and extending the Unified Technology Acceptance and Application Theory (UTAUT). Findings reveal significant effects of performance expectancy and social influence factors on effort expectancy and behavioral intention to accept tax e-filing. However, this study did not establish empirical support for the impact of social influence and effort expectancy on behavioral intention. The novelty of extending the UTAUT framework contributes to advancing theory development in information systems research. This study contributes to understanding the adoption and acceptance of technological innovations, particularly in the context of tax e-filing practices in Central Java, explaining the factors that influence user behavior and acceptance levels.

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INTRODUCTION

The practical problem in Indonesia, including Central Java, that the author found is that there are still minimal users of e-filing tax applications for individual taxpayers in Central Java. Information obtained by researchers related to the number of individual taxpayers in several regions of Central Java who use tax e-filing to report their tax obligations is still very diverse. This is based on data obtained from the Regional Office of the Directorate General of Taxes and data from several KPPs in Central Java, not only in Central Java and Indonesia in general, but also in other countries, including Taiwan, as a country that the world has currently recognized for its technological advances and e-government facilities (Affiza Mohd Tallaha et al., 2014). Through various studies related to behavior towards information systems that are continuously carried out, the acceptance of the tax e-filing system in Taiwan has improved over time. Similarly, in other countries such as America and Malaysia, which continuously research the receipt of tax e-filing applications (Aziz & Idris, 2016; Koong et al., 2019).

Acceptance of the tax e-filing system varies in different countries. In developed countries, the acceptance of the tax e-filing system is better than in developing countries, especially in Central Java. This is supported by various studies related to tax e-filing receipts

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that have been carried out and continue to be researched for developments such as research conducted by many previous research (Andriani et al., 2017); (Rifat et al., 2019); (C. W. Chen, 2010); (Akram & Sulaiman, 2019); (Schaupp & Carter, 2010).

Previous studies have used various theories to understand perceptions and behavior in information technology. The theories used include the Theory of Acceptance Model (TAM) discovered by [9] and the Unified Theory of Acceptance and Use of Technology (UTAUT) first proposed by Venkatesh [9] in 2003. In TAM theory, the two main factors in TAM, namely perceived usefulness and perceived ease of use, are the main factors that can explain the behavior of users of a technology, while in UTAUT, the factors that can explain the behavior of technology users are performance expectancy, effort expectancy, social Influence and facilitating conditions. The last fifteen years of research on the acceptance of an information technology system have been carried out, including the tax e-filing system. In other countries, the term tax e-filing is also known as e-file. Research on the topic of tax e-filing was carried out with various theories and issues related to information technology systems, such as research conducted by Zaidi et al. (2017), Gunter (2019), and J. V. Chen et al. (2015).

Theoretical background and hypothesis

Previous studies have used various theories to understand perceptions and behavior in information technology. The theories used include the Theory of Acceptance Model (TAM) discovered by (Davis et al, 1989) and the Unified Theory of Acceptance and Use of Technology (UTAUT) first proposed by (Zaidi et al., 2017)Venkatesh in 2003. In TAM theory, the two main factors in TAM, namely perceived usefulness and perceived ease of use, are the main factors that can explain the behavior of users of a technology, while in UTAUT, the factors that can explain the behavior of technology users are performance expectancy, effort expectancy, social Influence and facilitating conditions. As short as the author's knowledge, the development of the UTAUT2 model and its expansion as in this study has not been done in previous studies, so it is a difference or recentness made by the author. This is what makes this study different from previous studies. Integrating UTAUT 2 with information quality, system quality, and perceived risk variables will likely answer the question of low acceptance of the tax e-filing application system in Central Java. Central Java is a country that is still developing, with all the limitations and education levels of its citizens, who are also not as good as those in developed countries.

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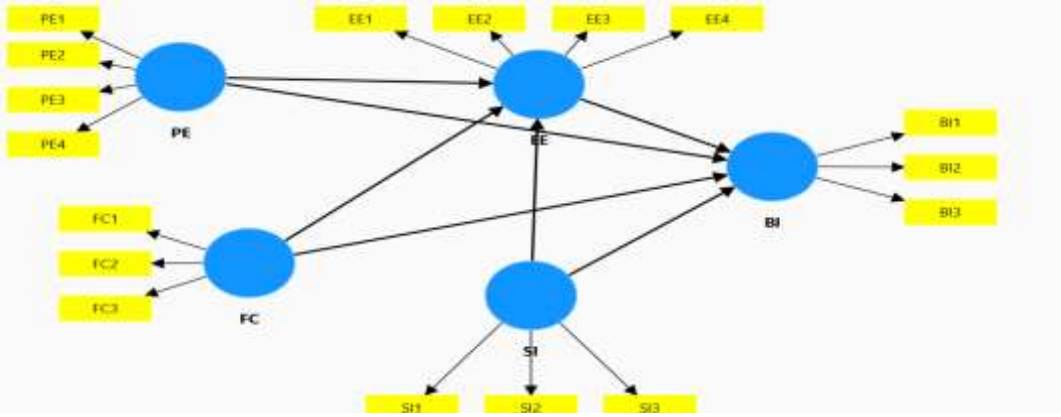

Figure 1. Research model

METHOD

This study aims to investigate the impact of Performance Expectancy, Facilitating Conditions, Social Influence, and Effort Expectancy on Behavior while extending the effects of other variables on Effort Expectancy. Additionally, it seeks to broaden our understanding of the relationships within the UTAUT 2 model by examining how Facilitating Conditions, Performance Expectancy, and Social Influence influence Effort Expectancy. Based on the arguments presented earlier, the hypothesis formulated for this research is designed to investigate the relationships and effects discussed. Specifically, the hypothesis posits that H1: Performance Expectancy positively impacts Behavior Intention. However, some studies do not find a relationship between effort expectancy and Behavior Intention, such as research conducted by Tarhini et al (2016). H2: Effort Expectancy has a positive effect on Behavior Intention. Further hypotheses based on information and reassurance provided by people around customers (e.g., friends, family members, colleagues, and superiors) can influence customer awareness and intention to adopt technology (Gupta & Arora, 2019). H3: Social Influence has a positive effect on Behavior Intention.

Facilitating Conditions in literature related to e-government are significant factors influencing the intention to use information technology (Bhuasiri et al., 2016). While research conducted by Cabrera-Sánchez et al (2020), Bhatiasevi (2016) found that Facilitating Condition was not supported, nor was the research conducted (Sichone et al., 2017) in Tanzania. This research is explanatory, so this study explores the relationship between existing variables. From here, it will be known what the main factors of the variables in the UTAUT model are that most influence the acceptance of the tax e-filing system. Based on this thinking, hypothesis 5 is built. H5: Facilitating Condition has a positive effect on Effort Expectancy. If facilitating conditions are considered favorable, then this should influence expectations regarding the effort exerted. Similarly, the expected level of performance is expected to influence the effort exerted. H6: Performance Expectancy has a positive effect on Effort Expectancy. As a country with a large population and typical characteristics of a developing nation where social relationships are highly significant, social Influence should also impact the level of effort exerted. H7: Social Influence has a positive

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effect on Effort Expectancy. Previous research has proven that Performance Expectancy positively impacts Behavior Intention. So, it is expected that if these two factors influence each other, it will be the basis for future policies for tax e-filing, which will pay attention to factors that have proven to have a positive influence and be further improved. Previous UTAUT model expansion studies, such as those conducted by AL-Nuaimi et al (2022) and Hermanto et al. (2022), show that many expansions have been made to the UTAUT model. Still, no one has tested how the Influence between UTAUT variables themselves.

RESULTS AND DISCUSSION

Out of 110 respondents who participated, 11 did not meet the requirements, leaving 99 valid datasets for analysis as stipulated. According to SEM-PLS research guidelines, a relatively small sample size is recommended. These guidelines suggest that sample sizes between 30 and 100 respondents are typically adequate for conducting SEM-PLS analyses effectively (Wong, 2013). Therefore, the sample size in this study meets the minimum requirement.

Measurement

In model design, an evaluation is carried out to determine the loading value of each indicator in the structural model. The value of loading factors that do not meet the requirements will be eliminated. Tables 1 and 2 present detailed test results for convergent validity and reliability after elimination and R values to test the model's strength. Both tables show the values that have met the minimum requirements. In the Smart PLS research model context, the term "moderate" signifies adequacy. Thus, this model is considered sufficiently robust to depict the extension of the previously existing UTAUT 2 model.

Table 1. Nilai R Square

	R Square	R Square Adjusted	Description
BI	0.500	0.478	Moderate
EE	0.582	0.569	Moderate

Table 2. Convergent Validity and Reliability Test Results

Konstruk	Item	FL	CR
Performance Expectancy	PE1	0.845	
	PE2	0.734	
	PE3	0.840	
	PE4	0.764	
			0.828
Effort Expectancy (EE)	EE1	0.808	
	EE2	0.866	
	EE3	0.847	0.848
	EE4	0.782	
0Social Influence (SI)	SI1	0.907	
	SI2	0.810	
	SI3	0.798	0.819
Facilitating Condition (FC)	FC1	0.773	
	FC2	0.840	
	FC3	0.762	0.713
Behaviour Intention (BI)	BI1	0.926	
	BI2	0.882	
	BI3	0.928	0.902

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Table 3 shows that the outer loading value meets the test criteria above 0.7. The rule of thumb for making an initial examination of the matrix factor ±0.30 is considered to have met the minimum level, ±0.40 is considered better, while >.50 is considered better (Hair et al., 2010).

Table 3. Outer Loading Value

	BI	EE	FC	PE	SI
BI1	0.926				
BI2	0.882				
BI3	0.928				
EE1		0.808			
EE2		0.866			
EE3		0.847			
EE4		0.782			
FC1			0.773		
FC2			0.840		
FC3			0.762		
PE1				0.845	
PE2				0.734	
PE3				0.840	
PE4				0.764	
SI1					0.907
SI2					0.810
SI3					0.798

Table 4 shows that the variables in this study were reliable. When the variables have been declared reliable and proven by the value of Cronbach's Alpha and Composite Reliability, the next step is to test the research hypothesis.

Table 4. Cronbach's Alpha, Composite Reliability, and AVE

	Cronbach's Alpha	Composite Reliability	Average Variance Exctracted (AVE)	Information
BI	0.899	0.902	0.832	Reliable
EE	0.845	0.848	0.683	Reliable
FC	0.706	0.713	0.628	Reliable
PE	0.811	0.828	0.636	Reliable
SI	0.791	0.819	0.705	Reliable

Hypothesis testing in SmartPLS is carried out by bootstrapping so that the Influence of exogenous variables on endogenous variables can be known. A hypothesis is considered insignificant if the value of the coefficient is between -0.1 and 0.1, while the value> 0.1 or < -0.1 is significant. If the path coefficient value >0.1 and the p-value < 0.05, the hypothesis is accepted. Based on the results of empirical tests, several conclusions were obtained regarding the acceptance of tax e-filing applications, which are the latest from this study. Eight new relationship directions are empirically proven to have a positive and significant influence, and are theoretical contributions of this study. In full, namely, Facilitating Condition has a positive effect on Effort Expectancy. This study provides empirical evidence that facilities that support taxpayers, such as infrastructure, internet networks, and assistance that exist when individual taxpayers need it when using the tax e-filing system, are proven to have a positive and significant influence on effort expectancy or the level of effort incurred by individual taxpayers in using the tax e-filing application system.

Data analysis technique

Hypothesis testing in SmartPLS is carried out by bootstrapping so that the Influence of exogenous variables on endogenous variables can be known. A hypothesis is considered

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Table 5. Bootstrapping Calculation Result

Hyphotesis	Original Sample	Sample Mean	Standard Deviation	T-Statistic	P Value
EE -> BI	0.286	0.272	0.181	1.576	0.115
FC -> BI	0.267	0.281	0.133	1.307	0.045*
FC -> EE	0.225	0.244	0.126	1.922	0.074
PE -> BI	0.458	0.448	0.102	5.927	0.000*
PE -> EE	0.402	0.392	0.131	2.800	0.002*
SI -> BI	0.031	0.032	0.093	7.377	0.738
SI -> EE	0.268	0.270	0.110	0.361	0.015*

Note: *supported

This research provides evidence that supports the Influence of Performance Expectancy on Effort Expectancy. Social Influence of taxpayers is also proven to provide proof that supports a positive and significant influence on effort Expectancy. This study supports the positive and essential Influence of variables on UTAUT2 in the initial model, namely Performance Expectancy and Facilitating Condition, which have a significant effect on Behavior Intention. Unfortunately, this study could not support the considerable Influence of Effort Expectancy and Social Influence on Behavior Intention. This study also does not support the positive and significant Influence of facilitating condition factors on effort expectancy for individual taxpayers in Central Java.

CONCLUSION

The Directorate General of Taxes adds save, live chat or Q&A features in e-filing, data import, and user guides if you experience problems using e-filing to make it easier for OP Taxpayers to fill in data in e-filing in reporting the OP Annual Income Tax Return, the Directorate General of Taxes improves integration with employers/companies to connect withholding evidence obtained by OP Taxpayers as attachments to the OP Annual Income Tax Return so that it can make it easier for OP Taxpayers to fill in e-filing.This study provides empirical evidence that facilities that support taxpayers, such as infrastructure, internet networks, and assistance that exist when individual taxpayers need it when using the tax e-filing system, are proven to have a positive and significant influence on effort

expectancy or the level of effort incurred by individual taxpayers in using the tax e-filing application system.

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