The Influence o f Perceived Usefulness and Perceived Ease of Use on Actual Use in Using E-Billing System with Behavioral Intention as Intervening Variable: Case Study on Individual Taxpayers in Surakarta

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ABSTRACT

This study aims to examine the indirect effect of perceived usefulness and perceived easy of use on actual use through behavioral intention in using the e-billing system. This study used a sample of 200 WPOP lecturers and employees at private universities in Surakarta. Sampling using a purposive side technique. Validity testing using Factor Analysis technique, reliability testing using Cronbach Alpha. The analytical method to test the hypothesis is using Regression Analysis and Sobel Test. The results of this study indicate that (1) the quality of perceived usefulness and perceived easy of use has a significant effect on behavioral intention (2) perceived usefulness and perceived easy of use have a significant effect on actual use (3) behavioral intention has a significant effect on actual use (4) perceived usefulness and perceived easy of use have an indirect effect on actual use through behavioral intention.

Keywords*: quality, system, information, satisfaction, compliance*

INTRODUCTION

Information Technology (IT), which is currently growing very rapidly, has an influence on the development of many areas of human life. The application of new technology in an organization will affect the whole organization, especially on human resources. The user factor is very important to consider in the implementation of the new system, because the level of user readiness to accept the new system has a major influence in determining the success or failure of the development or implementation of the system (Prasetianingrum & Sejati, 2017).

In order to realize transparency, convenience, and security in tax payments, the Director General of taxes makes an innovation in the field of technology from manual tax payments or MPNG 1 (Generation One State Revenue Module) which is regulated in Law No. 28 of 2007 turned into electronic or online tax payments called eBilling or MPNG 2. This policy is stated in the Director General of Taxes regulation No. PER-26/PJ/2014 regarding the electronic tax payment system called e-billing(Agustia, 2017). Based on these regulations, the public is expected to use an online tax payment system or *e-billing* because it is considered easier, faster, and safer.

The problem of human error in the electronic tax payment process by WPOP is an interesting phenomenon to study. The results of a preliminary survey conducted by researchers indicate that the use of the e-billing system has not been fully utilized by WPOP lecturers and employees at several Surakarta Private Universities, on average they do not understand the making of ID billing until the electronic tax payment process. This problem indicates that the practice of the e-Billing system is still not optimally used.

In line with these problems, the actual system usage conditions in the practice of e-Billing systems need to be evaluated using the Technology Acceptance Model (TAM) approach. According to Davis (1989) TAM is an information system theory designed to explain how users understand and use information technology. TAM aims to explain the main factors of the behavior of users of information technology on the acceptance of the use of information technology itself. TAM illustrates that the use of SI will be influenced by perceived usefulness and perceived ease of use where these two variables will determine the attitude towards the use of the system. Furthermore, the attitude can explain the user's behavioral intention which will then affect the actual use of the system.

The results of empirical studies show that the TAM approach in research has been widely carried out related to the acceptance of information systems. The results of Darmaningtyas & Suardana's research (2017) using a sample of auditors at KAP Denpasar Bali show that perceived usefulness and perceived ease of use have a significant positive influence on the auditors' behavioral intention, then behavioral intention affects the actual use of the system. Putri & Parameswara's research (2019) showsperceived usefulness, perceived ease of use, and the intention to use the system have a significant positive influence on the actual use of the accounting

information system at PT BRI Gianyar Denpasar Branch. Research by Nyoman & Yasa (2015) which examines the acceptance of the system on internet banking in Denpasar, Bali, shows that perceived usefulness and perceived ease of use have a significant positive influence on attitude toward using of system, which in turn affects the actual use of system.

A research related to the use of the e-billing system was carried out by Ayem & Wahidah (2022), stating that the use of tax e-billing using the technology acceptance model (TAM) in MSMEs in the Special Region of Yogyakarta was significantly influenced by perceived usefulness and perceived ease of use.

Based on the problems and results of previous studies, it was necessary for the researcher to evaluate e-Billing acceptance system on Individual Taxpayers in Surakarta. The purpose of this study was to explore the causality of the relationship between perceived usefulness, perceived ease of use, behavioral intention with the actual use of e-billing system. The expected contribution of this research can be an evaluation material for KPP Pratama Surakarta to find out whether the e-billing system implemented has been running as expected, and can be used as an effort to improve the problems that occur in the implementation of the e-billing system, so that it is expected to be able to be a successful and sustainable project.

LITERATURE REVIEW
1. **Theoretical basis**
   a. **E-Billing**

The Directorate General of Taxes (DGT) issued an electronic payment system, namely E-Billing, to make it easier for taxpayers to pay taxes. The E-billing system is an electronic tax payment method using a billing code according to PER-26/PJ/2014 concerning the electronic tax payment system. By filling in data electronically on the website of the Directorate General of Taxes (DGT), taxpayers can obtain a Billing code. With the E-billing system, it is hoped that it can help taxpayers pay taxes more easily, faster, more accurately, and more comfortably. By using E-billing, we also don't need to come to the tax service office to pay taxes because we can pay taxes through ATMs or perception banks (Muliyani, 2021).

Husnurrosyidah & Suhadi (2017) argue that E-billing can provide efficiency in tax payments, because payments can be made anywhere and anytime.

   b. DeLone & McLean's Information Systems Success Model

Technology Acceptance Model(TAM) was first introduced by Davis in 1989. TAM is an adaptation of TRA which was made specifically for modeling user acceptance of information systems. TAM considers that there are two individual beliefs, namely perceived usefulness which abbreviated as PU and perceived ease of use whichabbreviated as PEOU. TAM explains the relationship between beliefs (usefulness and ease of use) with attitudes, user intentions, and the actual use of the system.

   c. Perceived Usefulness

According to Davis (1989) perceived usefulness is a phase in which a person believes that the user of a particular system will be able to increase that person's performance. The indicators in perceived usefulness are accelerating work, improving performance, increasing productivity, effectiveness, facilitating work, and being useful.

   d. Perceived Ease of Use

According to Davis (1989) the perception of ease of use is the user's belief that the information technology to be applied is something that is easy and not a burden for them. Indicators in perceived ease of use are easy to learn, controllable, clear and understandable, flexible, easy to be skilled, and easy to use.

   e. Behavioral Intention

According to Davis (1989) behavioral intention to use is a behavioral tendency to keep applying a technology. The level of use of a computer technology on a person can be predicted from the attitude and attention of the user towards the technology. Indicators in behavioral intention include interest in information systems, feelings to use information systems, and desire to continue using information systems.

   f. Actual Use

According to Davis (1989) actual use is a real condition of system application. Someone will feel happy to use the system if they believe that the system is not difficult to use and proven to increase their productivity, which is reflected in the real conditions of use. Indicators in actual use can be measured through the accumulated amount of time spent interacting with technology and how often they use the technology.

2. **Hypothesis Development**
   a. The Influence of Perceived Usefulness on Behavioral Intention

Perceived usefulness explains aspects of user behavior that will improve work performance (Idrith, 2010). The results of research by Darmaningtyas & Suardana (2017) and Putri & Parameswara (2019) show that perceived usefulness has a significant positive influence on behavioral intention.

On the basis of the scientific arguments mentioned above, the following hypothesis can be formulated.

H1:   Perceived usefulness influences behavioral intention
    b.   The Influence of Perceived Ease of Use on Behavioral Intention
Perceived ease of use explains the ease of users in using the system which will improve the users' performances (Wida, 2016). Darmaningtyas & Suardana (2017) and Putri &Parameswara (2019) state that perceived ease of use the system has a significant positive influence on behavioral intention to use the system.
On the basis of the scientific arguments mentioned above, the following hypothesis can be formulated.
H2:   Perceived ease of use has an influence on behavioral intention
    c.   The Influence of Perceived Usefulness on Actual Use
Perceived Usefulness explains aspects of user behavior that will improve work performance (Idrith, 2010). The results of research by Darmaningtyas & Suardana (2017) and Putri & Parameswara (2019) show that perceived usefulness has a significant positive influence on actual use.
On the basis of the scientific arguments mentioned above, the following hypothesis can be formulated.
H3:   Perceived usefulness influences actual use
    d.   The Influence of Perceived Ease of Use on Actual Use
Perceived ease of use of system can support user performance (Wida, 2016). Research by Wida (2016) and Putri & Parameswara (2019) state that perceived ease of use of system has a significant positive influence on the actual use of the system
On the basis of the scientific arguments mentioned above, the following hypothesis can be formulated.
H4:   Perceived ease of use influences actual use
    e.   The Influence of Behavioral Intention on the Use of e-billing System (actual use)
The results of Darmaningtyas & Suardana's research (2017) show that behavioral intention has a significant influence on actual use of system in auditor at KAP Denpasar Bali. Putri & Parameswara's research (2019) indicatesthatintention to use accounting information systems has a significant positive influence on actual use at PT BRI Gianyar Denpasar Branch. Research of Nyoman & Yasa (2015) point out that attitude towards the use of the systemhas a significant positive influence on actual use of the system.
On the basis of the scientific arguments mentioned above, the following hypothesis can be formulated.
H5:   Behavioral intention influences actual use
    f.   The Influence of Perceived Usefulness on Actual Use through Behavioral Intention
The results of research by Darmaningtyas & Suardana (2017) and Putri & Parameswara (2019) show that perceived usefulness has a significant positive influence on behavioral intention, then behavioral intention influences the actual use.
On the basis of the scientific arguments mentioned above, the following hypothesis can be formulated.
H6:   Perceived usefulness influences actual use through behavioral intention
    g.   The Influence of Perceived Ease of Use on Behavioral Intention
Darmaningtyas & Suardana (2017) and Putri & Parameswara (2019) state that perceived ease of use of system has a significant positive influence on behavioral intention, then behavioral intention influences the actual use.
On the basis of the scientific arguments mentioned above, the following hypothesis can be formulated.
H7:   Perceived ease of use influences actual use through behavioral intention

Conceptual Framework Model
        The conceptual framework model in this study is presented as shown in the following chart.
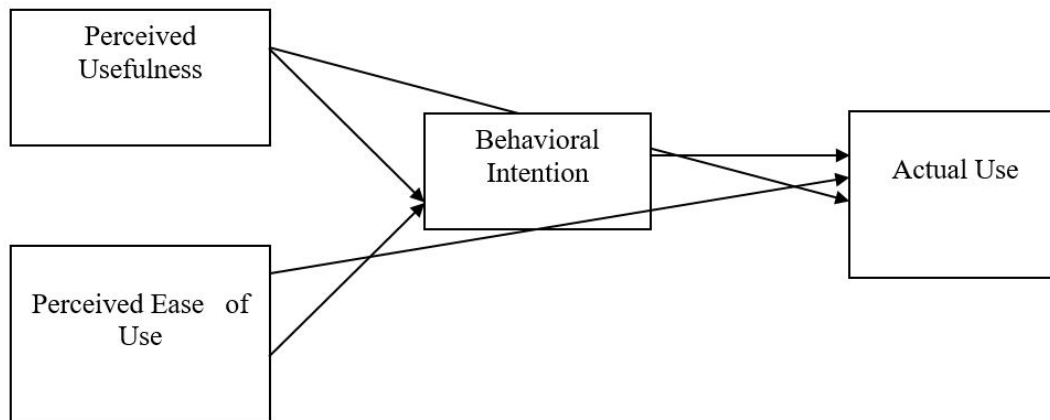

Figure 1. Conceptual Framework Model

RESEARCH METHODS

This study used a quantitative descriptive method, to explain the existence of each research variable, while data analysis used was a quantitative approach to test hypotheses (Sugiyono, 2008). The population in this study were individual taxpayers (WPOP) registered at KPP Pratama Surakarta . The unit of analysis in this study was the individual. Sampling technique used was a purposive sampling. The criteria set were (1) WPOP lecturers and employees at private universities (2) respondents were personal taxpayers who use E-Billing.

According to Hair et al., (1998), the minimum sample size is at least 5 times - 10 times the number of parameters to be estimated. The parameters to be estimated in this study were 19 items, while for each estimated parameter the researcher used 10 observations so that the minimum sample size was 19 x 10 = 190 respondents. All items were measured using a five-point Likert scale with a range from 1 (strongly disagree) to 5 (strongly agree).

Table 1 Operational Definition and Measurement of Variables

Variable	Operational definition	Indicator
Perceived of Usefulness (X1)	A phase where a person believes that the user of a particular system will be able to increase that person's work performance (Davis, 1989).	Based on the theory of Davis (1989) indicators of perceived usefulness as follows: 1. Speed up work 2. Improve the performance 3. Increase productivity 4. Effectiveness 5. Make work easier 6. Beneficial
Perceived Ease of Use (X2)	A User belief that the information technology to be applied is an easy thing and not a burden for them (Davis, 1989)	Based on the theory of Davis (1989) indicators of perceived ease of use : 1. Easy to learn 2. Controllable 3. Clear and understandable 4. Flexible 5. Easy to be skilled 6. Easy to use
Behavioral Intention (X3)	A person's tendency to choose to do or not do a job (Davis, 1989)	Measurement of behavioral intention, using indicators from Putri & Parameswara's research (2019): 1. There is interest in using 2. Statement to use 3. Desire to keep using
Actual usage (Y)	Real conditions of system application where someone will feel happy to use the system if they believe that the system is not difficult to use and proven to increase their productivity, which is reflected in the actual conditions of use (Davis, 1989).	Measurement of behavioral intention, using indicators from the research of Aji et al., (2019): 1. Actual usage 2. Time to use 3. Frequency usage 4. Satisfaction usage

In this study, the validity test used was the Factor Analysis technique. The minimum value of the validity test was 0.50 meaning that each item of the questionnaire must have a minimum loading factor of 0.50. The reliability test used Cronbach Alpha, the minimum value of the reliability test was 0.60. The analytical method in this study uses Regression Analysis and Sobel Test (Ghozali, 2010).

RESULTS AND DISCUSSION
1. Research Results

The validity test of statement items for system quality, information quality, taxpayer satisfaction, and tax compliance variables was carried out using Factor Analysis through the matrix rotation stage. The requirements that must be met for the selection of statement items were carried out by looking at the results of the KMO MSA (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) greater than 0.5 and the Chi-Square significance value on Barlett's Test <0.05. Based on the results of factor analysis, it is known that the KMO results show a number of 0.864 which was greater than 0.5 and the Chi-Square significance on Barlett's Test was 0.000 <0.05. Thus, it can be concluded that factor analysis can be continued. Henceforth, each statement item

was declared valid if it produced a minimum loading factor of 0.50. The test results of the validity of the statement items are presented in table 2.

Table 2 Results of Validity Test

	Factor			
	1	2	3	4
PU1		0.784		
PU2		0.791		
PU3		0.723		
PU4		0.803		
PU5		0.761		
PU6		0.730		
PEOU1	0.744			
PEOU2	0.813			
PEOU3	0.770			
PEOU4	0.802			
PEOU5	0.866			
PEOU6	0.745			
BI1				0.751
BI2				0.749
BI3				0.740
AU1			0.803	
AU2			0.701	
AU3			0.739	
AU4			0.709	

Table 2 showed that all question items for the perceived usefulness variable, perceived ease of use, behavioral intention and actual use were declared valid, because each question item that is an indicator of each variable had been extracted perfectly with a factor loading $\geq$ 0.50.

The reliability test in this study was carried out using the Cronbach's Alpha measure with a 5% confidence degree. An instrument is said to be reliable if the results of the Cronbach's Alpha coefficient show a value above 0.60 (Ghozali, 2010).

Table 3 Results of Reliability Test

Variable	Cronbach's Alpha
Perceived usefulness	0.867
Perceived ease of use	0.912
Behavioral intention	0.836
Actual use	0.744

Table 3 showed that the perceived usefulness variable, perceived ease of use, behavioral intention and actual use each have Cronbach's Alpha values greater than 0.60 so it can be concluded that all research variables were declared reliable.

Table 4 Results of Classical Assumption Test

Test	Result	Conclusion
Multicolinearity	*Tolerance* (0,632; 0,755; 0,724) > 0,1 VIF (1,129; 1,133; 1,765) < 10	Normal Residual
Heteroskedastisitas Heteroscedasticity	(0,457; 0,632; 0,355) > 0,05	Multicolinearity did not occur
Normality	*p value* (0,517) > 0,05	Heteroscedasticity did not occur

The results of the normality test with the Kolmogorov-Smirnov test obtained a probability > 0.05 which means the residual was normal. The multicollinearity test results showedthat each independent variable was not linearly

correlated, as indicated by the tolerance value > 0.1 and VIF < 10. Thus, multicollinearity did not occur in this model. Heteroscedasticity test through the Glejser test showedthat each independent variable was not significant to the absolute residual variable. This was indicated by a probability value > 0.05 which means that the model did not have heteroscedasticity problems.

a. Hypothesis testing

Based on calculations using the SPSS version 24 program, the results of the direct influence test for each variable are presented below.

Table 5 Results of Direct Influence Test

Path	Hyp.	(β)	t-value	p-value	Decision
PU→BI	**H1**	0,312	3,451	0,001	Supported
PEOU→BI	**H2**	0,454	3,729	0,000	Supported
PU→AU	**H3**	0,153	1,675	0,073	Rejected
PEOU→AU	**H4**	0,127	1,023	0,112	Rejected
BI→AU	**H5**	0,650	5,650	0,000	Supported

Based on Table 5 above, the results of testing each hypothesis can be described as follows:

1) The influence of perceived usefulness on behavioral intention resulted in a t count of 3.451 and a p value of 0.001 <0.05. It means that perceived usefulness has a significant influence on behavioral intention. Thus, hypothesis 1 is accepted.

2) The influence of perceived ease of use on behavioral intention resulted in a t count of 3.729 and a p value of 0.000 <0.05. It means that perceived ease of use has a significant influence on behavioral intention. Thus hypothesis 2 is accepted.

3) The influence of perceived usefulness on actual use resulted a t count of 1.675 and a p value of 0.073 > 0.05. It means that perceived usefulness has no significant influence on actual use. Thus, hypothesis 3 is rejected.

4) The influenceof perceived ease of use on actual use resulted in a t count of 1.023 and a p value of 0.112 > 0.05. It means that perceived ease of use has no significant influence on actual use. Thus, hypothesis 4 is rejected.

5) The influence of behavioral intention on actual use resulted in a t count of 5.650 and a p value of 0.000 <0.05. It means that behavioral intention has a significant influence on actual use . Thus hypothesis 5 is accepted.

b. Indirect Influence Test

The indirect influence test on hypotheses 6 and 7 using the Sobel test, aimed to test the significance of the indirect influence of perceived usefulness and perceived ease of use on actual use through behavioral intention as an intervening variable. Calculations for the Sobel test using an online calculator (www.danielsoper.com). The results of the Sobel Test are presented in the following table.

Table 6. Results of Sobel Test

Path	Sobel test statistic	Two-tailed Probability	Conclusion
PU→BI→AU	3,371	0,001	H6 accepted
PEOU→BI→AU	3,486	0,000	H7 accepted

Source: Output Sobel Online Calculator

The results of hypothesis 6 testing based on the Sobel test calculations above, obtained a z value of 3.371 with a probability value of 0.001 <0.05, meaning that the indirect influenceof perceived usefulness on actual use through behavioral intention is significant. Thus H6 is accepted.

The results of hypothesis testing 7 based on the Sobel test calculation above, obtained a z value of 3.486 with a probability value of 0.000 <0.05, meaning that the indirect influence of perceived ease of use on actual use through behavioral intention is significant. Thus H7 is accepted.

2. Discussion

This study succeeded in proving that perceived usefulness andperceived ease of use has a significant influence on behavioral intention in using the e-billing system at WPOP lecturers and PTS employees in Surakarta. Based on these findings, the perceived usefulness variable has a positive regression coefficient means that the higher the benefits of using the e-billing system, the higher the user's intention to use the e-billing system. In practice, the use of e-billing applications provides benefits for users in paying taxes compared to the

manual system. The e-billing application based on the perception of WPOP, can speed up work, simplify work, improve performance, increase productivity, and is more effective than manual systems.

This finding shows that perceived ease of use has a significant influence on behavioral intention in using the e-billing system for WPOP lecturers and PTS employees in Surakarta. Based on these findings, the perceived ease of use variable has a positive regression coefficient means that the easier it is to use the e-billing system, the higher the user's intention to use the e-billing system will be. In practice, the e-billing application is very easy to learn, and can be controlled well, the menus in the e-billing application are very clear and well understood. With the ease of using the system, it makes WPOP use it more often than the manual system.

This finding shows that perceived usefulness and perceived ease of use have no significant influence on actual use in the use of the e-billing system at WPOP lecturers and PTS employees in Surakarta. The absence of this influence in Davis' theory (1989) can be caused by actual use is a process where actual use is determined by the intention to use the system, and intentions are based on perceptions of the usefulness and ease of use of the system.

Based on these findings, behavioral intention has a significant influence on actual use in the use of the e-billing system at WPOP lecturers and PTS employees in Surakarta. The level of actual use of e-billing users can be predicted from the behavioral intention to apply the e-billing system. In this study, the behavioral intention of WPOP was measured by their interest in using the e-billing system, a statement agreeing to use the e-billing system compared to the manual system, and the desire to continue using the e-billing system.

The results of the indirect influence test show that perceived usefulness and perceived ease of use have an indirect influence on actual use through behavioral intention to use e-billing system on WPOP lecturers and PTS employees in Surakarta. This finding is in accordance with the Technology Acceptance Model (TAM) theory proposed by Davis (1989) that actual use in receiving information technology can be predicted from the behavioral intention of system users and behavioral intentions can be predicted from perceived usefulness and perceived ease of use. Thus, the level of actual use of the e-billing system is determined by WPOP's behavioral intention to use the e-billing system. The level of WPOP behavior intention in using the e-billing system is determined by the perceived usefulness and perceived ease of applying the e-billing system.

CONCLUSION

The results of this study indicate that (1) the quality of perceived usefulness and perceived ease of use has a significant influence on behavioral intention (2) perceived usefulness and perceived ease of use have a significant influence on actual use (3) behavioral intention has a significant influence on actual use (4) perceived usefulness and perceived ease of use have an indirect influence on actual use through behavioral intention. The implication of this finding is that actual use of the system occurs because of the intention to use the e-billing system, and the intention to use the system can occur because of perceived usefulness and perceived ease of use. This study is limited to using only two measures of the success of the e-billing system practice. Another limitation of this study is that it only uses a sample of WPOP lecturers and employees at private universities in Surakarta, so the results of this study cannot be generalized to other agencies or types of companies. Further research is highly recommended to explore the practical dimensions of the e-billing system, besides that it is necessary to include other contingent variables that also influence the actual use of the system. Further research is recommended to use other research objects, either in business companies or the public sector, as well as using samples of WPOP of employees of BUMN or civil servants, so that the results of this study can be more generalized.

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