

## Self-Efficacy and Attitude Mediation in the UMEGA Model: Behavior of e-Samsat Users in Bali

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### Abstract

The aim of this research is to provide empirical evidence regarding the influence of variables in the UMEGA Theory model on taxpayers' behavior intention in adopting the e-Samsat system and to test the role of attitude variables as mediating variables in the UMEGA model. This research also adds self-efficacy as a predictor of behaviour intention to expand the UMEGA model. Sampling in this study used a non-probability sampling technique using purposive sampling. The sample in this study was 411 respondents who were motor vehicle taxpayers in Bali Province. This research uses quantitative method with primary data through distributing questionnaires. Data processing uses Partial Least Square analysis. The research results show that the variables performance expectancy, effort expectancy, social influence and perceived risk influence attitudes. Attitude and self-efficacy variables were also found to influence the behaviour intention of motor vehicle taxpayers. Attitude was found to mediate the relationship between the influence of performance expectancy, effort expectancy, social influence and perceived risk on behaviour intention. Meanwhile, the facilitating condition variable was not found to be a predictor of taxpayers' behaviour intention in using e-Samsat.

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### 1. Introduction

Over the last few decades, governments in various countries have attempted to implement e-Government with the aim of achieving efficient and effective services. The implementation of e-services will make it easier for the public to access information so that it can increase the openness and reliability of public institutions and increase public trust in the government (Gracia & Casaló Ariño, 2015; Li, 2021; Widiatmoko et al., 2023; and Taufiqurokhman et al., 2024). Currently the public tends to be skeptical and demands services that are more transparent, accountable and reliable.

Research on e-government adoption has been studied for years through various technology acceptance models such as research by (Abu-Shanab, 2014; Susanto & Goodwin, 2013; Alryalat et al., (2020) analyzed e-government acceptance u-

sing the TRA approach. Rana et al. (2016) extended the TPB model to analyze user behavior in adopting e-government. Rana & Dwivedi (2015) used Social Cognitive Theory (SCT) to analyze behavior intention. Ali et al., (2018) used the TAM model to analyze the e-learning system. Bhuasiri et al. (2016); Mansoori et al., (2018) analyzed behavior intention utilizing UTAUT approach. Khan et al., (2017); Soodan & Rana, (2020) analyzed the acceptance of e-government systems using UTAUT2 Approach. Most previous research models on e-government adoption use conventional information system constructs, these theories tend to be criticized for not considering constructs that represent e-government-specific perspectives, such as trust, risk, security, transparency, and privacy (Dwivedi et al., 2017).

UMEGA theory is a system acceptance model that was developed and validated to under-

stand the factors of acceptance of appropriate e-Government systems. The variance in the constructs in the UMEGA theory displayed on behavioral intention (80%) outperforms the variance presented by the IS/TI adoption model in behavioral intention, which indicates that this is a better research model for e-Government adoption than any alternative model also includes (Dwivedi et al., 2017)

Research on the application of the UMEGA model in analyzing e-government user behavior has been carried out such as Altin & Yilmaz, (2022; Arshad et al., (2021); Zubaidah et al., (2021) found that all variables in the UMEGA model work well and to be the determinants of behavioral intention in using e-government. However, there are literatures that finds different results such as Verkijika & De Wet, (2018) found that effort expectancy has no effect on attitudes. Mensah et al., (2020) found that performance expectancy, effort expectancy and social influence were not found to have an effect on the attitudes of e-government users. Avazov & Lee, (2020) found that social influence and perceived risk have no effect on attitudes towards using e-Government services. Yohanes & Kurniawan, (2023) found that facilitated conditions have no effect on users' behavioral intention in adopting e-government. Khurshid et al., (2019) analyzing the behavioral interest of e-government users in Pakistan found that effort expectancy, facilitating conditions, social influence, and perceived risk had no significant impact on e-government adoption. The results of the UMEGA model in several studies are inconsistent, which still creates gaps in this theory.

Based on suggestions from Dwivedi et al., (2017), it is necessary to add other important constructs related to e-Government adoption such as self-efficacy, so in this study the construct will be added as an independent variable that has an influence on behavioral intentions in using e-Government. The variables in the UMEGA theory explain the external factors of users, but there are no personal factors in individual users, so the self-efficacy variable is added. Mensah & Mi, (2019) explain self-efficacy as a variable that can explain personal factors of users, namely related to individual knowledge and ability to use the system (Arfat et al., 2018; Almaiah et al., 2020; Al-Saedi et al., 2020; Lallmahomed et al., 2017; Zarei et al., 2019) in their research found that self-efficacy has a positive effect on the behavioral intention of system users.

One of the e-Government systems implemented in Bali Province is the E-Samsat system. This system is useful for motor vehicle taxpayers to carry out their motor vehicle tax payment obligations online. Based on data from Badan Pusat Statistik 2022 shows that the number of taxpayers in Bali province is 4. 510. 791 units, but according to data from Badan Pendapatan daerah Provinsi Bali the number of e-samsat users in 2022 was only 125,610. This figure shows that only 2.83% of taxpayers use the e-samsat system. Nasir (2013) states that user acceptance is a major concern and an important factor to determine the success of the implementation of an information technology. The success of implementing an e-government system depends on user acceptance of the system (Al-Qirim et al., 2018). Therefore, in this study, the UMEGA model will be tested in explaining the behavioral interest of e-SAMSAT system users in Bali Province.

This study aims to examine the influence of the variables in the UMEGA model in analyzing the behavioral intentions of taxpayers in Bali Province. This study also states the role of attitude variables in the UMEGA model by testing the mediating effect of attitude on the relationship between the constructs of performance expectancy, effort expectancy, social influence and risk perceptions on behavioral intentions. In addition, the addition of efficacy variables was also carried out in the study to expand the UMEGA model.

## **2. Hypothesis Development**

A system is considered to be able to provide useful benefits to its users. When users feel that the system they have can provide benefits for them, then users will choose to use the system. The more useful the system they use will determine the user's attitude in adopting the system. Verkijika & De Wet, (2018) analyzing e-government adoption in Sub-Saharan Africa found that performance expectancy has a positive influence on attitudes. Avazov & Lee, (2020) who conducted research on e-government acceptance in Uzbekistan found that performance expectancy had a positive effect on attitudes. In literatures Arshad et al. (2021); Zubaidah et al. (2021); Pamungkas et al. (2022); Abdalla et al. (2023); and Yohanes & Kurniawan (2023) also found that performance expectancy has a positive effect on attitudes towards adopting e-government.

H<sub>1</sub>: Performance expectancy has a positive effect on attitudes.

Effort expectancy is related to the user's feelings when a system fulfills easy-to-use aspects, then the user will be interested in using the system. When users feel the system is easy to use and the system is simple, it will increase the user's positive attitude in adopting the system. Research findings conducted by Khalilzadeh et al. (2017); Burhanuddin et al. (2019); Avazov & Lee (2020); Arshad et al. (2021); Flowrensya et al., (2023); Pamungkas et al. (2022) in their research on acceptance of e-government systems found that the effort expectancy construct had a positive effect on users' attitudes towards adopting e-government.

H<sub>2</sub>: Effort expectancy has a positive effect on attitudes.

Social influence as the degree to which a person attaches importance to other people's beliefs that he or she should use a new system. This social aspect has a direct influence on individual intention in using technology. This social influence is related to the encouragement of their social environment. The social encouragement in question can be in the form of recommendations from friends, relatives, family or even government policies. When users feel that the environment around them is also using the system, the user's feelings will arise to join in using the system. Research by Khurshid et al. (2019); Rai et al. (2020); Zubaidah et al. (2021); Arshad et al. (2021); and Aziz et al. (2022) also found that social influence had a positive effect on attitudes.

H<sub>3</sub>: Social influence has a positive effect on attitudes.

Perceived risk is an individual's subjective expectation of suffering a loss in doing something desired. Dwivedi et al., (2017) in developing the UMEGA model specifically added the risk construct which is considered to have an important influence in explaining user concerns when adopting the system. Perceived risk generally indicates feelings of uncertainty or anxiety associated with the use of a particular information system because of anticipated outcomes (Slade et al., 2015). Previous literature on perceived risk found that 80% of internet users worry about their personal identity being known on the web (Rana & Dwivedi, 2015). When users feel that there is a risk to the system they use, it will give rise to negative user attitudes. Research findings conducted by Tseng & Wang (2016); Ariffin et al. (2018); Verkijika & De Wet (2018); Mensah et al. (2020); Zubaidah et al. (2021); Nugroho et al. (2022); also found that perceived risk had a negative effect on attitudes.

H<sub>4</sub>: Perceived risk has a negative effect on attitudes.

Facilitating conditions can have a positive effect on the behavioral intention of the e-Government system when users believe that the government supports them to use e-Government by providing media that helps them in using e-Government. When users believe that there are conditions that facilitate users, it will increase their intention to use e-Government. To realize e-government success, it is important to ensure that all resources, facilities and infrastructure are ready to use (Kurnia et al., 2018). Research findings conducted by Verkijika & De Wet (2018); Avazov & Lee (2020); Mensah et al. (2020); Zubaidah et al. (2021); Saleh et al. (2022) found a positive effect of facilitating conditions on the use of the e-Government system.

H<sub>5</sub>: Facilitating condition has a positive effect on behavior intention of e-Samsat users.

UMEGA theory explains attitude as a form of evaluation of negative or positive feelings towards a behavior (Dwivedi et al., 2017). According to (Mensah et al., 2020) attitude towards the implementation of an e-Government system is the extent to which individual users express positive or negative assessments of interactions or interactions with the system. In the model in UMEGA Theory, behavioral intention is determined by the individual's attitude towards using the system. In the context of e-Government implementation, individuals who have a positive evaluation of the e-Government system will have a high intention to adopting the system (Verkijika & De Wet, 2018). When users have a positive attitude towards the e-Government system, it will increase taxpayers' intention on using this system. Research by Avazov & Lee (2020); Arshad et al. (2021); Zubaidah et al. (2021); Kijkasiwat, (2021); Nugroho et al. (2022); Flowrensya et al. (2023) found that attitudes have a positive effect on behavior intention to adopt e-Government systems.

H<sub>6</sub>: Attitude has a positive effect on the behavior intention of E-Samsat users.

A person's belief in their ability to do work using a system is said to be self-efficacy. Someone who has high self-efficacy will have an intention in doing everything. Likewise, when users have confidence and feel capable of completing work with the system, it will increase their intention in using the e-Government system. Zarei et al., (2019) found that the construct of self-efficacy influences the intention to use electronic informa-

tion services. Almaiah et al., (2020) also found that self-efficacy has a positive effect on intention to use mobile government. Research by Tarhini et al., (2017); Lallmahomed et al. (2017); Mensah & Mi (2019); Al-Saedi et al. (2020); validate the relationship between self-efficacy on behavior intention.

H<sub>7</sub>: Self-efficacy has a positive effect on behavior intention of e-Samsat users

Several previous research results show a significant positive influence between the variables of performance expectancy, effort expectancy, social influence, perceived risk on attitudes as well as a significant positive influence between the attitude variables on behavioral intention as in the research of Verkijika & De Wet (2018); Burhanuddin et al. (2019); Mensah et al. (2020); Avazov & Lee (2020); Zubaidah et al., 2021); Pamungkas et al. (2022); Upadhyay et al. (2023); Abdalla et al. (2023). This encourages researchers to test the truth of the research results by using attitude as a mediating variable between several independent variables and the behavior intention variable of e-Samsat system users. This test is expected to clarify the role and results of mediation attitudes, especially regarding e-Government system adoption behavior, which begins with several determinants of attitude, then followed by system user behavior intention.

H<sub>8a</sub>: Performance expectancy has an indirectly effect on E-Samsat user behavior intention through attitudes.

H<sub>8b</sub>: Effort Expectancy has an indirectly effect on E-Samsat user behavior intention through attitudes.

H<sub>8c</sub>: Social Influence has an indirectly effect on E-Samsat user behavior intention through attitudes.

H<sub>8d</sub>: Perceived Risk has an indirectly effect on E-Samsat user behavior intention through attitudes.

### 3. Data and Methods

This research uses a quantitative approach because this research aims to test a hypothesis. The population in this study were motor vehicle taxpayers in Bali Province. Sampling in this research used a non-probability sampling technique, namely by using purposive sampling. The criteria determined in determining the sample in this study were motor vehicle tax payers in Bali Province and had used e-Samsat. Determination of sample size using the Slovin formula. Slovin's calculation results require a minimum number of respondents of 400 people.

The type of data in this research is primary data. Data was obtained directly from respondents through distributing questionnaires. Questionnaires are distributed online via Google form and distributed via social media such as WhatsApp, Instagram and Facebook. An online questionnaire was distributed to reach respondents in all districts in Bali Province.

Respondents were asked to express their opinions on a 7-point Likert scale for each of six measures: (1) performance expectancy, (2) effort expectancy, (3) social influence, (4) perceived risk, (5) facilitating conditions and (6) attitude. The questions were slightly modified from the original UMEGA study by Dwivedi et al., (2017). Self-Efficacy variable, measurements were formed based on literatures by Lallmahomed et al. (2017); Arfat et al. (2018); Mensah & Mi (2019); Al-Saedi et al. (2020). The measurement of variable in this research are shown on Table 1.

Table 1. Variable Measurement

Variable	Indicators
Performance Expectancy	Using the E-SAMSAT would enable me to accomplish tasks quicker Using the E-SAMSAT would enhance my effectiveness Using the E-SAMSAT will make it easier to complete motor vehicle tax payments.
Effort Expectancy	I would find the E-SAMSAT useful for pay motor vehicle tax Learning to operate the E-SAMSAT would be easy for me I would find it easy to get the E-SAMSAT to do what I want it to do I would find the E-SAMSAT easy to use
Social Influence	People who influence my behavior think that I should use the the E-SAMSAT People who are important to me think that I should use the the E-SAMSAT I would use the E-SAMSAT because of the type of people who use the system BAPENDA is helpful in the use of the E-SAMSAT
Facilitating Condition	I would have command over using the E-SAMSAT E-SAMSAT I would have the knowledge necessary to use the E-SAMSAT Given the resources, opportunities and knowledge, it would be easy for me to use this

Variable	Indicators
Perceived Risk	system
	The E-SAMSAT would be compatible with the other systems I use
	Specialized instruction concerning the E-SAMSAT would be available to me
	Use of E-SAMSAT may cause my personal information to be stolen
	I would feel uneasy psychologically if I used the E-SAMSAT
Attitude	I think that it is unsafe to use the E-SAMSAT because of the privacy and security concerns
	I believe that there could be negative consequences by using the E-SAMSAT
	Using the E-SAMSAT would be a good idea
Self-Efficacy	Using the E-SAMSAT would be a wise idea
	I like the idea of using the E-SAMSAT
	I feel confident using E-SAMSAT even though there is no one around to tell me what to do.
	I can complete motor vehicle tax payments with E-SAMSAT if someone shows me how to do it first.
Behavior Intention	I feel confident using E-SAMSAT if I have seen other people use it before trying it myself.
	I can use E-SAMSAT if someone else helps me to get started.
	I can complete motor vehicle tax payments electronically if I only have the E-SAMSAT instructions guide as a reference.
	I intend to use the E-SAMSAT
	I predict that I will use the E-SAMSAT
	I plan to use the E-SAMSAT in the near future

This study uses the Partial Least Square (PLS) data analysis method with SmartPLS 4 software. There are two model evaluations in PLS, namely the evaluation of the measurement model (outer model) and the structural model (inner model). Outer model is used to assess the validity and reliability of the research model (Hair et al., 2021). Inner model evaluation with PLS is done by looking at the R<sup>2</sup> value, Q<sup>2</sup> value and path coefficient value for significant tests between constructs in the structural model.

#### 4. Result

The distribution of questionnaires was carried out for three months from October 2023 until January 2024. The results of distributing questionnaires obtained 411 respondents who were processed in this study.

##### Descriptive statistics

Descriptive statistics explain respondents' tendencies in answering statements in the questionnaire. This is done so that researchers can see the frequency of answers for all research variables. Based on table 2 each construct in this study has a minimum and maximum value of 1 and 7 respectively. The standard deviation value is between the minimum value and the maximum value. The standard deviation value also does not exceed the average value (mean). Based on this, it can be seen that the research respondents' answer data has a good distribution.

Table 2. Descriptive Statistics

Variable	Average	St. Dev
Performance Expectancy	6.01	0.06
Effort Expectancy	6.03	0.04
Social Influence	6.03	0.05
Perceived Risk	2.97	0.05
Facilitating Condition	5.99	0.07
Attitude	6.07	0.04
Self Efficacy	5.96	0.07
Behavior Intention	6.07	0.05

##### Evaluasi Outer Model

Convergent Validity refers to the validity of items making up a latent with reflective indicators. his means that there is no measurement error on the outer model and all of the latent variables can be used to predict structural functions on the inner model. This study shows the validity of indicators as seen from each construct having an AVE value > 0.5, outer loading value > 0.7, this study has all valid indicators. The reliability test results show that all variables have a Cronbach's Alpha value > 0.7 and a composite reliability value > 0.7. The test results show that all variables are reliable and all the variabel. The validity and reliability test results are shown in table 3.

##### Evaluasi Inner Model

The next test is testing the inner model to determine the predictive power of the structural model. This can be seen in the R-square (R<sup>2</sup>) value, and Q-square (Q<sup>2</sup>), predictive relevance. The R<sup>2</sup> value of the attitude variable is 0.486. This means that 48.6% of attitude variables are explained by performance expectancy, effort expectancy, so-

cial influence and perceived risk. Furthermore, the R<sup>2</sup> value of the behavior intention construct is 0.439. This value indicates that the behavior intention variable can be explained by the attitude construct, facilitated conditions and self-efficacy by 43.9%, while the rest is explained outside the research model. Q<sup>2</sup> value on attitude and behavior in-

tion variables has a value greater than 0.00. The attitude variable has a Q<sup>2</sup> value of 0.356 while the behavior intention variable has a Q<sup>2</sup> value of 0.308 so it can be concluded that the model estimation results have good predictive validity. The results of the R<sup>2</sup> and Q<sup>2</sup> tests are shown in table 4.

Table 3. Validity And Reliability Test Results

Variable	Iterm	Outer loading	AVE	Cronbach's alpha	Composite reliability
Performance Expectancy	X1.1	0.879	0.680	0.844	0.857
	X1.2	0.779			
	X1.3	0.840			
	X1.4	0.799			
Effort Expectancy	X2.1	0.887	0.697	0.781	0.786
	X2.2	0.820			
	X2.3	0.794			
Social Influence	X3.1	0.884	0.676	0.840	0.846
	X3.2	0.828			
	X3.3	0.794			
	X3.4	0.780			
Perceived Risk	X4.1	0.962	0.926	0.973	0.975
	X4.2	0.966			
	X4.3	0.967			
	X4.4	0.954			
	X5.1	0.888			
Facilitating Condition	X5.2	0.780	0.611	0.839	0.846
	X5.3	0.771			
	X5.4	0.755			
	X5.5	0.701			
Attitude	X6.1	0.913	0.743	0.826	0.831
	X6.2	0.848			
	X6.3	0.821			
	X7.1	0.873			
Self-Efficacy	X7.2	0.804	0.629	0.851	0.861
	X7.3	0.811			
	X7.4	0.723			
	X7.5	0.746			
Behaviour Intention	Y1.1	0.905	0.726	0.809	0.816
	Y1.2	0.859			
	Y1.3	0.787			

Table 4. R<sup>2</sup> dan Q<sup>2</sup> test

Variable	R <sup>2</sup>	Q-square (Q <sup>2</sup> )
Attitude	0.486	0.356
Behavior intention	0.439	0.308

### Hypothesis Test of Direct Effect Between Variables

This test is conducted to see the effect of performance expectancy (X<sub>1</sub>), effort expectancy (X<sub>2</sub>), social influence (X<sub>3</sub>), perceived risk on attitude (X<sub>4</sub>) and the effect of attitude (X<sub>5</sub>), facilitating conditions (X<sub>6</sub>) and self-efficacy on behavioral intention (X<sub>7</sub>) toward Behaviour Intention (Y). The results of testing hypotheses 1 through 7 are shown in table 5.

Table 5. Hypothesis Test Results of Direct Influence Between Variables

Variable	β	t-statistics	P-values	Remarks
PE→AT	0.150	3.389	0.001	Accepted
EE→AT	0.241	5.569	0.000	Accepted
SI → AT	0.376	7.792	0.000	Accepted
PR→AT	-0.137	3.375	0.001	Accepted
FC → BI	0.085	1.525	0.127	Rejected
AT→ BI	0.299	5.385	0.000	Accepted
SE→ BI	0.227	3.874	0.000	Accepted

Desc: PE = Performance expectancy, EE = Effort expectancy, SI = Social influence, PR= Perceived risk, FC = Facilitating condition, SE = Self-efficacy, AT = Attitude, BI = Behavioral intention

Based on table 5, performance expectancy, effort expectancy, dan sosial influence has a positive effect on attitude. This is indicated by the p-value of  $0.000 < 0.05$  so  $H_1, H_2, H_3$  are accepted. Perceived risk has a negative effect on attitude. This is indicated by the p-value of  $0.001 < 0.05$  and the path coefficient value of  $-0.137$  so  $H_4$  is accepted. Facilitating conditions has no effect on behavioral intention. This is indicated by the p-value of  $0.138 > 0.05$  and the path coefficient value of  $0.083$  so  $H_5$  is rejected. The attitude and self efficacy has a positive effect on behavioral intention. This is indicated by the p-value of  $0.000 < 0.05$   $H_6$  and  $H_7$  are accepted.

### Hypothesis Test for The Mediating Effect of Attitude

Sholihin & Ratmono, (2013) state that there are three conditions that must be met before testing mediation partially or fully. First, the significant relationship between the independent variable and the dependent variable. Second, the significant relationship between the independent variable and the mediating variable. Third, the significant relationship between the mediating variable and the dependent variable.

Based on table 5, all independent variables (performance expectancy, effort expectancy, social influence, perceived risk) have been found to

affect the mediating variable (attitude). The mediating variable (attitude) was also found to have an effect on the dependent variable (behavioral intention). This means that 2 of the 3 conditions for testing the effect of mediation have been met. Furthermore, testing the direct effect of independent variables (performance expectancy, effort expectancy, social influence, perceived risk) on the dependent variable of behavioral intention is carried out. The test results are shown in table 6.

Table 6. Test Results of the Direct Effect of Independent Variables on Dependent Variables

Variable	$\beta$	T statistics	P-values	Remarks
PE → BI	0.160	3.045	0.002	Significant
EE → BI	0.309	6.407	0.000	Significant
SI → BI	0.202	3.685	0.000	Significant
PR → BI	-0.092	2.117	0.034	Significant

Based on table 6, the results of testing the direct effect of all independent variables (performance expectancy, effort expectancy, social influence, perceived risk) on the dependent variable (behavioral intention) show a p-value smaller than 0.05, so that all independent variables affect the dependent variable. All conditions for testing the effect of mediation have been met. Furthermore, the effect of attitude as a mediating variable was tested. The test results are shown in table 7.

Table 7. Test Results for the Mediating Effect of Attitude

Variable	$\beta$ with mediation effect	P-value with mediation effect	Result	Remark
$H_{8a}$ PE → BI	0.053	0.287	Full mediation	Accepted
$H_{8b}$ EE → BI	0.163	0.001	Partial mediation	Accepted
$H_{8c}$ SI → BI	-0.011	0.850	Full mediation	Accepted
$H_{8d}$ PR → BI	-0.137	0.001	Partial mediation	Accepted

Table 7 shows that attitude fully mediates the effect of performance expectancy and social influence on behavioral intention. In testing the mediation of PE→AT→BI it was found that PE → BI was not significant. Also, SI→AT→BI it was found that SI → BI was not significant. These test results indicate that  $H_{8a}$  and  $H_{8c}$  are accepted. Attitude partially mediates the effect of effort expectancy and perceived risk on behavioral intention. In testing the mediation EE→AT→BI it was found that EE → BI was significant. Also, RS→S→MP it was found that RS → MP was significant. These test results indicate that  $H_{8b}$  and  $H_{8d}$  are accepted.

## 5. Discussion

### The Effect of Performance Expectancy on Attitudes

The results of this study indicate that performance expectancy has a positive effect on attitudes. This result meaning when the user feels that the system can be useful it will improve the user's attitude. This is related to the e-Samsat system which provides many benefits to taxpayers. Taxpayers do not need to come and queue at the SAMSAT office to pay motor vehicle tax manually. Based on taxpayer responses presented in the descriptive table, they agree that the e-Samsat system has good benefits.

The results of this research are in accordance with the UMEGA theory by Dwivedi et al.,

(2017) which explains that performance expectancy is one of the constructs that influence the use of e-Government systems. The relationship between the influence of performance expectancy on attitudes is also supported by Verkijika & De Wet, (2018) regarding the implementation of e-Government in Sub-Saharan Africa, finding that performance expectancy has a positive influence on attitudes. The findings of this study strengthen research conducted by Arshad et al., (2021); Zubaidah et al., (2021); Abdalla et al., (2023) that performance expectancy influence e-Government adoption attitudes.

#### **The Effect of Effort Expectancy on Attitudes**

The research results show that effort expectancy have a positive effect on attitudes. This result meaning when users feel the system is easy to use, will increase their attitudes toward using e-government. Based on field findings through taxpayer' responses, they stated that they felt the e-Samsat system was easy to use so that accessing e-Samsat did not become an obstacle for taxpayers in making motor vehicle tax payments.

Dwivedi et al., (2017) stated that individual attitudes can be determined by the extent to which the e-Government system is easy for the public to use (not complicated). The simplicity of the e-Government system will make it easier for users to start adopting the system. This research supports the results of researches by Avazov & Lee (2020); Arshad et al. (2021); Zubaidah et al., (2021) also found that effort expectancy has a positive effect on users' attitudes towards adopting e-Government.

#### **The Effect of Social Influence on Attitudes**

The results of this study indicate that social influence has a positive effect on attitudes. When users feel that the people around them require them to use a system, it will increase their attitude towards using the e-government system. Taxpayers believe that people around them use the e-Samsat system and suggest using the e-Samsat system will influence the form of evaluation and positive feelings of taxpayers in using e-Samsat.

Dwivedi et al., (2017) which stated that an individual's attitude can be determined by the extent to which the individual believes that other people think it is best to use the new system. Other people here relate to people around the individual, such as family, co-workers, superiors and even the government who advise the individual to carry out a behavior. Avazov & Lee,

(2020) found that social influence has a positive effect on users' attitudes towards adopting e-governance in Uzbekistan. Research by Rai et al. (2020); Arshad et al. (2021); Aziz et al. (2022); Zubaidah et al. (2021) also validate this relationship.

#### **The Effect of Perceived Risk on Attitude**

The results of this study indicate that risk perception has a negative effect on attitudes. Taxpayers feel that the risk regarding this system is low, thereby increasing taxpayers' positive evaluation of the use of e-Samsat. Based on taxpayer responses, they assess that e-Samsat has a low risk.

Dwivedi et al., (2017) explained that the risks regarding system adoption are related to users' feelings of anxiety regarding system insecurity due to the sophisticated nature of information technology and sometimes users are required to enter personal data. Previous literature on perceived risk found that 80% of internet users worry about making their personal identity known on the web (Rana & Dwivedi, 2015).

Empirical support for this relationship is provided by research Mensah et al., (2020) that perceived risk attitudes influence the use of e-Government systems in Ghana. Other research conducted (Verkijika & De Wet, 2018; Zubaidah et al., 2021) also found that perceived risk has a negative effect on attitudes.

#### **The Effect of Facilitating Conditions on Behavior Intention**

The research results show that Facilitating Conditions have no effect on behavioral intention. The results of this research are not in line with the UMEGA theory of Dwivedi et al., (2017) which states that facilitated conditions are defined as a person's level of trust in the existence of infrastructure and organizations as supporters of system users. The results of this research are supported by Saragih & Septamia, (2019) stated that Taxpayers who use e-Government sometimes feel that the e-Government system experiences server downtime, thereby influencing the results of the influence of facilitated conditions on behavioral intentions. Nugroho et al., (2022) stated that taxpayers do not consider supporting facilities to carry out their obligations, because taxpayers are aware and will continue to fulfill their obligations to pay taxes. The results of this study support Tarhini et al. (2017); and Almaiah et al. (2020) also found that facilitating conditions had no effect on behavior intention in adopt e-government.



### **The Effect of Attitude on Behavior Intention**

The results of this research show that attitude has a positive effect on Behavioral Intention. This shows that taxpayers have a positive attitude in using the e-Samsat system, thereby increasing taxpayer intention to adopting e-Samsat. In the context of e-Government adoption, individuals who have a positive evaluation of the e-Government system will have a high intention in adopting the system.

These results are in line with the UMEGA Theory developed by Dwivedi et al., (2017) which who explain attitude as a form of evaluation of individual feelings which express a positive or negative assessment of a behavior so that it becomes a determinant in forming behavior intention to adopting an e-government system. Researches by Verkijika & De Wet (2018); Zubaidah et al. (2021); Arshad et al. (2021); and Nugroho et al. (2022) also found that attitudes influence Behavior intention in adopting e-Government systems.

### **The Effect of Self-Efficacy on Behavior Intention**

The results of this study indicate that self-efficacy influences behavioral intention. The results of this research show that the success of the self-efficacy variable is one of the determinants that researchers added to the UMEGA theory in this research to analyze behavioral intention in adopting e-government systems. Taxpayers have confidence and knowledge regarding e-Samsat. Taxpayers feel capable of completing tax payments using the e-Samsat system, thereby increasing their intention in using this system. It is important to increase taxpayer confidence and ability to increase self-efficacy so as to increase behavioral intention in using e-Samsat. Mensah & Mi, (2019) validated the behavioral intention in e-government using the construct of self-efficacy and finding that self-efficacy was a factor that had a significant influence on using e-government systems. Lallahomed et al., (2017) found that self-efficacy is an influential construct in adopting e-government systems. Zarei et al., (2019) also found the significant relationship between self-efficacy on behavior intention.

### **The Mediating Effect of Attitude**

The results of this mediation test emphasize the role of attitude as a mediating variable in accordance with UMEGA Theory. Dwivedi et al., (2017) which stated that advantage of system, usefulness, perceived risk, and social influence to use

the system will initially influence a person's positive or negative feelings, thus forming behavioral intention. In connection with adopting an e-government system, it is a voluntary behavior carried out individually by the community so that the attitude variable in adopting e-government becomes an important construct as an evaluation before forming people's behavioral intention.

The results of the mediation test found that performance expectancy, effort expectancy, social influence and perceived risk had an indirect effect on behavioral intention through attitudes. The results of this study prove that attitude fully mediates the relationship between performance expectancy and social influence on behavioral intention. These results imply that the more positive the taxpayer's evaluation of the usefulness and advantages of the e-Samsat system and the social environment that supports system adoption, the behavioral intention of taxpayers in Bali Province in using e-Samsat will increase. These results also prove that attitude mediates the relationship between effort expectancy and perceived risk on behavioral intention. The more positive the evaluation of the taxpayer's attitude regarding convenience and low risk, will increase e-Samsat user behavioral intention.

## **6. Conclusion and Suggestion**

### **Conclusion**

The results of this research provide empirical evidence regarding the umega theory that performance expectancy, effort expectancy, social influence, perceived risk and attitude are factors that influence taxpayers' behavioral intention in using e-samsat. Facilitating condition variables have no effect on the taxpayer's intention in behavior in using e-samsat. The addition of the self-efficacy variable was also found to be a determining factor in the behavior intention of e-Samsat users in Bali Province. This research also provides the results of testing mediation attitudes in each relationship between performance expectancy, effort expectancy, social influence, perceived risk on behavioral intention.

### **Suggestion**

Based on the research results, one of the UMEGA variables used in this research was found to have no effect on behavioral intention of e-Samsat users, resulting in inconsistencies with the UMEGA theory that has developed. Future research can use facilitating condition variable

again in analyzing the determinants of behavior intention in e-government to answer the inconsistencies with the UMEGA theory that occurred in this research.

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