

# Implementation of Decomposed Theory of Planned Behavior on the Adoption of E-Filing Systems Taxation Policy in Indonesia

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*The increased in internet and telecommunication usage has become the reason for the adopting of e-filing systems for annual tax report or SPT (based on Indonesian Taxation Authority Decree Number Kep.88/PJ/2004 on 14<sup>th</sup> May 2004 about electronic based annual tax report). On the contrary, this development does not show in the usage of the e-filing systems. This condition is the reason for this study to investigate the implementation of e-filing systems taxation policy by using decomposition theory of planned behavior. This theory is used to understand and test the influenced factors in the usage of electronic based annual tax report (e-filing) and the persistent of e-filing system in Indonesia. Population in this study is the Indonesian citizen's tax payers who have got tax registration number (NPWP) both who have or have not used e-filing to report the annual tax return in Surabaya area, East Java-Indonesia. Sample is taken using a non-probability sampling, with convenient sampling method. Analytical technique used in this observation is Structural Equation Method (SEM). The results showed that e-filing user's attitude, subjective norms, and perceived behavior control influence the users' intention to use e-filing systems. These results indicated that Indonesian citizens' intention to use the e-filing facilities to report their annual tax income is depend upon their attitudes and controls on the systems. Even if Indonesian tax payers realized that with e-filing systems they will be able to increase the effectiveness, more optimize services, hasten and improved efficiency in annual tax reporting, the taxpayer does not completely understand about how to operate the e-filing system. Therefore, it is imperative for the government to socialize and educate them on the importance of e-filing systems.*

**Keywords:** e-filing user's attitude, control of perception variable, intention to use e-filing systems.

**JEL Classification:** M15, M38, C5

## 1. Introduction

The use of information technology (IT) has grown extensively and can be categorized by the applications and target users. Fuelled by good governance, many organizations have invested large funds for the application of information technology. One example of the application of information technology is the Directorate General of Taxes Decision Letter number: Kep. 88/PJ/2004 May 14, 2004 about the delivery of annual-tax-report (SPT) electronically. The main purpose of this tax policy is the government provides

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reporting SPT electronically via the media of internet communication to Taxpayers. Thus, the individual taxpayers can report their SPT from home or place of work, while corporate tax payers can report from the agency office location or place of business. By reporting taxes electronically would help reduce the cost and time required by taxpayers to prepare, process, and reported taxes to the tax office in a right and proper time. On the other hand, reporting annual-tax-report (SPT) electronically is also giving support to the government in terms of the acceptance SPT, the minimization of administration, the accuracy of the data, the distribution and filling of SPT.

Although e-filing facility tax system provides a lot of convenience to taxpayers, the usage of this system is still not optimal, since its development not comparable with the development of internet use since this facility introduced and implemented in 2004 until 2008. In 2008, the details of the use of tax facilities was only 95 tax payers for income tax article 15, 7,854 taxpayers for income tax article 21, 2,523 tax payers for income tax article 21, 944 tax payers for for income tax article 4, and 1.107 taxpayers for VAT. Overall, taxpayers who uses the e-filing facilities was 9.058 taxpayers of the total tax payers about 13 million or the utilization of e-fillif systems only about 0.07%. In 2010, the number of tax payers increased to 15.9 million. The increased in the number of taxpayers was not accompanied by an increased in the use of SPT e-filing systems. Data indicated only 0.05 percent in 2011 (<http://ciputraentrepreneurship.com>, April 2011).

People's understandings on internet technology is the foundation of the adoption of internet based tax system (e-filing) provided by the Directorate General of Taxes. Nowadays almost everyone already understand the usefulness of the Internet, have an email address to communicate on-line and browsing through the internet to find information. The development is also supported by the spread of internet cafe (a cyber cafe) all over Indonesian archipelago. The development of other communication and wireless technology can be found easily almost every where, like in public like area mall, cafe, and other places.

The rapid development of Internet technology and communication facilities as the basic of the adoption of e-filing systems did not provide a similar development in the utilization of e-filing (SPT) service. This is what triggered the research done in the implementation of e-filing system policies using the decomposition theory of planned behavior. Decomposed theory of planned behavior is used to test and determine the factors that affect the use of electronic e-filing (SPT) systems and the sustainability of the e-filing system in Indonesia. Therefore, this study aims to answer 1). Are factors of decomposed theory of planned behavior – attitudes, subjective norm, and perceived behavior control –affect user behavioral intention in using SPT e-filing systems? 2). Will the decomposed theory of planned behavior increase the predictive power of user behavioral intention in using SPT e-filing systems? The rest of this paper will be organized as follows: the second section of this paper is the literature review. The third section outlines the research methods and the forth section describes research results. Finally, conclusion is set in the last section.

## **2. Literature Review**

In the organizations that using system information technology, humans interact with the system information technology. The interaction of this can be behavioral problematic. Although technique-wise ability and the quality of system information technology have become more satisfactory so it is seldom to find any mistakes, there was also the presence of failure in the application of the system information technology. Studies that have been done in this failure showed that the cause of this failure was more on the human behavior (Hartono, 2007). Behavior is actions or reactions of an object or organism, such as awareness (consciousness) or unconsciousness, overt or covert, voluntary or involuntary. Hartono (2007) explained that to refuse or to accept for using information technology is a human behavior. To change a behavior can not be done directly to the behavior, but must be done through an antecedent or the cause of these behaviors. One of the antecedents of behavior is faith (belief). Thus to change behavior can be done by changing the trust of individual to positive belief to receive information technology.

Information technology can be defined as a cross between computer technology, communication and office automation which has been integrated to become one (Indriantoro, 2002). Information technology is considered as an agent that permits organization to be able to increase the efficiency of operational and strategic position of a business organization in an increasingly competitive environment. (Darma, 2000). The development of information technology, especially computer technology provide positive impacts to the organization, 1) an increase in efficiency, saves both time and a reduction in the use of paper, 2) an increase in computer memory capacity and to make it more easy to use, and 3) the increase in the quantity and quality of organization decision-making. In this study, communication and information technology refer to e-filing system that has been provided by Indonesian government through the Directorate General of Taxes (DJP).

## **2.1. Theory of planned behavior**

Theory of planned behavior (TPB) is a further development of theory of reasoned action (TRA). Ajzen (1991) added a new construct to TRA namely perceived behavioral control. This construct was appended in an effort to understand limitations owned by individuals in order to perform a certain behavior (Hartono 2007), in other words, a certain behavior maybe done is not only determined by the attitude and subjective norm, but also by individual perception in controlling the action that is based on his control belief. Overall, beliefs of the behavior produce an attitude like or dislike; beliefs of the normative yielding to social pressure or subjective norms; beliefs of the control will provide perceived control of behavior. The attitudes and behavior, together with subjective norms and perceived control will result in the behavior intention, and will next give rise to behavior.

Taylor and Todd (1995) pointed out that TPB is not without criticism. The relationship between the belief structure and the determinant of intention: attitude, subjective norm, and perceived behavior control are not essentially well understood. Although TPB introduced one variable, perceived behavior control, as an answer to all uncontrollable elements of behavior, the beliefs set and construct may be difficult to employ the TPB and may not be consistently related to attitude, subjective norms, and perceived behavioral control. Furthermore, Taylor and Todd (1995) suggest that TPB model still requires individuals to be motivated to perform certain behavior.

## **2.2. Decomposed Theory of Planned Behavior**

Decomposed Theory of Planned Behavior (DTBP) is an extension of TPB, was proposed by Taylor and Todd (1995) to overcome some of the limitation of TPB. Taylor and Todd (1995) extended TPB by decomposing the attitudinal belief, normative belief, and control belief into several dimensional constructs to provide higher descriptive power and a more accurate understanding of the antecedents of behavior. They claimed that DTBP provides some advantages: first, by decomposing belief, the relationship between belief and the antecedents of intention should become clearer and more readily understood. Second, decomposition can provide a stable set of beliefs, which can be applied across a variety of settings, and third, by focusing on specific beliefs, DTPB more managerially relevant. Because of the larger number of factors that may influence adoption and usage, DTPB should provide a more complete understanding of IT usage.

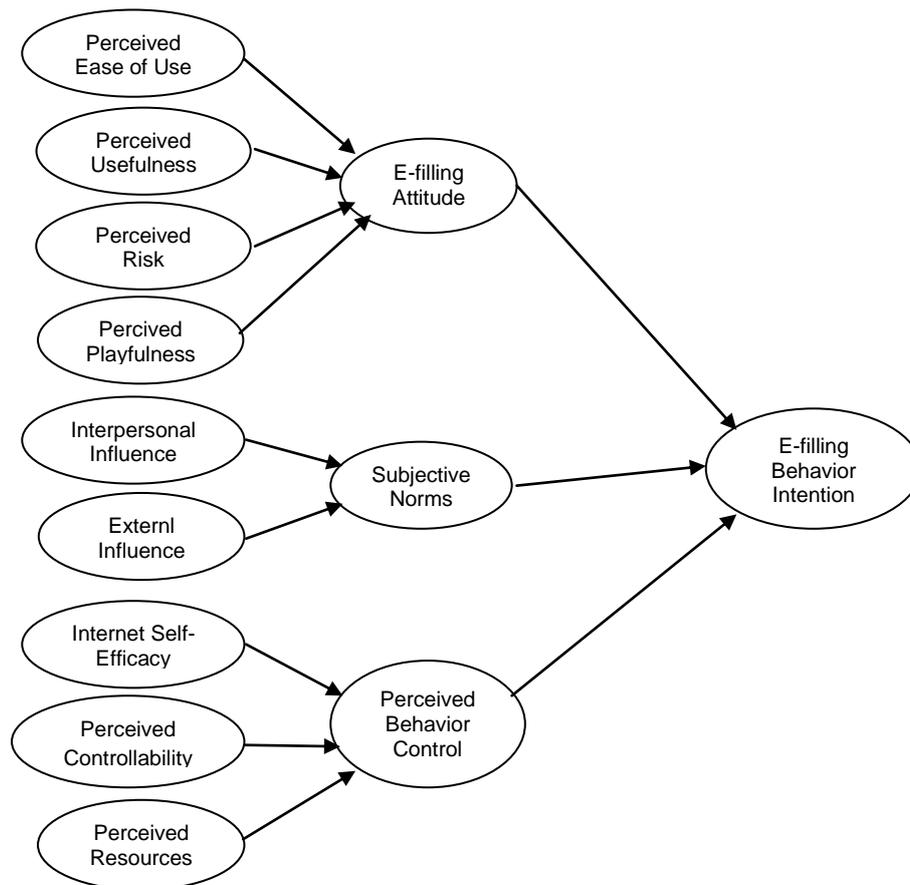
Several researchers have examined the validity of DTPB in understanding behavioral intentions (Taylor and Todd 1995, Hsu and Chiu 2004, Koeder et al. 2011). Hsu and Chiu (2004) studied electronic service continuance using DTPB. They indicated that even though DTPB provides better diagnostic value than original TPB model, it is still more complex because it introduced numbers of factors that may influence usage. Koeder et al. (2011) developed their model to identify the factors that encourage consumer to purchase e-book reader in Japan, with the focus on normative factors. They found that attitude towards connected e-book readers were the most important factor contributing to purchase behavior. Koeder et al. (2011) study differed from Taylor and Todd (1995) and Hsu and Chiu (2004) because they developed new constructs in decomposing attitude with relevance advantage and decomposing subjective norm with normative influences.

In this study, decomposition attitude towards the behavior was done by using Fisbein and Azjen (1975). They proved that the differences in attitudes, perceived usefulness, perceived risk, and perceived playfulness as attitude that associated with the usability and categorized as attitude toward the behavior. Suryaningrum, et al (2009) showed that perceived ease of use is an important factor in adopting internet technology based information system like e-learning. Based on these studies, attitude towards behavior was decomposed into four components, namely perceived ease of use, perceived usefulness, perceived risk, and perceived playfulness.

Decomposition of subjective norms was based on Hsu and Chiu (2004) result study. They find the influence of subjective norm to behavioral intention. On the contrary, Tan and Theo (2000) found no significant influence of subjective norm to individual intention to adopt internet banking. Bhattacharjee (2000) suggested that subjective norm is a predictor of behavioral intention to use the broker services electronically. In his study, Bhattacharjee showed that subjective norm includes two forms influence that is, interpersonal and external influences. Therefore, in this study, subjective norm was decomposed into two components, namely interpersonal influence and external influence.

Decomposition of perceived behavior control was based on Azjen (2002). Azjen suggested a constructs of self-assurance (self efficacy) and controlability. Self-efficacy is the ease or difficulty to perform the behavior, or beliefs of individuals to perform the behavior. Controllability is a control on the behavior or beliefs about how much do the behavior is a desire of their own behavior (Ajzen, 2002). Associated with self-efficacy, the individual will feel more satisfied with the behavior that they feel able to do, or vice versa (Bandura, 1997). Thus, in this study, perceived behavior control is decomposed into three components, namely

Internet self-efficacy, perceived controllability, and perceived resources. Based on the decomposed theory of planned behavior, figure 1 depicts the conceptual framework of the model.



**Figure 1.** *Decomposed Theory of Planned Behavior Model*

Based on the conceptual model in figure 1, hypotheses of this study are 1). Attitude towards e-filing, subjective norm, and perceived behavior control will affect user behavioral intention in using SPT e-filing systems, 2). Decomposed theory of planned behavior will increase the predictive power of user behavioral intention in using SPT e-filing systems.

### **3. Data and Methodology**

Data in this study was captured in 2012 by using questionnaires to the Indonesian taxpayers in Surabaya city. The population of this study is all taxpayers who have tax number (NPWP) which have or have not been using e-filing systems in reporting annual tax income (SPT) in Surabaya East Java. The sampling method used this study is convenient sampling. Total samples based on Ferdinand (2002: 48) are the number of indicator multiplied by 5-10, so the number of sample in this study is 32 indicators x 10 = 320 taxpayers.

The measurement of the instruments of this study used interval scale or semantic differentials scale. Respondents have to answer from 5 (five) – means a very positive response, to 1 (one) – means a very negative response.

Data was analyzed by using Structural Equation Model (SEM) technique that enable to test the relationship between independent and dependent variables simultaneously. The phase in testing the model is as follows: data normality test, evaluate outliers, test the validity and reliability, and test of relations causality and evaluation of the model.

### **4. Research Results and Discussion**

The test of the quality of the data (normality, multivariate outlier, reliability and validity, construct reliability and extracted variance) indicated that data can be analyzed for further estimation. Estimating results and model fit one step approach of SEM and modification can be seen in figure 2.

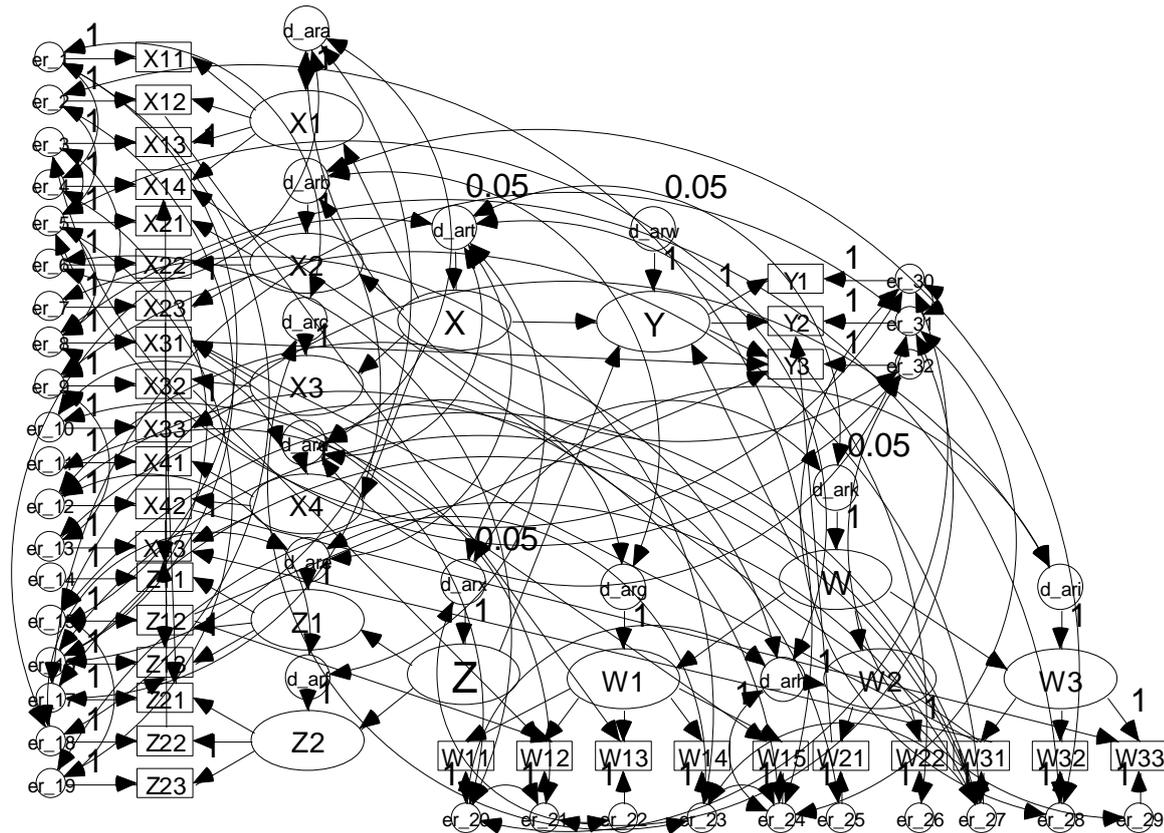


Figure 2. Structural Model of Attitude towards Behavior, Subjective Norms, and Perceived Behavior Control: One Step Approach Model-Modification

Table 1. Evaluation of Goodness of Fit Modification

Criteria	Results	Critical Value	Model Evaluation
Cmin/DF	0.655	≤ 2.00	Good
Probability	1.000	≥ 0,05	Good
RMSEA	0.000	≤ 0,08	Good
GFI	0.933	≥ 0,90	Good
AGFI	0.905	≥ 0,90	Good
TLI	1.035	≥ 0,95	Good
CFI	1.000	≥ 0,94	Good

Source: Data analyzed

From the evaluation one step approach model modification turned out that of all criterias of goodness of fit showed the results of good models evaluation. It meant that the conceptual model developed from the theory has been fully supported by the facts. Thus this model is the best model to explain the relationship between variables in the model.

The causal relation between variables showed a direct influence as observed from the weight of the regression standard coefficient.

Table 2. Test of Causality

Regression Weights		Ustd Estimate	Std Estimate	Prob.
Factor	Factor			
Behavioral Intention	E-filing attitude	-1.115	-0.333	0.008
Behavioral Intention	Subjective norms	-1.727	-0.516	0.001
Behavioral Intention	Perceived behavior controll	5.912	0.607	0.001
Sig.				≤ 0.05

Source: Data analyzed

Test of the first hypotheses indicated that e-filing attitude, subjective norms, and perceived behavior control influenced behavioral intention to use e-filing with probability value of 0.008; 0.001; and 0.001 respectively, are less than 0.05. Based on these results, the second hypotheses can be proven by using factor loading number. The factor indicated the correctness of the model in predicting the outcome in the future. Therefore, decomposed theory of planned behavior will increase the predictive power in predicting e-filing behavior intention.

E-filing attitude variable consisting of dimensions of perceived ease of use, perceived usefulness, perceived risk and perceived playfulness significantly influence behavioral intention to use e-filing. This is similar with the results of Ajzen (1987), Muthusamy et al. (2010), and Sheikhshoaei and Oloumi (2011). They concluded that attitude that deals with the behavior have a direct effect on behavior intention. This result also supported by the results of research (Suryaningrum et al., (2009). Their result indicated that perceived ease of use is an important factor in adopting information technology system namely e-learning. The condition showed that the attitude of the tax payers actually realized that with e-filing system they will be able to facilitate efficiency and effectiveness, hasten, and optimize service for taxpayer in reporting their annual tax income report (SPT). Analysis of the questionnaires indicated that even though tax payers realized the benefit of SPT e-filing system, they have not completely understand how to operate the e-filing system

The second variable is subjective norms that consist of interpersonal and external influences. The result of this study is supported by previous studies (Zang and Gutierrez, 2007; Ajzen, 1991; Hsu and Chiu, 2004; Bharracherjee, 2000; Sheikhshoaei and Oloumi, 2011). Ajzen (1991) stated that relative interest of subjective norm in predicting behavior intention is expected to vary with the behavior and the situation. Hsu and Chiu (2004) found that subjective norms influence behavior intention in using technology. Bhattacharjee (2000) indicated that subjective norms includes two forms of influence that is, interpersonal and external influences. Condition in the field study indicated that the tax payers were supported by their friends and colleagues to perform annual tax income reporting through e-filing system. Tax payers were also knew e-filing system from news reports and popular media. The problem is the lack of network system or access to the system that requires a fast information and communication technology.

The third variable is perceived behavior controls that consist of the internet self-efficacy, perceived controlability, and perceived resources will affect the behavior intention to use e-filing system. These results are in accordance with the opinion that self efficacy is the ease or the difficulty to do a certain behavior, or to belief in individual to do these behaviors, while perceived controlability is control against behavior or belief about how far do a certain behavior (Ajzen, 2002). Related to self efficacy, individual will feel more satisfied with behavior if they will be able to do it (Bandura, 1997). In the future, it is expected that taxpayers will voluntarily visit web-site, download software and data on web-site, in reporting their annual tax income. Further, they would overcome barriers and seek access to sources to use e-filing system for their annual tax report (SPT).

Based on the results of this study, there are two things to be considered by Indonesian government (tax department), first the quality of e-filing system (ease of use, speed access, reliability, flexibility and security). Second the quality of information (completeness, relevance, accurate, time lines and information presentation) in order to create satisfaction for e-filing users.

## 5. Conclusion

The objective of this study is to investigate the implementation of e-filing systems taxation policy by using decomposition theory of planned behavior. This theory is used to understand and test the influenced factors in the usage of electronic based annual tax report (e-filing) and the persistent of e-filing system in Indonesia. Using SEM statistical method, the results showed that not only e-filing user's attitude variable which includes ease of use, e-filing usage, risk, and playful perceptions influence to the users' intention to use the e-filing facilities, but also the control of perception variable influence the users' intention to use e-filing. These results indicated that Indonesian citizens' intention to use the e-filing facilities to report their annual tax income is depend upon their attitudes and controls on the systems. Even if Indonesian tax payers realized that with e-filing systems they will be able to increase the effectiveness, more optimize services, hasten and improved efficiency in annual tax reporting, the taxpayer has not completely understands about how to operate the e-filing system. Therefore, it is imperative for the government to socialize and educate taxpayers on the importance of SPT e-filing systems.

At least four limitations should be noted in this study. First, the data were collected only in Surabaya city; the characteristic of these taxpayers surveyed might be different from those in other areas or countries.

Second, since individual informant provide the empirical data, possible biases or preferences (e.g. learning styles, communication methods, social preferences, etc) may exist due to different personal experiences, family, or educational background. Third, this study didn't control for other variables (e.g. firm's size, taxpayers' age, type of industry, etc) that may influence the relationship in the decomposed theory of planned behavior model. Finally, this study only focused on the behavior of taxpayers from the side of attitude, subjective norms and perceived behavior control. Future study may investigate from the point of view of the system itself, such as system facilities.

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