

## THE DETERMINANT IN E-COMMERCE BEHAVIOR WITH DECOMPOSED THEORY OF PLANNED BEHAVIOR MODEL

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### ABSTRACT

*This study aims to predict and identify the determinants of behavioral intention in E-Commerce. The variables and sub variables that affect behavioral intention in this study is the perceived usefulness, perceived ease of use, trust, compatibility, interpersonal influence, external influence, self-efficacy, facility of condition, attitudes, subjective norm, and perceived behavioral control. This study is a replication and development of a Decomposed Theory of Planned Behavior model from previous research. Data of this study was gathered through a survey conducted students of undergraduate, graduate, post-graduate, and PPAk program in the Faculty of Economics and Business of Brawijaya University who have the intention to make purchases of goods and services through E-Commerce, from which 333 data are processing with SmartPLS. The result of this study show that perceived usefulness, perceived ease of use, trust, and compatibility have a positive influence on attitudes. Futhermore, interpersonal and external influence have a positive influence on subjective norm and self-efficacy and facility of condition have a positive influence on perceived behavioral control. Finally, attitudes, subjective norm, and perceived behavioral control have a positive influence on behavioral intention.*

Keywords: Behavioral Intention, E-Commerce, Decomposed Theory of Planned Behavior, SmartPLS

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### Introduction

Technology was created and developed to facilitate human activities by processing information through a system called information systems. Information systems are official procedures for data that has been processed and sent to users (Hall, 2001: 7). Accounting information system is one type of information system that is utilized in various accounting activities such as the sale of products or services, procurement of procurement, payment received, and other accounting activities. One example of purchasing accounting information systems is the purchase of goods or services, namely E-Commerce services. This study raises the issue of interest in buying through E-Commerce. Motivation researchers question interest because, first, learning the interests of individuals will be able to understand various kinds of problems that will arise and know various important information. In the past several rounds, many information technology systems failed to improve poor technical quality. After repairs are carried out, a failed implementation is also carried out. Some preliminary studies reveal the facts about this failure lies in the behavioral aspects (behavior) associated with human factors of the system (Hartono, 2007: 1; Windarta, 2011).

Behavioral intention is a necessity to do certain and its nature can change which can be caused by changes in one's economic status, education level, domicile area, work conditions full of consideration, information about support needs nearby, and factors from in the individual person himself. (Hartono, 2007: 25). Interest in behavior can be done, whether accepted or rejected. Therefore, behavior (behavior) is interpreted as an act or tangible activity that is carried out by someone if they have an interest (behavioral intention) to do (Hartono, 2007: 25 and Muntianah et al. 2012). Behavior can be influenced by cultural, social, personal, and psychological factors. According to Muebarak (2009), by studying a person's behavior it will be able to obtain three types of information that are quite important, namely understanding, related facts related to humans, and theories that guide why the next process occurs. Requires, would prefer for someone to be more selective and effective in choosing the right method, model, or choice.

Second, the results of Taylor and Todd (1995) research prove that behavioral intention is a good predictor of the use of technology by system users. Lin (2007) study examined the interest of consumers shopping online in North Taiwan and revealed that behavioral intention was the main determinant of real usage behavior. Research by Neufeld et al. (2007) on charismatic leadership and user acceptance of information technology, research by Shih and Fang (2004) on the use of internet banking in Taiwan, and Taylor and Tod (1995) research on IT use in Canada giving the same conclusion as Lin (2007) study.

However, what needs to be considered is that interest in behavior is not permanent (can change) along with the time and conditions that exist. Accuracy of predictions will usually decrease based on the amount of time that occurs between measurements of interest with observations of behavior (Hartono, 2007: 29). For example, after measuring the factors that influence the appearance of individual interest in using certain information technology, the individual then changes his opinion and refuses to use it after studying more deeply and finds that the information technology that will be used is not in accordance with the costs and conditions of his residence. The refusal is a failure to implement an information technology system and can harm the seller. The reasons for the rejection of the online shopping system include, consumers cannot know the honesty of the seller, the quality of the website that is difficult to understand, access to sites that require a long time, the compatibility between the information and the questionable items, information that is not satisfying consumers, and fear of consumers to take advantage of online shopping facilities.

There are a various types of events that can change a person's behavioral. Learning about behavioral intention can predict behavior more deeply. This is in accordance with the interests of Ajzen which is not just predicting human behavior, but more deeply related to the identification of causes that arise from the existence of an interest in behavior, especially behavior in volitional (Hartono, 2007: 31). Therefore, researchers are interested in identifying the cause of the emergence of an interest in buying behavior, especially in E-Commerce services. If online sellers can find out various factors that influence consumers' interest to shop online, it is expected to be an additional information for sellers regarding the description of consumer behavior in the online market as well as to improve sales strategies in the future in order to minimize the possibility of rejection from consumers.

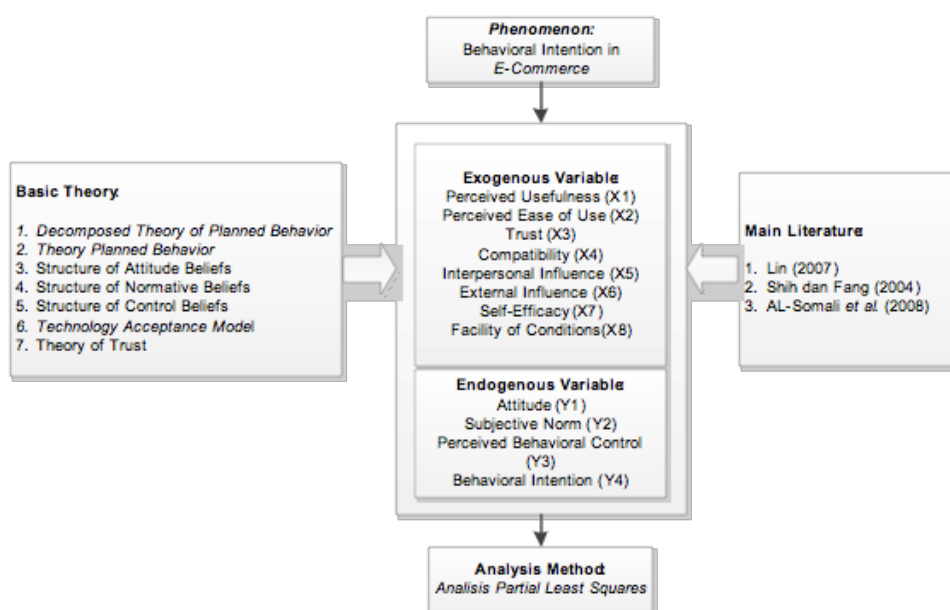
Third, Lin (2007) revealed some limitations, such as 1) only focusing on respondents who have high experience in shopping online, 2) only focusing on online book store shopping systems so that they were unable to generalize behavior interest in the entire online store, and 3) suggested to conduct research in different countries to find out consumer behavior in different cultures. Through these limitations, this study then examines the interest in online shopping behavior in existing cultures in Indonesia and extends the object to both online shop consumers who are experienced and new consumers who are interested and have just used the technology.

Fourth, there are differences results of several previous studies conducted by Venkatesh and Davis (2000), Shih and Fang (2004), Cheng et al. (2005), Nor and Pearson (2007), Lin (2007), Al-Somali et al. (2008), and Nazar and Syahran (2008). Based on the differences in the results of the research, the researchers then conducted further research on the factors that influence the interest in purchasing behavior through E-Commerce by combining the research models of Shih and Fang (2004), Lin (2007) and Al-Somali et al. (2008).

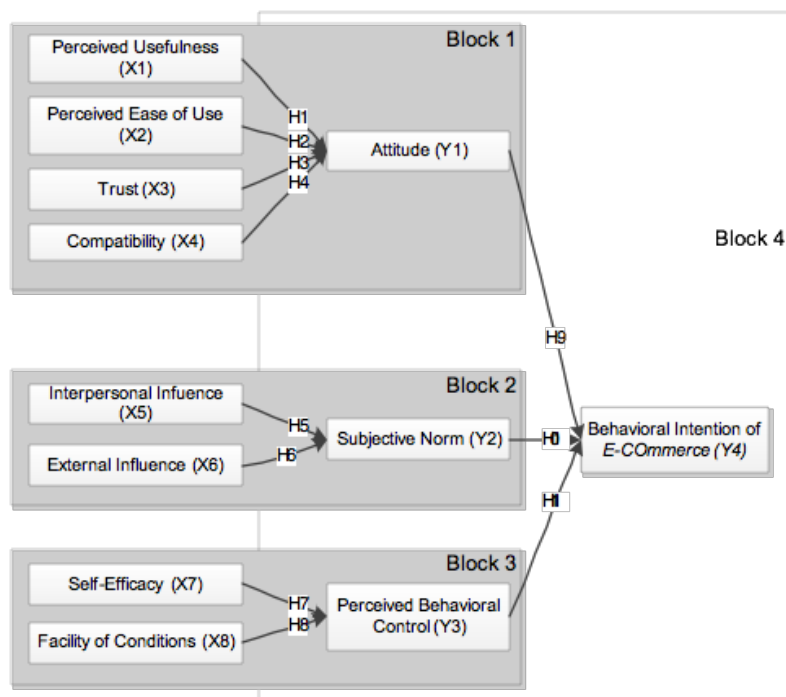
E-Commerce is part of E-Business which is generally defined as any form of trade in goods or services involving consumers, manufacturers, service providers, and intermediary traders using electronic media, especially internet media (Iman, 2013). The focus of research on E-Commerce is due to consumer reject to transact using online media. This reject can trigger the failure of E-Commerce implementation and causes losses. The cause of rejection because consumers don't know the honesty of the seller, the quality of the website that is difficult to understand, access to sites that take a long time, question the suitability of information and goods, information that has not been able to satisfy consumers, and fear of consumers to utilize shopping facilities on line. If online sellers can identify factors that influence their interest in online transactions, it is expected to be a source of information for sellers to improve sales strategies to minimize rejection and losses from their customers.

The research framework is illustrated in Figure 1 below. This study aims to predict and identify determinants of behavioral intention in buying and selling transactions using online media, better known as B2C E-Commerce. The basic theory in this research is Decomposed Theory of Planned Behavior supported with Technology Acceptance Model, beliefs theory, and the other like Figure 1 below. The determinants of behavioral intention are explained through several previous studies, namely by Lin (2007), Al-Somali et al. (2008), and Shih and Fang (2004). Based on three previous studies, there were eight exogenous variables (perceived usefulness, perceived ease of use, trust, compatibility, interpersonal influence, external influence, self-efficacy, Facility of conditions) and four endogenous variables (attitude, subjective norm, perceived behavioral control, behavioral intentions). This research use PLS for analysis method.

Picture 1. Conceptual Frameworks



Picture 2. Research Hypothesis



The determinants of behavioral intention studied will be divided into four blocks as shown in Figure 2 above. Block 1 shows the structure of attitude beliefs that are guided by TAM with sub-variables of perceived usefulness, perceived ease of use, beliefs that are replicated from the Al-Somali et al. (2008) and the compatibility of the research of Shih and Fang (2004). Block 2 shows the structure of normative beliefs with interpersonal influence and external influences taken from Lin (2007). Block 3 which shows the structure of control beliefs with self-efficacy and facility of conditions from Shih and Fang (2004). And block 4 shows the behavioral results theorized by TPB with attitude, subjective norms and perceived behavioral control from Lin (2007). The overall variables and sub-variables in this study refer to the Decomposed Theory of Planned Behavior model.

Perceived usefulness is the extent to which someone believes that using a technology will improve the performance of workers (Hartono, 2007: 114). Perceived usefulness in E-Commerce is a benefit obtained by its users to encourage the effectiveness of purchasing goods or services, making it easier to search and compare products without taking a lot of time. Cheng et al. (2005) conducted a study of the factors that influence the application of internet banking using the Technology Acceptance Model. The sample in this study amounted to 203 internet banking users who were randomly selected from the customer list in the Yellow Pages and processed using SEM. The processing results provide empirical evidence that perceived usefulness has a positive effect on the attitude of using internet banking. This result is consistent with Lin (2007) in the context of online shopping for students in Taiwan, and Al-Somali et al. (2008) in the context of internet banking in Saudi Arabia. These results indicate that the better the perceived usefulness of individuals as consumers will provide a good attitude towards the use of information technology. From this description, alternative hypothesis formulated. But in the other hand, Kusuma and Susilowati (2007) and Meiranto (2011) has a different result. Study of Kusuma and Susilowati (2007) about internet banking usage in Yogyakarta found that perceived usefulness has no effect on attitude. From the description, alternative hypothesis formulated H1: Perception of usability has a positive effect on the attitude of using E-Commerce.

Perceived ease of use is the extent to which a person believes that using a technology will be free of effort (Hartono, 2007: 115). Kusuma and Susilowati (2007) explain that a system that is often used means that the system is more familiar, easier to learn and operate, add user skills, and easier to use by users. Perceived ease of use can reduce effort, both time and energy users in learning how to transact using E-Commerce. Therefore, the perceived ease of use can be one of the predictors of the attitude of using a technology. Some of the previous studies suggest that the perceived ease of use has a positive effect on the attitude of using information technology. Meiranto (2011) relates to factors that influence the actual acceptance and use of BRI Information Technology Systems (BRINETs) in terms of the use of the TAM model. A sample of 70 respondents from the Semarang Branch of BRI employees who used BRINETs were processed using PLS and provided empirical evidence that the perceived ease of use had a positive effect on the attitude of using the technology. These results indicate if BRINETs are easy to use, it will make employees feel comfortable using BRINETs. The results of this study are consistent with the research of Lin (2007), Kusuma and Susilowati (2007), and Combs et al. (2009). It means that the easier the use of a technology can increase a positive attitude from someone to want to adopt the information technology. But, Cheng et al. (2005) and Wibowo (2007) has a different result. Wibowo (2007) found an empirical result that perceived ease of use has no effect on application of technology information system. From the description, alternative hypothesis formulated H2: Perception of ease of use has a positive effect on the attitude of using E-Commerce.

Trust is the willingness of a party to be sensitive to the actions of other parties based on the expectation that the party trusted will carry out certain actions (Nazar and Syahran, 2008). In the context of E-Commerce, consumers must be sensitive to sensitive information that they must provide when making transactions with online stores, such as address information and credit card information, and another. Consumers cannot monitor in full related to the use of this important information so that there will be reluctance from consumers to share information that is considered important. In fact, on the other hand the online store needs this important information. The high or low level of trust in consumers can be based on available information related to the online store and the accuracy of the consumer in making an assessment. Jarvenpaa et al. (2000) conducted research on consumer trust in online stores. The number of samples in this study were 184 respondents, 120 respondents carried out a lab test and 64 respondents conducted a questionnaire filling. The results of this study indicate that trust has a positive effect on the attitude of using online stores. Lee (2005) identified interactivity components and examined the impact of perceived interactivity on customer trust and interest in transactions with mobile commerce. Data was collected through personal interviews with graduate students and workers in Seoul, Korea. The results of these studies indicate that trust has a positive effect on consumer attitudes in transactions using mobile commerce. These results indicate that when the individual's trust in the use of an information technology is greater, it can increase the positive attitude of the individual. But, Nazar and Syahran (2008) has a different result. Through their research about internet banking usage found that trust has no effect the attitude of consumer to make online transaction. From this description, H3 is formulated: Trust has a positive effect on the attitude of using E-Commerce.

The character of innovation such as compatibility provides a more efficient approach to assessing consumer attitudes in shopping online (Lin, 2007). In the context of E-Commerce, a person's lifestyle can influence his decision to adopt information technology. An individual who is mostly on the internet will be more likely to make shopping transactions online. In addition, an individual who has high mobility will also be more likely to transact online to get the goods or services he needs because it can save time when compared to traditional transactions by going directly to the store. Thus, if individuals feel that the innovation of an information technology is in accordance with their needs, there is a possibility that the individual will use the information technology. Research by Combs et al. (2009) aims to determine the factors that influence Thai people to adopt internet banking by applying the TAM model and innovation innovation. Samples were obtained from 400 Thai people who used internet banking. The results of this study indicate that compatibility has a positive effect on the attitude of adoption of internet banking in Thailand. This result is consistent with Nor and Pearson (2005) and Lin (2007). When individuals feel suitable for an information technology both to fulfill their needs or desires, a good attitude will also emerge towards the utilization of information technology. In the other hand, Shih and Fang (2004) found that compatibility has no effect on attitudes in adoption of technology information system. From this description, alternative hypothesis formulated H4: Compatibility has a positive effect on the attitude of using E-Commerce

Interpersonal influences are influences that arise from the closest environment of the individual, such as friends, relatives, and family (Nor and Pearson, 2005). Hartono (2007: 65) defines normative trust as a belief about normative expectations from others and motivation to support these expectations. In the context of E-Commerce, a person's decision to transact or not at a particular online store can also be influenced by family or friends who already have prior experience. Teo and Pok (2003) take the context of research related to the use of WAP-enabled cellphones among internet users. The data obtained amounted to 1,012 respondents which were divided into two categories, namely 587 respondents were members of a forum and 425 individual respondents were sent via email. The analysis technique was carried out using SEM and obtained empirical evidence that the interpersonal influence sub-variables had a positive effect on subjective norms of using WAP-enabled on mobile phones in both types of categories. The same results are also found in Lin (2007) and Shih and Fang (2004). From the description above, alternative hypothesis H5 is formulated: Interpersonal influences have a positive effect on subjective norms of E-Commerce use.

External influences are influences from outside the individual or influence from other individuals who do not have a direct relationship with the individual. Hsu and Chiu (2004) argue that in research with the context of internet use, measurement of subjective norms needs to consider external influences as well as only interpersonal influences. External influences can arise from colleagues or other individuals who do not have a direct relationship with consumers. Nor and Pearson (2005) took a sample of 812 people using internet banking in Malaysia to test the receipt of internet banking in Malaysia. The results showed that external influences had a positive effect on subjective norms of internet banking acceptance in Malaysia. The results obtained in this study are external influences which are part of subjective influences positively influence the subjective norms of internet banking acceptance in both countries, namely Greece and Bulgaria. From this description, alternative hypothesis H6 is formulated: External influences have a positive effect on subjective norms of E-Commerce use.

Self-efficacy is a belief in one's own ability to perform a certain behavior Hartono (2007: 72). Lin (2007) in his study stated that consumers who have confidence or have experience in online purchases will be more able to accept the use of online stores. The experience of consumers in using the internet can also increase their confidence to transact online. Research by Teo and Pok (2003) regarding the use of WAP-enabled cellphones among internet users shows that self-efficacy has a positive effect on subjective norms of using WAP-enabled on mobile phones in both categories of respondents, namely respondents who are members of a forum and respondents who are individuals sent by email. Shih and Fang (2004) tested the factors that influence actual use of internet banking in Taiwan. The sample used was 425 bank customers in Taiwan who used internet banking. The results of the study provide empirical evidence that self-efficacy has a positive effect on perceived behavioral control. From this description, formulated alternative hypothesis H7: Self-efficacy has a positive effect on the perception of behavioral control using E-Commerce.

Shih and Fang (2004) argue that the facility of conditions reflects the availability of the resources needed to perform certain behaviors, for example the existence of time, money, and other supporting infrastructure that can facilitate users to access. Nor and Pearson (2005) examined the acceptance of internet banking in Malaysia. The sample used in this study amounted to 812

people using internet banking in Malaysia and processed with SEM techniques. The results of the study concluded that the facility of conditions had a positive effect on perceived behavioral control of internet banking acceptance in Malaysia. But, study Lin (2007) about online shopping in Taiwan has result that facility of conditions has no effect on perceived behavioral control. This result consistent with Shih and Fang (2004). From this description, alternative hypothesis H8 is formulated: Facility conditions have a positive effect on the perception of behavior control using E-Commerce.

The attitude of individuals in E-Commerce shows the level of the individual towards evaluating good or bad about the existence of E-Commerce. As consumers, before transacting with one of the online stores, they will certainly look for information about the online store. The more positive information received by consumers, will lead to a good attitude from the consumer side. Wibowo (2007) examined the behavior of information system users based on the factors that exist in the Model Technology Acceptance at a university. The number of samples obtained by 150 respondents was then analyzed using SEM. The results of the analysis produced empirical evidence that the attitude of positive influence on the interest in the use of information systems. The more positive the individual's attitude, the greater the individual uses the desired information system. Park and Chen (2007) conducted research with the aim of knowing the motivation of individuals to adopt smartphones to doctors and nurses. Using the basis of the Technology Acceptance Model, the study examined 133 respondents who were doctors and nurses who used smartphones. The results of the analysis also provide empirical evidence that attitudes positively influence the behavioral intention in smartphone usage on doctors and nurses. Nazar and Syahrani (2008) conducted further testing to understand the effects of privacy, security, trust, experience, and interest in online transaction behavior. As many as 200 students in Yogyakarta internet banking users were taken as respondents. The results of the study concluded that attitudes positively influence the behavioral intention to transact online. But Hasan (2007) found a different result. From this description, alternative hypothesis H9 is formulated: Attitudes positively influence behavioral intentions using E-Commerce.

Subjective norm is a function that assesses that someone's interest in performing behavior is predicted by how he thinks other people will judge if he does that behavior Hartono (2007, 32). Unlike the attitude variable which is more personal, variable subjective norms are more about social influence and normative considerations. Hsu and Chiu (2004) argue that in the context of internet application, a measure for subjective norms considers the interpersonal and external influences of the individual concerned. In the context of E-Commerce, transactions are carried out indirectly face-to-face so that consumers cannot directly assess honesty from online store sellers. Thus, the existence of informants who have experience in conducting transactions with these online stores becomes important for consumers. The more positive information provided regarding online stores, the more it can attract consumers to transact at the online store. Sometimes there are consumers who trust traditional purchases more. However, with the influence given by the closest parties about the ease of making an online purchase, it can also change the perception of consumers to try to transact online. Baker et al. (2007) tested the influence of sex, age, and education on the implementation of new technology in Saudi Arabia by basing the Theory of Planned Behavior. A total of 1,088 samples were obtained and analyzed by PLS. The results of this study subjective norms positively influence the behavior intention in implementing new technology in Saudi Arabia. From this description, alternative hypothesis H10 is formulated: Subjective Norms have a positive effect on behavioral intention in E-Commerce use.

Perceived behavioral control is the ease or difficulty of perception to perform a behavior (Hartono, 2007: 64). Nazar and Syahrani (2008) argue that with the perceived behavioral control, it will show easy or difficult for someone to take action and is considered a mirror of past experience with obstacles and obstacles that have been anticipated. Nor and Pearson (2005) tested the acceptance of internet banking in Malaysia by using Decomposed Theory of Planned Behavior. The sample used in this study amounted to 812 people using internet banking in Malaysia. Data were analyzed using SEM techniques and produced empirical evidence that perceived behavioral control has a positive effect on behavioral intention in internet banking acceptance in Malaysia. Lin (2007) learned of consumer interest in online shopping with a sample of 297 students in Taiwan using E-Commerce obtained empirical evidence that perceived behavioral control had a positive effect on behavioral intention in E-Commerce usage. Although there are previous study has a consistent result, study Teo and Pok (2003) provide an empirical result that perceived behavior control has no effect on behavioral intention in information technology usage. From this description, alternative hypothesis H11 is formulated: Perception of behavior control has a positive effect on behavioral intentions in E-Commerce use.

## METHODOLOGY

This study predict and explain causal relationships and influences between variables using survey methods and try to explain existing phenomena based on theories and hypotheses. The subjects of this study were S1, S2, S3, and Accounting Professional Programs of the Faculty of Economics and Business Brawijaya University who were still active in the even semester of the 2013/2014 academic year. Students are chosen because, first, students are individuals who understand the development of technology, technology observers, and the highest technology users in the world (BBC News, 2018). Second, students are one of the consumers who have a large influence on the purchase of goods through E-Commerce to always look fashionable and up to date. (Listiyowati, 2012). Third, students are the largest proportion of internet users and online stores consumers are generally young and highly educated individuals. Thus, the use of students as subjects in this research is considered more suitable. (Lin, 2007). Fourth, Saraswati (2011) research mentions 234 students majoring in accounting department of Faculty of Economics and Business, Brawijaya University who use E-Commerce for online purchases. Thus, it was concluded that there were enough students in the Faculty of Economics and Business, Brawijaya University who made purchases through E-Commerce.

This study uses non-probability sampling method with convenience sampling method, because researcher does not know the number of students who will and who have used E-Commerce. Population in this study was 4.780 students, based on information from the academic section in Faculty of Economic, Brawijaya University. The minimum number of samples in the study was determined based on Hartono (2011: 68) which requires a minimum sample size using PLS to be 10 samples for each pathway.



There are 11 paths in this study, so the minimum number of samples is 11x10, which is 110 samples. Data collection techniques in this study used the questionnaire survey method that were distributed directly, through intermediaries, and via e-mail. The questionnaire instrument was replicated from Lin (2007) and Al-Somali et al. (2008) used a seven-point likert scale. Through 369 questionnaires distributed, 333 questionnaires were returned and could be processed to be sample.

Hypothesis testing is done using Partial Least Square (PLS) analysis techniques with SmartPLS software ver. 2.0 M3. Evaluation of the hypothesis model is done by evaluating the outer model and inner model. Outer model is a measurement model to assess the validity and reliability of the model (Hartono, 2011: 69). Validity test is done to determine the ability of the questionnaire or research instrument to measure what should be measured, while reliability testing is used to measure the consistency of measuring instruments in measuring a concept or can also be used to measure the consistency of respondents in answering statement items in questionnaires or research instruments used (Hartono, 2011: 69). Inner model is a structural model testing to predict the causality relationship between latent variables. Inner model testing is done through the bootstrapping process to obtain the T-statistic parameter. T-statistic parameter can be predicted whether there is a causality relationship (Hartono, 2011: 69).

**RESULT**

This study uses two evaluation models, namely outer model and inner model. First, evaluation of outer model. Evaluation of the outer model aims to assess the validity and reliability of the model used by the researcher. Three stages in testing the outer model, namely, convergent validity test, discriminant validity test, and reliability test. The parameters used in outer model shown in Table 1 below:

**Table 1. Outer Model Parameter**

Testing	Parameter	Rule of Thumbs	Notes
Convergent Validity Testing	<i>Faktor Loading</i>	More than 0.7	- Indicators with factor loading below 0.4 must be removed from the model. - Indicator with factor loading between 0.4 – 0.7, must be analyze in advance the impact of the decision to remove the indicator in AVE and Composite Reability value.
	<i>Average Variance Extracted (AVE)</i>	More than 0.5	-
	<i>Communality</i>	More than 0.5	-
Diskriminant Validity Testing	AVE’s root and latent variable correlation	AVE’s root > Latent Variable Correlation	-
	<i>Cross Loading</i>	More than 0.7 in one variable	-
Reability Testing	<i>Cronbach's Alpha</i>	More than 0.6	-
	<i>Composite Reability</i>	More than 0.7	-

Source: Hartono (2011: 71) and Sholihin and Ratmono (2013: 67)

The parameter in Table 1 above are used to analyze the result of Smart PLS testing. Based on data processing with Smart PLS obtained AVE values and communality of more than 0.5, and the factor loading value of each indicator more than 0.7. It is concluded that this study has met the convergent validity test. Next, in discriminant validity testing. The results of data processing with Smart PLS showed that the AVE’s root was more than latent variable correlation in each variable and the cross loading value was more than 0.7 in one variable. In conclusion, the variables and indicators in this study have met the discriminant validity test. The testing in outer model evaluation is reliability testing. Based on Smart PLS results, the cronbach’s alpha value is more than 0.6 and the composite reliability value is more than 0.7. The results concluded that this study had fulfilled the reliability test. Thus, the final conclusions obtained through evaluating the outer model are the variables and indicators in this study that are valid and reliable.

Second, evaluation of inner models. Evaluation of inner model to predict the causality relationship between latent variables. The parameters in the inner model testing are R<sup>2</sup> and path coefficients. Sholihin and Ratmono (2013: 72) state that the value of R<sup>2</sup> is used to measure the percentage of variance in endogenous variables that can be explained by exogenous variables. Based on Smart PLS testing, the R<sup>2</sup> value of the attitude variable is 0.623. It means that the percentage variance in attitude variables that can be explained by perseived usefulness, perceived ease of use, trust, and compatibility is equal to 62.3%, while the rest is explained by other variables outside the model. The value of R<sup>2</sup> subjective norm variable is 0.551. It means, the percentage variance of subjective norm variables that can be explained by interpersonal influence and external influences is equal to 55.1%,

while the remainder is explained by other variables outside the model.  $R^2$  value of perceived behavioral control variable is 0.522. It means, the percentage variance in the perceived behavioral control variable which can be explained by self-efficacy and facilitation condition is 52.2%, while the rest is explained by other variables outside the model. The last,  $R^2$  value of the behavioral intention variable is 0.640. It means, the percentage variance in behavioral intention can be explained by attitudes, subjective norms, and perceived behavioral control is equal to 64%, while the rest is explained by other variables outside the model.

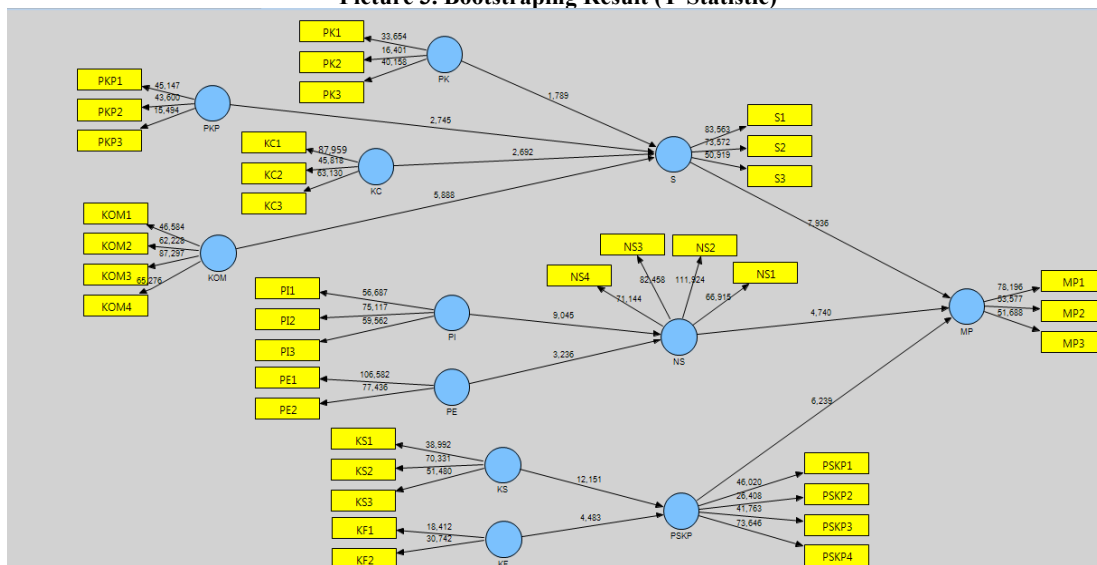
After discussion about result of inner model testing, next step is discussion about result of path coefficient value. The path coefficient value indicates the level of significance in testing the hypothesis and symbolized by T-statistic. If T-statistic value (T-statistic)  $\geq 1.64$ , the research hypothesis (Ha) is supported but if the T-statistic value (T-statistic) is  $\leq 1.64$ , the research hypothesis (Ha) is not supported. Conclusion The processing results are summarized in Table 2 and Figure 3 below:

**Table 2. Path Coefficient**

Hypothesis	Original Sample (O)	T Statistics ((O/STERR))	Conclusion
H1 : PU -> A	0.097	1.789	Supported
H2 : PEOU -> A	0.212	2.745	Supported
H3 : T -> A	0.162	2.691	Supported
H4 : COM -> A	0.439	5.888	Supported
H5 : II -> SN	0.574	9.044	Supported
H6 : EI -> SN	0.224	3.235	Supported
H7 : SE -> PBC	0.560	12.151	Supported
H8 : FC -> PBC	0.227	4.483	Supported
H9 : A -> BI	0.422	7.936	Supported
H10 :SN -> BI	0.214	4.740	Supported
H11 : PBC -> BI	0.306	6.238	Supported

Source: Data Processing

**Picture 3. Bootstrapping Result (T-Statistic)**



Notes: PK : Perceived Usefulness, PKP : Perceived Ease of Use, KC : Trust, KOM : Compatibility, PI : Personal Influence, PE : External Influence, KS : Self-Efficacy, KF : Facility Of Conditions, S : Attitude, NS : Subjective Norm, PSKP : Perceived Behavioral Control, MP : Behavioral Intention

The H1 hypothesis states that perceived usefulness has a positive effect on the attitude of using E-Commerce. The test results show that the H1 hypothesis is supported. Cheng et al. (2005), Lin (2007), Hasan (2007), Wibowo (2007), Liao et al. (2007),

Park dan Chen (2007), Benamati dan Rajkumar (2008), Al-Somali et al. (2008), and Combs et al. (2009) also has the same results. These results explain that when an individual believes that the use of E-Commerce can be useful, can improve its performance, and obtain other benefits for it, then the individual's attitude towards E-Commerce services will be more positive. This can increase the emergence of interest to use E-Commerce services in making purchases of goods or services desired. Thus, the perception of usability is one of the determinants of consumer attitudes especially for FEB UB students to make purchase transactions through E-Commerce.

H2 hypothesis states that the perceived ease of use has a positive effect on the attitude of using E-Commerce. The test results concluded that the H2 hypothesis was supported. This result is consistent with the results of Lin (2007). These results explain, when an individual believes that E-Commerce services are easy to use, then raises a positive attitude in the individual and enlarges the interest or desire of the individual to use E-Commerce services in the purchase transaction of goods or services he wants. If E-Commerce services are created and developed with good features and make it easier for consumers to find information or shop, consumers will be more interested and can spend their time shopping through E-Commerce. Thus, the perception of ease of use is one of the determinants of consumer attitudes, especially for FEB UB students who are interested in making purchase transactions through E-Commerce.

The H3 hypothesis states that trust has a positive effect on the attitude of using E-Commerce. The test results show that the H3 hypothesis is supported and is consistent with the results of Nor and Pearson (2007) research. These results explain that trust is an important factor that is considered by consumers to choose to transact online. Consumers must be sensitive to the sensitive information they provide when making transactions with online stores because consumers cannot monitor in full regarding the use of this important information. The higher the trust in consumers, the higher the loyalty given by consumers to the E-Commerce service providers that they use. Thus, trust is one of the determinants of consumer attitudes, especially for FEB UB students who are interested in making purchase transactions through E-Commerce.

The H4 hypothesis states that compatibility has a positive effect on the attitude of using E-Commerce. The test results show that the H4 hypothesis is supported. This result is consistent with the research of Teo and Pok (2003) and Lin (2007). Shih and Fang (2004) argue that an innovation will be used when judged to be compatible with the job responsibilities and consumer value systems. When individuals feel suitable for E-Commerce services, both used to fulfill their needs or desires, a positive attitude will emerge for this service. These results indicate that the suitability of a technology or need will influence consumers to form a positive attitude towards the use of E-Commerce. Thus, compatibility is one of the determinants of consumer attitudes, especially for FEB UB students who are interested in making purchase transactions through E-Commerce. In this study compatibility is a factor that has the highest positive influence on the attitude of using E-Commerce among FEB UB students. It can be explained that FEB UB students are positive towards E-Commerce because these services can meet their needs and lifestyle.

The H5 hypothesis states that interpersonal influences have a positive effect on subjective norms of E-Commerce use. The test results show that the H5 hypothesis is supported. This result is consistent with the research of Teo and Pok (2003) in the context of using WAP-enabled, Nor and Pearson (2005) research in the context of internet banking, and Lin (2007) research in the E-Commerce context. Information from the consumer's internal environment greatly influences the subjective norms of the use of E-Commerce services by these consumers. The more positive information provided by family, relatives, or close friends who have experienced before can provide a positive influence for consumers so that they are interested or interested in using E-Commerce in the transaction of purchasing goods or services. Individuals as consumers will pay more attention to the sources they can trust. When a trusted source provides positive information related to E-Commerce, the consumer will be more interested in using E-Commerce. It is evident in this study that interpersonal influence is the determining factor that has the greatest influence for consumers, especially FEB UB students towards subjective norms of E-Commerce use.

The H6 hypothesis states that external influences have a positive effect on subjective norms of E-Commerce use. The test results show that the H6 hypothesis is supported. Nor and Pearson (2005) research in the context of internet banking, as well as Lin (2007) research in the context of E-Commerce also provided results consistent with this study. Information related to information technology, especially E-Commerce, can not only be obtained from the nearest sources. It will also be good if consumers pay attention to information obtained from outside parties who have experience with E-Commerce sites, such as testimonials from other users, other consumer ratings, online news, and so forth. Consumers will be more freely interested or interested in using information technology because of the influence of other broader parties. Thus, external influences are one of the determining factors of subjective norms for consumers, especially for FEB UB students who are interested in making purchase transactions through E-Commerce.

The H7 hypothesis states that self-efficacy has a positive effect on the perception of behavioral control using E-Commerce. The test results show that the H7 hypothesis is supported. This result is consistent with research conducted by Teo and Pok (2003), Shih and Fang (2004) and Lin (2007). When an individual has the confidence to be able to operate an information technology especially E-Commerce will be able to make the individual comfortable when using it. Beliefs related to whether or not to use an information technology will give rise to control of its behavior. Usually this belief arises when the individual has the ability and access to learn how to use information technology that is new to him. So, it is necessary to have clear guidelines or procedures for using information technology and make it easier for new users to be able to master and understand the steps. Thus, self-efficacy is one of the determining factors of the perception of behavior control for consumers, especially for FEB UB students who are interested in making purchase transactions through E-Commerce. Self-confidence is a determining factor that has the most influence on the perception of behavioral control using E-Commerce in FEB UB students. This is because students are individuals who understand technology development and technology users who are good enough to feel confident that they can use a technology even though it is only using it first.



The H8 hypothesis states that the facility of conditions has a positive effect on the perception of behavioral control using E-Commerce. The test results show the H8 hypothesis is supported. This result is consistent with the research conducted by Nor and Pearson (2005). Not only the beliefs and factors needed in the individual's self, the availability of supporting facilities can also attract the interest of these individuals to use an information technology, especially E-Commerce. E-Commerce supporting facilities include the availability of supporting infrastructure such as the internet and PCs or electronic devices that make it easy to access. Although its influence on the perceived behavioral control is not as big as the factor of belief, when there are conditions and adequate facilities can increase the interest of consumers to use E-Commerce. Conversely, when the facility of conditions does not meet, it can reduce consumer interest in using E-Commerce.

The H9 hypothesis states that attitudes have a positive effect on behavioral intention in E-Commerce usage. The test results show the H9 hypothesis is supported. This result is consistent with research conducted by Wibowo (2007), Park and Chen (2007), and Nazar and Syahran (2008). The attitude of individuals in E-Commerce shows the level of the individual towards evaluating good or bad about the existence of E-Commerce. As a consumer, before making a transaction with one of the online stores, you will certainly find information about the online store. If more positive things are related to E-Commerce, it will be able to create a greater positive attitude towards consumers. A positive attitude that is getting higher, can increase interest in conducting online transactions. Thus, attitude is one of the determinants of behavioral intention for consumers, especially for FEB UB students. In this study, the attitude gave the most influence on the emergence of intention in using E-Commerce among FEB UB students.

The H10 hypothesis states that subjective norms have a positive effect on behavioral intention in E-Commerce usage. The test results show the hypothesis H10 is supported. This result is consistent with the research of Teo and Pok (2003) and Baker et al. (2007). The presence of informants who have experience in conducting transactions with online stores is important for consumers. The more positive information provided regarding online stores, the more it can attract consumers to transact at the online store. The use of E-Commerce will probably be influenced by various social pressures that come from the nearest environment (such as family, relatives, or close friends) or from a wider environment (such as mass media advertisements or testimonials given by consumers who have used it). Nor and Pearson (2007) explain that there is a positive influence between subjective norms on the intention in using information technology. These findings indicate that social pressure and social influence are factors that can influence the formation of behavioral intention in consumer. Thus, subjective norms are one of the determinants of behavioral intention for consumers, especially for FEB UB students. It can be explained that the behavioral intention of FEB UB students to use E-Commerce is generally affected by the social environment around them.

The hypothesis H11 states that the perceived behavioral control has a positive effect on the behavioral intention in E-Commerce usage. The test results show the hypothesis H11 is supported. This result is consistent with the research of Shih and Fang (2004), Nor and Pearson (2005) in the context of internet banking, and Lin (2007) research in the context of E-Commerce. In the context of E-Commerce, when consumers feel easier, feel confident that they can control their behavior, and have the necessary resources, these consumers will tend to choose to trade with E-Commerce. The higher the individual's confidence in using information technology and supported by adequate conditions to use it, the more likely the individual is interested in using the information technology he wants. Teo and Pok (2003) explain that the emergence of individual decisions to be intention in using information technology can be influenced that the use of information technology is considered easy and users can control when using it. When consumers feel they cannot control the use of E-Commerce, it will make it difficult for them when deciding to continue using E-Commerce. Thus, perceived behavioral control is one of the determinants of behavioral intention in use of E-Commerce for consumers, especially for FEB UB students.

## **CONCLUSION**

Through the results of this study, it can be concluded that the behavioral intentions of FEB UB students to use E-Commerce are determined by attitudes, subjective norms, and perceived behavioral control. In this study, attitudes have a more dominant influence on behavioral intentions. Meanwhile, perceived behavioral control gives a greater influence when compared to subjective norms. These results further reinforce that the Decomposed Theory of Planned Behavior model can be used to predict behavioral intention in the use of information technology. The attitude indicates that FEB UB students have positive evaluation results on purchasing services through E-Commerce. The attitude of encouraging the emergence of interest of FEB UB students to use E-Commerce services. Perceived behavioral control indicate that FEB UB students believe that when they can control what they are doing it will encourage greater interest in purchasing services through E-Commerce. Subjective norms indicate that the behavioral intention of FEB UB students to make purchases through E-Commerce is also due to information and influence from their interpersonal environment and external environment.

The emergence of a positive attitude from FEB UB students on purchases through E-Commerce is influenced by several factors, there are perceived usefulness, perceived ease of use, trust, and compatibility. These four factors indicate that E-Commerce services are useful, easy to use and learn, can be trusted, and in accordance with the needs and lifestyles of FEB UB students, thereby strengthening their positive attitude towards the service. The magnitude of the perceived behavior control is influenced by factors of self-efficacy and facility of conditions. Both of these factors indicate that according to FEB UB students the belief in their own abilities and the existence of facilities that support the functioning of E-Commerce services becomes important for them to exercise control over the behavior they will carry out.

Subjective norms are influenced by interpersonal influences and external influences. Both of these influences indicate that for FEB UB students the influence of the closest parties such as family, relatives, and friends as well as influences from external parties such as mass media advertisements and other consumer experiences can influence their interests. When the influence is positive, it can increase the interest of FEB UB students to use E-Commerce services.

## LIMITATION

Some limitations in this study include, firstly, imperfect research design, seen from the value of R2 on attitude, subjective norms, perceived behavior control and behavioral intention which still range between 55% - 64%. This value explains that the sub-variables and variables used in this study still have an average influence of 50%, so it is considered not able to explain attitude, subjective norms, perceived behavior control, and behavioral intention perfectly. Second, the motivation of respondents is still considered low by researchers. Seen from 29 questionnaires (7.86%) did not return and seven questionnaires were not fully filled so that they could not be used. The researcher has tried to motivate respondents by giving a return, but there are still respondents who did not fill out the questionnaire well.

The hope is that further research can expand the research model on the use of technology to be able to cover important theoretical factors, as suggested by Venkatesh and Davis (2000). With the expansion of the model, it is hoped that this model can be further refined. Secondly, it is expected that further researchers will test different cultures and individuals to see the consistency of the results of the study. If it is again proven to have the same results as this research, it indicates that the model in this study has high consistency to be applied in Indonesia. Third, it is hoped that further research can distinguish male and female behavioral intentions in order to obtain better and specific results. This is because there are differences in factors that affect the attractiveness between men and women in purchasing goods or services, especially online. Fourth, further research is suggested to be able to continue the research model to identify the real behavior of E-Commerce usage for goods and services purchase transactions.

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