THE INFLUENCE OF TECHNOLOGY ACCEPTANCE MODEL (TAM) TOWARDS CUSTOMER SATISFACTION OF ZAHIR ACCOUNTING APPLICATION

Haris1), Abdul Ghofar, DBA., CA., AK2) and Dr. Endang Mardiati, Msi., CA., Ak2)
1) Student of Accounting Studies Master Program, Faculty of Economics and Business, University of Brawijya Indonesia
2) Accounting Lecturer in Faculty of Economics and Business, Universitas of Brawijya Indonesia
Email correspondence: hariskuddah47@gmail.com

Abstract: This study aims to analyze the influence of perceived ease of use principle towards customer satisfaction of zahir accounting application, analyze the influence of perceived usefulness principle on customer satisfaction of zahir accounting application, analyze the influence of actual usage principle towards customer satisfaction of zahir accounting application, analyze the influence of attitude toward using principle on customer satisfaction of zahir accounting application, and analyze the influence of behavioral intention principle towards customer satisfaction of zahir accounting application. This study uses a quantitative approach and is categorized into an explanatory research with total population of 1151 users. The sampling technique with incidental techniques in this study yields a number of sample of 100 users. The type of data used in this study is primary data which obtained by using questionnaires. The Inferential Statistical Method used in the data analysis of this study is Partial Least Square (PLS). Perceived ease of use has a positive effect on customer satisfaction. It means the higher customer convenience in using the Zahir accounting application, the higher customer satisfaction resulted. Perceived usefulness has no effect on customer satisfaction, meaning that there is no significant effect of perceived usefulness on customer satisfaction. Attitude toward using has a positive effect on customer satisfaction, meaning that the higher consumer's attitude in using Zahir accounting application, the higher customer satisfaction resulted. Customer satisfaction has a positive impact on behavioral intention, meaning that the higher customer satisfaction in using zahir accounting application, the higher customer's behavioral intention to use the application, and vice versa. Behavioral intention has a positive effect on actual usage, meaning that the higher customer's intention to use zahir accounting application will result in a significantly higher customer behavior in using the zahir accounting application. This is one of several accounting scientific studies that investigate customers of zahir accounting applications relating to TAM (Technology Acceptance Model) and Customer Satisfaction.

Keywords: Perceived ease of use, Perceived usefulness, Attitude toward using, behavioral intention, actual usage, Customer satisfaction, Zahir Accounting Application, PLS- SEM.
The Influence of Technology Acceptance Model (TAM) Towards Customer Satisfaction of Zahir Accounting Application

I. INTRODUCTION

The current technology nowadays is experiencing rapid development. Along with advances in globalizing technology, it has influenced many aspects of life such as economy, politics, art and culture, even in the education sector. Technological advancement is something that cannot be avoided in this life, because it will developed according to the science development. Every innovation was created to give positive benefits for humans as well as create various conveniences and solutions for human activities. (Kurniawati, 2017).

Innovation in accounting sector also aims to give convenience to its users. The challenge faced by users is manual processing of transaction data. This will hamper the business operation due to many transactions that must be inputted manually, as well as other stages that must be made, if using manual recording. For example, when inputting a transaction, after inputting it in a journal, the next step to be taken is to make a ledger, then getting a trial balance based on the new ledger. The financial reports cannot be resulted yet because there are still many adjustments needed as well as compiling a work sheet. The information generated by manual recording system is not yet fully trusted too due to the possibility of double entry from the entered transaction. The error risks were obtained due to a lot of transactions inputted by using the manual data recording or processing. This made computerized data processing is recommended (Susan, et al: 2017).

The process of recording from public journals to financial reports is a process of accounting cycle. Meanwhile, Mulya (2013) stated that "accounting cycle is the process of accounting recording from documents to financial presentation". According to Dunia (2008), "Accounting is similar to an information system that gives information to various users or decision makers regarding business activities of an economic unit". Diana and Setiawati (2011: 3) define a system as "a series of interdependent parts that work together to achieve certain goals". Likewise, Hall (2011: 5) states that "System is group of two or more interrelated components or subsystems that have a common goal." Furthermore, Hall (2011: 7) defines information system as "a set of formal procedures where data is collected, processed into information, and distributed to users". Husein (2004: 3) also defines information as "data that has been processed into a form that has meaning and benefit to humans". Furthermore, Hall (2011: 11) argues that "information is often defined only as processed power".

According to Romney and Steinbart (2004: 473), information system is defined as “a regular way to collect, process, manage, and report information so that organizations can achieve their goals and objectives”. Rosadi and Wardani (2014) state that Zahir accounting software is a computer-based accounting information system used by companies, especially trading companies in Indonesia. Zahir accounting software is one of local accounting programs that very popular among small and medium businesses because it is easy, simple, and flexible to use. Other study, according to Yuswanto and Hanafi (2013), revealed that "Zahir Accounting is an integrated accounting software". Given the enthusiasm of Zahir Accounting management to always make improvements (continuous improvement) especially through product development in presenting a competitive advantage compared to its competitors, then researchers are interested in studying this field.
Meanwhile, according to Venkatesh & Morris (2000) in Sanjaya (2005), TAM is used to see the understanding of individuals who are continuously using information technology in their activities. The use of information systems among individuals to carry out activities and their utilization still becomes an important concern for researchers, even though there is significant progress in hardware and software capabilities. Benefit becomes strong determinant regarding the use of technology, adoption, and user’s behavior (Davis, 1989, Mathinshon, 1991, and Venktesh & Davis, 2000 in Sanjaya, 2005). Ease is the level of a person's belief that the use of a technology will free him from effort (Davis, 1989 in Sanjaya, 2005). Davis defines TAM (Technology Acceptance Model) as a model designed to predict the acceptance of information technology that will be used by users. Thus, by using the TAM model, it can be estimated factors that influence the acceptance of a technology by the user.

Individual acceptance of information technology can be determined by 2 main constructs offered by TAM, namely perceived ease of use and perceived usefulness (Hartono, 2008: 111-112). However, according to Davis (1989), there are five patterns that affect a person's behavior regarding the use of information technology, i.e. perceived ease of use, perceived usefulness, attitude toward using, behavioral intention of use, and actual system usage. Therefore, researchers in this study try to understand zahir accounting software by using the Theory of Technology Acceptance Model (TAM). This theory was proposed by Davis (1989) and re-developed by several researchers such as Adam et. al. (1992), Szajna (1994), Venkatesh & Morris (2000), Venkatesh & Davis (2000), and Sanjaya (2005). The TAM model is based on Theory of Reasoned Action (TRA) (Ajzendan Fisbein, 1980, in Sanjaya, 2005). The TRA is a well-researched intention as a special model that has proven successful in predicting and explaining someone's behavior in utilizing information technology in various field. Furthermore, researchers want to examine “The Influence of TAM (Technology Acceptance Model) Principle on Zahir Accounting Applications towards Customer Satisfaction”.

II. LITERATURE REVIEW

2.1 Information System

Information system is framework that coordinates resources (human, computer) to convert inputs into outputs (information) in order to bring in company goals (Wilkinson, 1992). According to Northcraft and Neale (1994), effectiveness is a company’s ability to achieve its main goal or mission. Ability is the capability to do a thing. The goal is a certain value to be achieved and obtained by the company in the future. According to Aras (2003), effectiveness is a condition where the ability of a system is in accordance with the user’s expectance. System’s ability means the ability to do a thing. User’s desirability is additional thing to the need that is expected to be met so that users feel more satisfied. According to the Language Center of the Ministry of National Education (2002), effective means having an effect (impact, influence, impression); can bring results or be effective (about effort and action). Thus effective is an action that can bring in results.
2.2 Accounting Information System

According to Bodnar and Hopwood (2003), accounting information system is a collection of resources, such as human and equipment, that are designed to convert financial data and other data into information that will be communicated to various decision makers. According to Chusing in Hall (2001), accounting information system is a collection of human and capital resources in an organization that is responsible to provide financial information and that obtained from the collection and processing of transaction data. Diana and Setiawati (2011) define accounting information system as a system that aims to collect and process data and report information regarding financial transactions. According to Krismiaji (2002), accounting information system is a system that processes data and transactions to result useful information for planning, controlling, and operating a business.

2.3 Zahir Application

According to Yuswanto and Lo Sanjaya (2013: 5) "Zahir Accounting is an accounting program that is easy to use and full of innovation, designed for the needs of small and medium businesses". The existence of zahir accounting will facilitate the bookkeeping process so that all accounting journals and financial reports can be created automatically. With many facilities offered by Zahir Accounting, it will certainly make it easier for users to operate. Zahir accounting Version 5.1 innovatively combines financial accounting software with financial management software as a decision support system. It is easy to use without having to study accounting theory and it can help make business decisions quickly and accurately. Zahir accounting program is a financial accounting software that is made based on 4 basic types of transactions, i.e. Sales of products and services, Raw materials purchase, merchandise, fixed assets and services from suppliers, Cash Receipts and Cash Expenditures.

2.4 Acceptance Model Theory

In order to know the level of acceptance of information systems used in libraries, it can be analyzed by using the TAM model. Thus, TAM is an analysis instrument used to determine the attitude of user acceptance on the presence of technology. Before the TAM model introduced, there was a theory known as Theory of Reasoned Action (TRA) developed by Martin Fishbein and Icek Ajzen (1975, 1980). Derived from previous research which started with attitude and behavior theory, the emphasis of TRA at that time was on attitude from a psychological perspective. The principle is: determine how to measure the relevant behavioral components of behavior, distinguish between beliefs or attitudes, and determine external stimuli. Thus, the TRA model will represent the user's reaction and perception of the information system which later determine the user's attitude and behavior.

In 1986, Davis conducted a Dissertation research by adapting the TRA. Then in 1989, Davis published the results of his dissertation research in the journal MIS Quarterly, thus bringing up the TAM theory with an emphasis on perceived ease of use and usefulness which has a correlation to predict attitudes in using information systems. So in its application, the TAM model is clearly broader than the TRA model. TAM is a kind of theory that uses an approach of
behavioral theory that is widely used to study the process of information technology adoption. However, a good model is not only one that can predict, but ideally it should also be able to explain. Apparently, the TAM model and its indicators have indeed been tested to measure technology acceptance. Thus, using TAM will be able to explain why the library information system used in libraries can be accepted or not by users. TAM becomes a basis for knowing the influence of external factors on the beliefs, attitudes, and goals of its users.

2.5 Perceived ease of use

In Davis (1989), it was stated that "ease" means "freedom from difficulty or great effort". Furthermore, "ease to use perceived" is defined as "the degree to which a person believes that using a particular system would be free of effort". If applied to the library information system, it means that the user believes that the library information system is easy to use so that it does not need a lot of effort and help to be free from difficulties. This includes the ease of use of information system in accordance with the user’s expectancy. Davis (1989) research shows that perceived ease can explain the reasons why users using the system and can explain why new system can be accepted by users.

2.6 Perceived usefulness

In Davis (1989), it was stated that "the degree to which a person believes that using a particular system would enhance his or her job performance". It means that users believe that by using the library’s information system, their performance will be improved. This illustrates the system’s benefits from its user’s perspective relating to many aspects. Thus, from usefulness perspective, it forms a trust for decision making whether to use information systems or not. The assumption is that, if the user believes that the system is useful, then of course he will use it. On the contrary, if he does not believe that it is useful for him, then he will definitely not use it.

2.7 Actual Usage

The success or failure of technology-based services that have just been launched in improving services is clearly depend on the number of the service’s users. A technology that is launched will be successful if the number of its users is increasing and continuously used. Therefore, the use of technology by someone becomes an important factor (Adhiputra, 2015). According to Rangkuti (2013: 63), behavior is action shown by someone to buy, spend or use products or services that are expected to provide satisfaction in meeting their needs. Behavior that can meet a person's needs, can relieve the tension and stress feeling because their needs can be met.

2.8 Attitude toward Using

According to Davis in Hartono (2008: 117), there is stated that TAM conceptualizes attitude toward using as an attitude towards the use of a system in the form of acceptance or rejection as an impact when someone uses information technology in his work. The acceptance
or rejection attitude of a person towards information technology depends on the level of trust owned by that person. If someone has a high level of trust in an information technology, then he will show a positive attitude in the form of accepting a technology. According to Setiadi (2003: 213), it was stated that a consumer’s attitude can be seen from his belief and choice of a brand / service.

2.9 Behavioral Intention to Use

Behavior is actions or reactions of an object or organism. Behavior can be either conscious or unconscious, frank or not, voluntary or not. Human behavior can be either common or uncommon, acceptable or unacceptable. Humans evaluate the acceptance of behavior by using a comparison standard called social norms and regulating behavior by using social control. Behavioral intention to use is the tendency of behavior to keep using a technology (Davis, 1986).

2.10 Customer Satisfaction

According to Kotler in Sunyoto's book (2013, p.35), customer satisfaction is the level of someone's feelings after comparing (performance or results) perceived to his expectations. Customers can experience one of three general levels of satisfaction, i.e. if the performance is below expectations, customers will feel disappointed; if the performance is in line with their expectations, they will be satisfied; and if the performance is above their expectations, they will feel very satisfied or happy. According to Kotler's theory in Suwardi’s journal (2011), one key to retain customers is customer satisfaction. Indicators of customer satisfaction as as follow:

1) Re-purchase: Buy back, where the customer will return to the company to look for goods / services.
2) Creating Word-of-Mouth: In this case, customers will say good things about the company to others.
3) Creating a brand image: Customers will pay less attention to brands and advertisements of the competing products.
4) Create purchasing decisions at the same company: Buy other products from the same company.

III. METHOD

This study uses a quantitative approach and categorized into explanatory research with a population of 1151 users. The sampling technique used is incidental techniques with number of samples obtained in this study of 100 users. The type of data used is primary data obtained using a questionnaire. The Inferential Statistical Method used in the data analysis is Partial Least Square (PLS). PLS is used to help researchers getting the value of latent variables for predictive purposes. Formally, the latent variables in the model are linear aggregates of their indicators. Weight estimate to produce latent variable scores are obtained from the inner model and outer model specifications. The inner model is a structural model that connects latent variables while the outer model is a measurement model that connects indicators (manifest variables) with their constructs (latent variables). Parameters estimation through PLS includes 3 categories, namely:
1. *Weight estimate*, used to create a latent variable score.
2. Reflect the path estimate, which connects latent variables and the latent variable and its indicator block (*loading*).
3. Related to the means and location of the parameters (regression constant values) for indicators and latent variables.

IV. RESULTS AND DISCUSSION

4.1 Inner Model Hypothesis Testing

Inner model testing is conducted to estimate the path coefficient and evaluate the significance impact among latent variables in the study. Hypothesis testing is conducted using *bootstrapping* techniques with SmartPLS Version 3 software. Graphically, the results of PLS calculations by using *bootstrapping* techniques can be seen in the following figure:

![Figure 1. Path Diagram of T-Statistics Value](image)

In this study, the all hypotheses were built using a 95% confidence level ($\alpha = 0.05$) so that the *path* coefficient value of the *inner model* is said to be significant with p-value less than
0.05 and t-statistics greater than 1.96. Whereas, the significance of influence among latent variables in the path can be seen from the estimated criteria of path coefficient for each path.

4.2 Path Coefficients Testing

The influence between variables is measured from one latent variable to another latent variable. There are five influences tested in this study, arranged in the following table:

Table 1. Results for Path Coefficients Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Path Coefficients</th>
<th>T-statistics</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1 → Y1</td>
<td>0.251*</td>
<td>2.84</td>
<td>0.000</td>
</tr>
<tr>
<td>X2 → Y1</td>
<td>0.142</td>
<td>1.22</td>
<td>0.220</td>
</tr>
<tr>
<td>X3 → Y1</td>
<td>0.536*</td>
<td>5.26</td>
<td>0.000</td>
</tr>
<tr>
<td>Y1 → Y2</td>
<td>0.782*</td>
<td>16.00</td>
<td>0.000</td>
</tr>
<tr>
<td>Y2 → Y3</td>
<td>0.652*</td>
<td>12.39</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Note: * significant at α = 0.05

Of all five paths tested, four paths have influence between variables with a confidence level of 95%. The detailed description of Table 7 are as follow:

1. The testing of influence of perceived ease of use (X1) towards customer satisfaction (Y1) obtained path coefficients of 0.251 with T-statistics value of 2.84 where it is greater than 1.96 and the p-value of 0.000 is smaller than 0.05. It means that there is a significant influence of perceived ease of use (X1) towards customer satisfaction (Y1) at a 95% confidence level.

2. The testing of influence of perceived usefulness (X2) towards customer satisfaction (Y1) resulted path coefficients of 0.142 with T-statistics value of 1.22 where it is greater than 1.96 and the p-value of 0.220 is greater than 0.05. It means that there is no significant influence of perceived usefulness (X2) towards customer satisfaction (Y1) at a 95% confidence level.

3. The testing of influence of attitude toward using (X3) towards customer satisfaction (Y1) resulted path coefficients of 0.536 with T-statistics value of 5.26 where it is greater than 1.96 and the p-value of 0.000 is smaller than 0.05. It means that there is a significant influence of attitude toward using (X3) on customer satisfaction (Y1) at 95% confidence level.

4. The testing of influence of customer satisfaction (Y1) towards behavioral intention (Y2) resulted path coefficients of 0.782 with T-statistics value of 16 where it is greater than 1.96 and the p-value of 0.000 is smaller than 0.05. It means that there is significant influence of customer satisfaction (Y1) towards behavioral intention (Y2) at the 95% confidence level.

5. The testing of influence of behavioral intention (Y2) towards actual usage (Y3) resulted path coefficients of 0.652 with T-statistics value of 12.39 where it is greater than 1.96 and the p-value of 0.000 is smaller than 0.05. It means that there is a significant direct
correlation between behavioral intention (Y2) and actual usage (Y3) at the 95% confidence level.

Where the results of inner model hypothesis test answer the hypothesis formulations in this study, which include:

H1  Perceived ease of use has a positive influence on customer satisfaction

The study results at the 95% confidence level (α = 0.05) showed that perceived ease of use (X1) has a positive and significant influence on customer satisfaction (Y1) with positive path coefficient of 0.251 and T-statistics value of 2.84 (> 1.96) and p-value of 0.000 (<0.05). Thus hypothesis 1 (H1) in this study was accepted. Given the positive mark of the path coefficient, then the relationship between them is positive. The higher customer convenience in using the zahir accounting application, the higher customer satisfaction resulted. This is in line with study conducted by IZMI (2017) entitled “The Increased Easy to use increases Go-Jek's customer satisfaction in Malang”. This is also in accordance with study conducted by Ida Ayu (2007) entitled “Perceived ease of use has a positive and significant effect on user satisfaction”, meaning that the better perceived ease of use in GO-JEK service application, the higher the user satisfaction. This study reinforces the positive significant relationship between Perceived ease of use and customer satisfaction.

H2  Perceived usefulness has no influence towards customer satisfaction

The testing of influence of perceived usefulness (X2) towards customer satisfaction (Y3) resulted a path coefficient value of 0.142 with T-statistics value of 1.22 (<1.96) and p-value of 0.220 (> 0.05), then there is no significant influence between perceived usefulness and customer satisfaction. Thus, hypothesis 2 (H2) in this study was rejected, i.e. there was no positive correlation between perceived usefulness (X2) and customer satisfaction (Y1) at a 95% confidence level. This is different with Livari’s study in Istianingsih and Wijanto (2008) stating if users of information system feel the benefits of the system used, then they will feel satisfied using the system. The higher the benefits felt by users of a system, the higher the satisfaction felt. The higher perceived usefulness will increase user satisfaction and vice versa, the lower perceived usefulness will decrease user satisfaction. This weakens the rules of value and the use of technology in getting customer satisfaction.

H3  Attitude toward using positively influences customer satisfaction

The testing of influence of attitude toward using (X3) on customer satisfaction (Y1) resulted path coefficient of 0.536 and T-statistics value of 5.26 (> 1.96) and p-value of 0.000 (<0.05), thus there is a significant influence of attitude toward using on customer satisfaction. Given the path coefficient marked positive, then the relationship between them is positive. In other words, the higher customer’s attitude toward using zahir accounting applications, the higher customer satisfaction resulted.

Based on previous studies related to network and behavior in online shopping, Chang (2002) proves that there is a significant influence and positive correlation between Customer Attitudes and Customer Satisfaction regarding the use of the system. Lee (2009) explores Attitudes, Satisfaction, and Behavior towards user’s intention of information technology.
Customer’s attitude is proven to have a positive and significant effect on Customer Satisfaction regarding the use of a technology model. The Usability and Ease of Use variables have been known to influence Customer Attitudes in using mobile applications. This study strengthens the positive significant relationship of attitude toward using on customer satisfaction.

H₄  **Customer satisfaction has a positive effect on behavioral intention**

The results showed that the model had an influence on the 95% confidence level (α = 0.05), customer satisfaction (Y1) had a positive and significant influence on behavioral intention (Y2) with coefficient value of 0.782 and T-statistics value of 16 (> 1.96) or p-value of 0.000 (<0.05). Thus, hypothesis 4 (H₄) i.e. customer satisfaction has a positive impact on behavioral intention in this study. High or low customer satisfaction regarding the use of Zahir accounting application will affect the level of customer intention to use the application. The higher customer satisfaction in using the application, the higher customer intention to use the application, and vice versa.

Lien, Wen and Wu (2011) found a positive correlation between customer satisfaction and customer behavioral intention. With individual attributes named service quality (Chen, 2008; Fornell, 1992 quoted from Khairani et al (2017)), previous study has evidenced that customer satisfaction significantly influences customer loyalty and behavioral intention in various industries (Anderson and Sullivan, 1993; Cronin and Taylor, 1992; Fornell, 1992; Oliver, 1980; Petrick and Backman, 2002), including public transportation service (Joewono and Kubota, 2007; Nathanail, 2008). This is evidenced by the satisfaction feeling shown by consumers who have an impact on consumer's desire to re-use it. This study reinforces the positive significant relationship between customer satisfaction and behavioral intention to use.

H₅  **Behavioral intention has a positive influence on actual usage**

The testing of influence of behavioral intention (Y2) towards actual usage (Y3) resulted a path coefficient value of 0.652 with T-statistics value of 12.39 (> 1.96) and p-value of 0.000 (<0.05), thus there is a significant influence of behavioral intention towards actual usage. The positive mark of path coefficient indicates that the relationship between them is positive. In other words, the higher behavioral intention will lead to the higher actual usage. This shows that hypothesis 5 (H₅) is accepted, the higher customer's intention to use zahir accounting application will result in a significantly higher customer behavior in using the application.

In Heru Susilo (2015), the study result indicates that behavioral intention to use Instagram social network has a significant positive effect on the actual usage of the system, meaning that the higher the student’s tendency to use Instagram, the higher the actual usage resulted. The result of this study supports the study result by Dewi (2010) and Akbar (2013) that behavioral intention to use can increase the condition of system’s actual usage. This study reinforces the positive significant relationship between behavioral intention to use and actual usage.
V. CONCLUSION AND RECOMMENDATION

5.1 Conclusion

From the above study, there are several points can be concluded:

1) Perceived ease of use has a positive influence on customer satisfaction
2) Perceived usefulness has no influence on customer satisfaction
3) Attitude toward using has a positive influence on customer satisfaction
4) Customer satisfaction has a positive influence towards behavioral intention
5) Behavioral intention has a positive influence on actual usage

5.2 Recommendations

Based on the study results, there are several recommendations suggested

1) The study results can become benchmark for Zahir accounting company to pay more attention in how to socialize the technology thus increase user’s behavior to use as well as know the usability and ease level which can affect user’s attitude in the future.
2) The study results can be used for further study regarding analysis of the influence of TAM (Technology Acceptance Model) principle towards customer satisfaction of application. The method used in this study is component-based or variance-based SEM methods, i.e. partial least square (PLS). The author suggests that for readers who are interested in continuing this research, it is better to use the covariance-based SEM method if all the required criteria can be met, for example if the sample number is > 100 and adds some exogenous constructs and formative models.

REFERENCES


