MODEL OF INFORMATION SYSTEM OPERATION BASED ON TECHNOLOGY ACCEPTANCE MODEL FOR MICRO FINANCIAL INSTITUTIONS

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ABSTRACT

Credit union (CU) is an important financial institution for poor society and micro industries in supporting the fact in which in credit unions, client doesn't require complicated clauses like other micro finance companies. Yet, traditional ways in accounting system make limitation for this institution efficient and effective in their operation. By applying an information system, they can increase performance through repairing in planning and managing business and easier in transaction activity. Thus, it will reduce operation costs. The main objective of the research is to develop an electronic transaction system (ETS) for credit unions (CUs) by identifying determinants that are considered by managers and employees of credit unions in adopting the system. To investigate the determinants for adopting information system, the research uses Technology Acceptance Model (TAM) modified by other models such as TRA, TPB and DOI. Using Structural Equation, the result shows supporting evidence for TAM that perceived ease of use and perceived usefulness are important determinants for adopting information systems.

Key words: Information System, Credit Union (CU), Technology Acceptance Model (TAM), Perceived Ease of Use, Perceived Usefulness.

INTRODUCTION

So far, Credit Union (CU) has been one of microfinance types which are the most affordable by the poor and rural microbusinesses. To gain access to such financial institutions' services, the customer does not require complicated requirements like other microfinance institutions. Although hundreds of studies have found evidence that the presence of CUs was able to reduce poverty and empower the rural poor, the existence of this institution is up to now still marginalized (Wilopo, 2006; Salam, 2008). Some of the variables were allegedly considered the cause of underdeveloped CUs, among others the government regulations are not clear, the government has never provided continuous supervision, the CUs own internal conflicts, lack of customer protection, and an inefficient use of infrastructure (Salam, 2008; Krisnamurti, 2005).

Some CUs at this time have been experiencing a crisis of confidence from their members, and this is due to the operation of this institution. The existence of a crisis of confidence has resulted in total funds raised by this institution over the years which have been steadily declining. For example, in 2002 the total funds that can be collected by CUs is approximately Rp 473 billion, then in 2006 only about 348 (Wardani, 2007).

This study focuses on the use of inefficient infrastructure which does not cause these CUs maximum operational activities. In reality, the CUs still use the infrastructure that is still traditional. The entire recording of transactions, estimates of investment and financial reporting systems at these institutions are done using the traditional (manual) tools, as revealed by Hermana et al. (2008). Therefore, in an effort to improve the sustainability of CUs business, and to serve the

rural communities especially the poor with more efficiency, it is necessary for having a system of recording transactions or electronic accounting to be applied in CUs in the areas of provincial districts of Yogyakarta. The application of information systems proved capable for improving the performance through improvements in planning and managing the business. It is also intended to have an ease of transaction activity, so that it can lower the operating costs (Siu, 2001).

The use of information on the cooperative system is also expected to improve customer satisfaction and accuracy in decision-making as well as the media to inform the products worldwide. However, it cannot guarantee that to use information technology will be adopted or accepted by the employees of CUs. The CUs' officials will adopt and use an information system which is possibly determined by two factors, namely whether the system of information is easy to use (ease of use) and whether the information system is useful (usefulness) for the performance of the organization (Davis, 1989; Davis, 1993; Venkatesh and Davis, 1996; Maurer, 2004; Kusuma, 2008). The higher a person's receiving system provided, the faster it will provide time and cost to learn to use the system (Q. Ma, 2004; Galantone, 2006; Kumar, 2007).

There must be two main factors that should always be considered before building a system of electronic transaction information, namely whether the system will be built to provide benefits and whether it is easy to use. Such questions will determine the individual's acceptance of the presence of technologies. If someone has already received information system, then he will use the system which is already offered (Pikkarainen et al., 2004; Ma Q., 2004; Galantone, 2006; Kumar, 2007). Therefore, in order to provide CUs electronic transaction system and it can be accepted by employees and managers, it is necessary to create an electronic information system for CUs. This needs to be identified first and investigate the reasons for any determinants that have impact on the deci-

sion of the Cus' employees and managers in using the system.

After their determinants are identified, the next step is to construct a model of information system that is to be adopted. The purpose of this study is to determine the determinants that affect the decisions by the managers and employees in adopting CUs' electronic transaction system. It uses the Technology Acceptance Model (TAM) developed by Davis (1989) to modify it with earlier theories, namely the TRA, TPB, and DOI. By using SEM, the results are supposed to support the theory used, that the perception of usefulness and perceived ease of use is the main variables considered by managers and employees when they adopt CUs' information systems.

**THEORETICAL FRAMEWORK**
Adoption of Information Systems Theory
When considering the adoption of information system (IS) theory it is salient to note some proponents dealing with it. According Kurmanalieva, Montgomery, and Weiss (2003), the use of information technology has the potential to improve the welfare of the poor in two ways, namely direct and indirect. The direct effect includes (a) information on markets, opportunities, etc., (b) employment, (c) the skills and education, (d) the maintenance of health, (e) the provision of government services, and (f) empowerment. ICT can also increase welfare indirectly through growth (economic) that quickly, which give trickledown effect on the improvement of income and employment.

Research by Harris (2004) showed that the application of information technology (IT) will reduce poverty because it has multifunction or benefits. These functions are namely distributing information relevant to development; empower disadvantaged communities and disadvantaged (marginalized); encourage micro enterprises (fostering micro entrepreneurship); improve health information services remotely (telemedicine); improve education through e-learning and learning-a-lifetime (life-long learning);

Figure 1
Basic Concepts of Information Technology Adoption
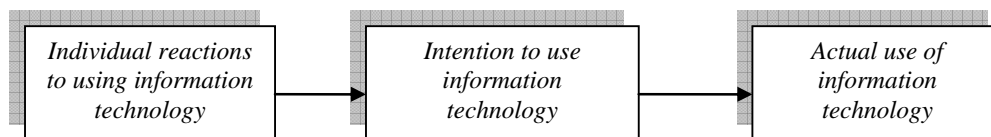
Figure 2
Thought Flow Model TRA
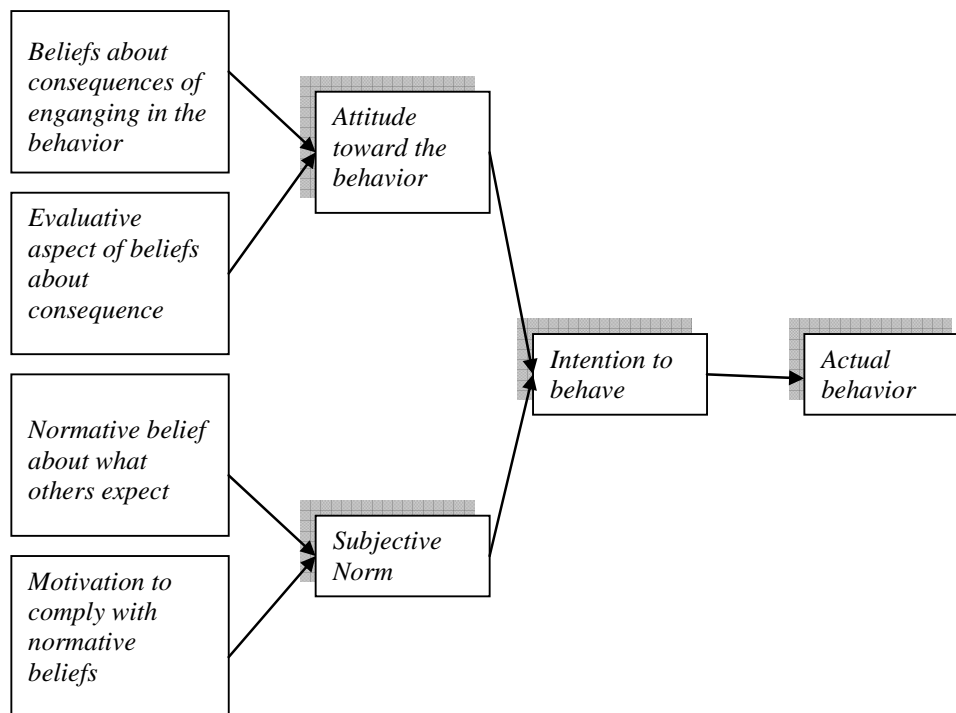
develop trade through e-commerce; creating public administration (governance) is more efficient and transparent through e-governance; develop capabilities; enrich cultures; support agriculture; create jobs (creating employment), and encourage social mobilization.

In order to understand the determinants that affect CUs' employees and managers in the adoption of information systems, particularly electronic transactions, it requires an understanding of the underlying theories. The model in this study builds upon the development of major theories of TAM by incorporating antecedents of external variables identified from previous studies, and modifies it with some theories or models that exist, namely the TRA, TPB, and DOI. The basic concept used in information technol-ogy adoption shown in Figure 1 (Sendecka, 2006).

Theory of Reasoned Action
The theory was formerly introduced by Fishbein and Ajzen in 1975. This is used to understand and predict attitudes and behaviors of individuals. TRA states that the primary determinant of actual consumer behavior is the desire to behave. Accordingly, the desire to behave is influenced by the attitudes in the behavior (attitude toward the behavior) and subjective norm (Figure 2). The attitude of conduct is defined as positive or negative feelings of how to carry out the purposes of individual behavior. On the contrary, subjective norm is a person's perception that most important people for him would think he should do or not to perform

Figure 3
Flow Model of TPB
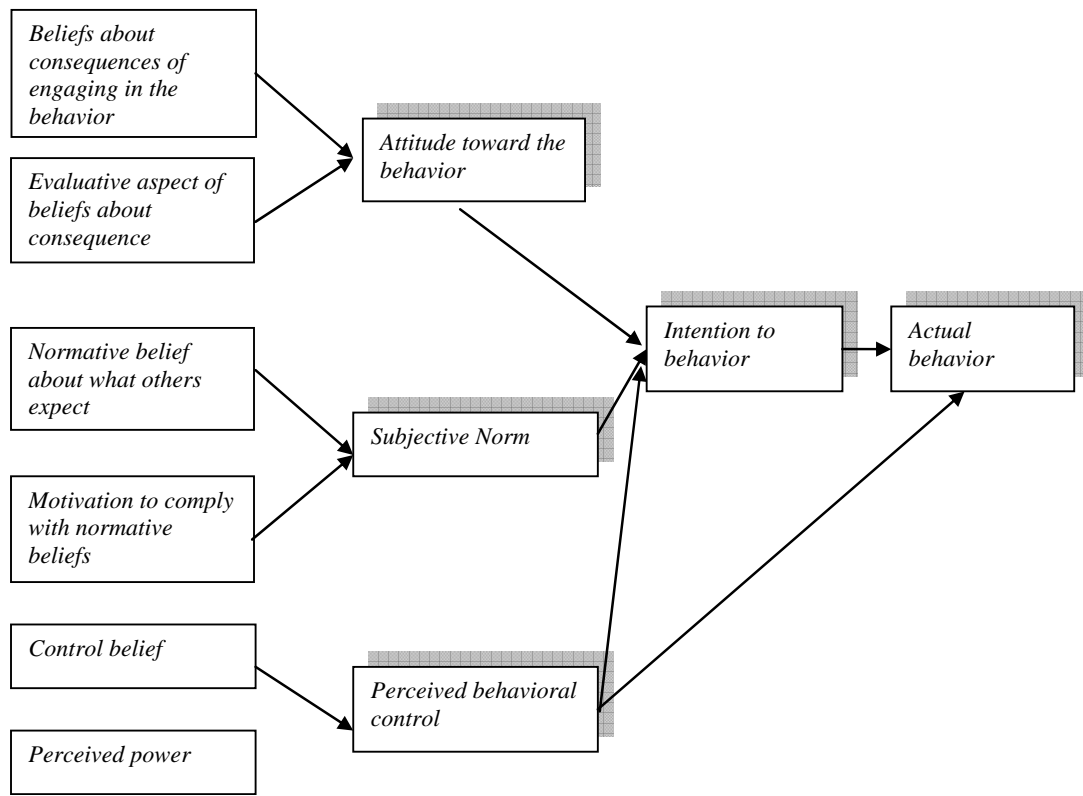
the intended behavior. In addition, it can be interpreted as a social influence on how the person should conduct his behavior. Thus, the desire to behave or use information technology is not only influenced by one's attitude in behavior, but may also be influenced by the opinions of others.

Theory of Planned Behavior (TPB)
TPB was developed by Ajzen Theory in 1991. It is an extension of the TRA, namely by adding a variable perception of behavioral control in addition to subjective attitudes and norms of behavior, to explain the situation when the individual has no control over the desired behavior (Figure 3). The perception of behavioral control is defined as the perceived ease or difficulty in performing the behavior. On the other hand, Taylor and Todd (1995) modify the definition in the context of information systems research as a perception of internal and external constraints of behaving. Person's behavior may not only be influenced by a de-

sire for someone to behave and opinions of others about such behavior. It can also be influenced by other factors, such as opportunities and resources e.g., time, money, skills or expertise, and cooperation with others (Harrison et al., 1997).

As seen in the model of PTB, it is clear that perception of behavioral control consists of two things: belief control and perceptions of strength. Control beliefs are beliefs about resources and opportunities that can be the experience of others or can also be influenced by other information that may increase or decrease the difficulty in performing a particular behavior. The perception of strength is the strength of a particular control factor that can facilitate or hinder the implementation of behavior.
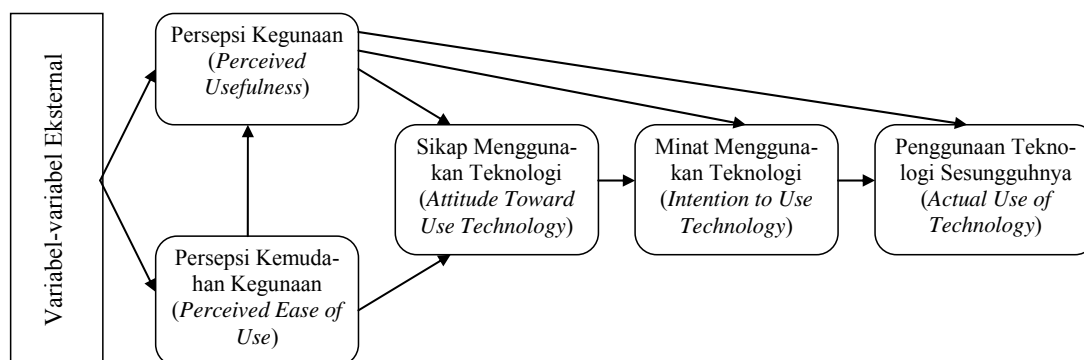
Innovation Diffusion Theory (IDT)
IDT was well-known and popularized by Rogers in 1995. This theory is defined as a process when the innovation is communicated through channels or specific relation-

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Figure 4
Thoughts Model Flow of IDT
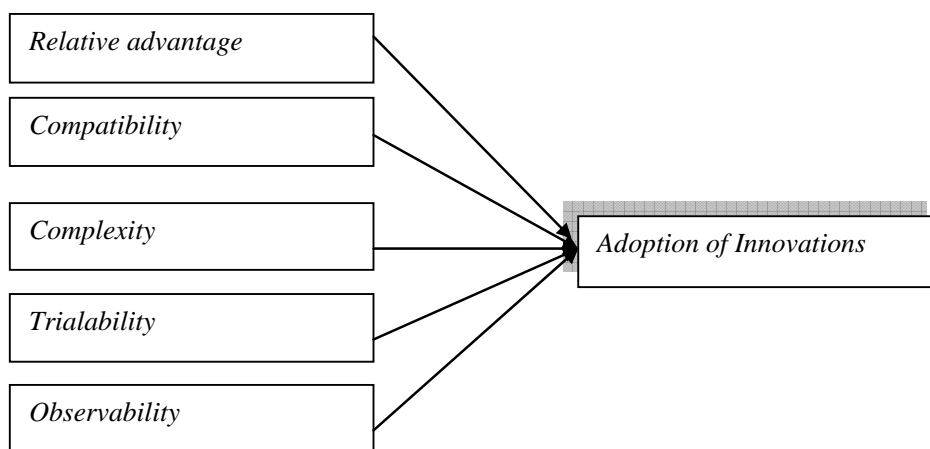
Figure 5
TAM Model Developed

ships over time among the members in a social system. Key elements of this process are innovation, communication channels, time and social system or the characteristics of innovation perceptions, beliefs and attitudes of individuals, as well as communications received by individuals through their social environment (Karahanna et al., 1999). In addition, in this theory, Roger considers five attributes of innovation that may affect the adoption of an innovation, namely: relative advantages, compatibility, complexity, triability, and clarity (Figure 4).

Relative advantage is the level where innovation is perceived as a better idea than the idea of being replaced. Compatibility is the level where innovation is perceived as the consistency between the values obtained, past experiences, and needs of potential users. Complexity is the level where the inno-

vation is perceived as something that is relatively difficult to understand and use. Trialability is a level where innovation can be tested with a limited basis. And, Clarity or observability is the level where the results of an innovation can be seen or visible to others.

Technology Acceptance Model (TAM)
TAM model was developed by Davis (1989), in which it was designed to predict the acceptance or use of IT by users and the benefits in jobs. TAM is the most widely applied model in the adoption by users and their utilization. Besides that, TAM is an extension of the TRA and TPB, which states that the desire to use a system is affected by two main determinants, namely the perception of the benefits and perceived ease of use (see Figure 5).

It is said that TAM has several advantages compared with other models of technology acceptance of other information (see: Hartono, 2007). The advantages are such as the following:

1) TAM is a model of behavior (behavior) is useful to answer the question why many information technology systems that fail to offer applied caused by the wearer does not have an interest (intention) to use it. Not many models the application of information technology systems that include psychological or behavioral factors (behavior) in the model and the TAM is one that is considered.

2) TAM is built with a strong theoretical foundation and has been tested by many studies. The result is largely supportive and concluded that the TAM is a good model. In fact, TAM has been widely tested in comparison with other models such as the TRA and the TPB and the results are also consistent that the TAM is quite good.

3) TAM excess of the most important thing is that this model is a model of parsimonious model which is simple but valid. It can create a simple but valid model is valid. Trade-offs occurs in the manufacturing model. If desired a simple model which is supposed to use a lot of assumptions that other factors remain no effect on the model, but it will air ¬ influence on the quality and validity of the model is going to decline. Conversely, if the desired model is valid and complete, then all influencing factors should be incorporated into the model with the result that the model will be complex.

Review of Past Research

Other proponents are Nor, and Pearson (2007) and Roger (1995), who developed the IDT model with emphasis on the effects of confidence (trust) to influence a person to accept an innovation. This study found that trust, relative advantage, and triablility have a significant influence on attitudes in using internet banking. Thus, it can significantly influence towards the attitude of willingness to use technology.

Vainio (2006) and (Amin, 2007) suggests that the factors motivating users come from the companies and individuals that are not the same. For companies that use internet banking, in order to satisfy the consumer, they should make the system easy to use and operate with adequate support facilities from the bank. Nysveen, Pedersen, and Thorbjornsen (2005a) also developed the TAM model by adding a few variables. The main objective of this research is to explain the desire of consumers to use mobile services. The results showed that there is a relationship between emotional influences (reflected through the variable perception of benefits. Perceived ease of use, enjoyment, and expressiveness, attitudes, subjective norms, and perceptions of control affect the consumers' desire to use mobile services.

Amin, et al. (2007), Bhatti (2007), Hung, Ku, and Chang (2003) showed that the perception of benefits, perceived ease of use, perceived credibility, subjective norms and perceptions of ability, behavior control, connection speed, user satisfaction, personal innovation as a determinant that explains the client's wishes to use mobile banking. The researcher has conducted exploratory research on the development of information systems and individual behavior when using information technology.

The importance of knowing the end-user acceptance of the application of IT in an organization encourages a variety of studies, among others: acceptance of the Internet (Fenech, 1998), acceptance of IT in the medical profession (Succi and Walter, 1999) and acceptance of electronic mail or e-mail (Hubona and Jones, 2002). Through the above studies, it is known determinants of user acceptance of the application of IT so that the organizations can evaluate and determine next steps.

Based on the research on the level of end user acceptance of IT that has been done by previous researchers, it was found a model that describes the level of acceptance of technology that is the Technology Acceptance Model (TAM). The main objective of

Figure 6
Adopting of Electronic Transaction System by the Employees and Managers of CUs
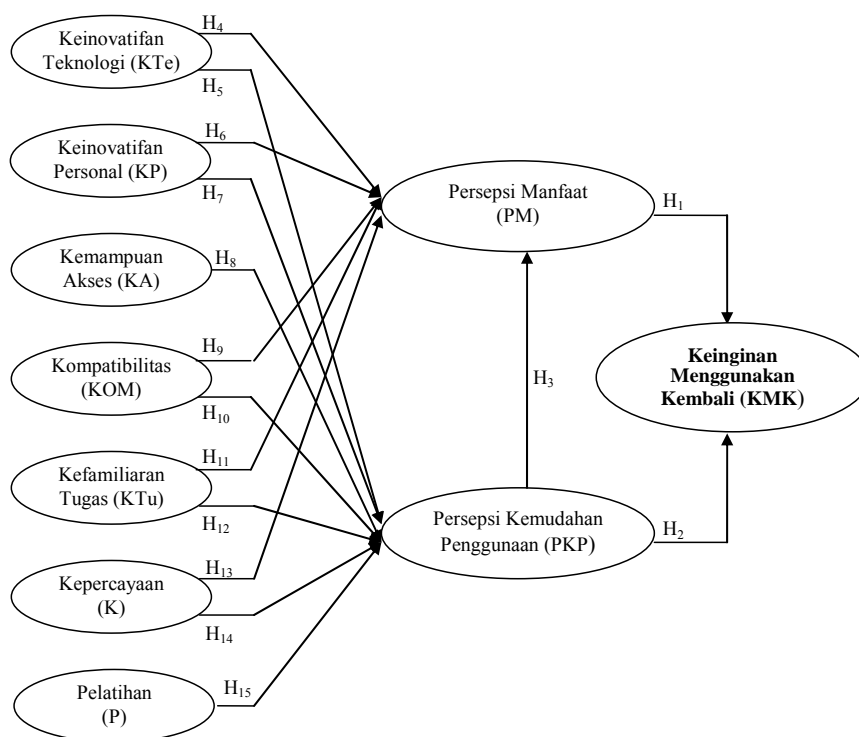
Note
Kte= Technology Innovativeness
KP=Personal Innovativeness
KA= Accessibility
KOM=Compatibility
KTu= Task Familiarity
K= Trust
P= Training
PM= Benefit Perception
PKP= Ease of Use Perception
KMK= Intent to Reuse

TAM is to provide an explanation of the acceptance of computers in general, provide an explanation of the behavior or attitude of users in a population (Davis, FD, 1989). The use of TAM in research on the application of technology acceptance has been done by several researchers in different countries and different application of technology to test the accuracy of TAM. Research include User Acceptance of Digital library at the University of Hong Kong by Hong Weiyin (2002).

TAM model testing in general illustrates one use of social psychological theory as a basis for research systems or IT (Goodhue, 1988 FD Davis, 1989; and Nurcahyati, 2001), that confirmed theoretically about user attitudes and their influence on the use

of computers (FD Davis, 1989; and Nurcahyati, 2001). Based on the TAM model, it can be known behavioral aspects of users that also influence the perception and attitude in accepting the use of core banking system with variable usefulness and ease of use.

Hypothesis Development
The proposed model identifies the factors that have impact on the community's decision in using IT electronic transactions of CUs (see Figure 6).

Perception of Benefits (Perceived Usefulness)
Davis (1989) and Adam et al. (1992) define

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perception as a level of benefits when one believes that the use of a particular technology will enhance job performance of that person. According to Chin and Todd (1995), perceptions of the benefits can be a benefit to the estimation of the factors such as getting job easier, rewarding, increasing productivity, promoting effectiveness, and improving job performance. Thus, it can be interpreted that benefit from the use of electronic transaction system (ETS) can improve the performance of people who adopt it. For that reason, the use of electronic transactions affects the attitude of the users of the system. The hypothesis tested is:

H1: Perceptions of the benefits has a positive influence on the desire to reuse the ETS of CU.

Perception of Ease of Use (Perceived Ease of Use)

Davis (1989) defines perceived ease of use as a level where a person believes that information technology can be easily understood. Davis (1989) also provides some indicators of the ease of use of an IT system that includes: easy to learn and operate, easy to work with what is desired by the user, and increase user skills. Thus, if the electronic transaction system services KSP perceived ease of use by employees and managers of CUs, then the system will be adopted by employees and managers of CUs. The hypothesis tested is:

H2: Perceptions of ease of use has a positive effect on the desire to reuse the ETS of CUs.

When employees and managers feel that CUs perceived ETS easy to use, then they will also perceive that the system would be beneficial for them. For that reason, the hypothesis is proposed is as the following:

H3: Perception of ease of use has a positive effect on perceptions of benefits.

Technological Innovativeness

Technology innovativeness is defined as an assumption or person's tendency to value the new technology more than the technology that is running. The existence of the new

technology is expected to provide an opportunity to do their jobs more effectively and efficiently (Muyle et al., 2004). With advanced technology, they cannot only create the ability to do more work, but can also give the option to perform and increase productivity. If employees and managers assume that CUs electronic transaction systems can improve their performance, then they will take advantage of the system. The hypothesis is constructed as follows:

H4: Technology innovativeness is positively related to perceptions of the benefits of ETS of CUs.

In addition, new technological innovations should be used more easily than the technology that has been running. Thus, the hypothesis is constructed again as the following:

H5: Technology innovativeness is positively related to perceived ease of use.

Personal Innovativeness

Personal innovativeness is the desire of individuals to get some new information systems (Bhatti, 2007). Some previous studies found an association between innovativeness and users with the decision to accept a variety of technologies. Innovative person tends to be always looking for something new (Citrin et al., 2000). In connection with the ETS employed by CUs, the employees and managers seem always to get something new when they really think that it can bring benefits for them. The hypothesis is constructed can be read as the following.

H6: Innovativeness has positive effect on perceptions of personal benefits.

The CUs' employees and managers will try to get something new when they feel that the technology is easy to use. Thus, the hypothesis is proposed is the following.

H7: Personal innovativeness has positive influence on perceived ease of use.

Accessibility

Accessibility can be defined as the level of ease to access the IT in place and right time flexibly without being too long in waiting.

This ability can measure the level of ease to get and usefulness of information systems which is offered. Kumar et al. (2007) argues that the more easily to access information system, the less the effort required using the system. In the context of ETS of CUs, the ability is also related to the physical access to the Internet. If the technology infrastructure are available easily and quickly, then the application of ETS of CUs will be more numerous and easier to use. In that case, there exists the ability to access predicted positive effect on perceived ease of use of ETS of CUs. Therefore, the hypothesis is as the following.

H8: The accessibility is positively related to perceived ease of use of ETS of CUs.

Compatibility

Compatibility is defined as the degree to which a person perceives the use of technology consistent or in accordance with work practices (Galantone et al., 2006). In a study by Moore and Benbasat (1991), one can not assume that the system is useful information if it does not match with the characteristics of his work. Therefore, if the ETS of CUs does not fit the needs of everyday work in the society, it will be assumed that the new system does not provide benefits. Thus, the hypothesis is proposed.

H9: Compatibility has a positive effect on perceptions of benefits.

It is said that the discrepancy (incompatibility) of a system will require adjustments in the work community, and may take time to learn it. Therefore, the electronic transaction system KSP nonconformity with the daily needs of the community will be considered as a system that is difficult to use. The hypothesis is then proposed as the following.

H10: Compatibility has a positive effect on perceived ease of use.

Task Familiarity

Task familiarity illustrates a degree of certainty non-variability and activities that requires the user to complete tasks and activities when using technology. Information system users will feel fit to information system that is running. It is when the users can save time and get familiar with the system information that has been provided. When using the CU ETS that is running currently, CU's employees and managers will feel that it is appropriate, and then the users can save time in conducting tasks on both systems so as to promote the benefits. Thus, the hypothesis is constructed as the following.

H11: Task familiarity task is positively related to perceptions of the benefits of ETS of CU.

The more familiar a system with the task performed, the easier it is for employees and managers of CUs to use the system. This is because of the fewer it is, it does not require great effort to learn. Thus, the hypothesis is constructed as the following.

H12: Familiarity task is positively related to perceived ease of use of ETS of CUs.

Trust (Trust)

When discussing the topic of trust, it can be referred to some proponents related to it. Trust is a set of beliefs held by society towards the characteristics of governance and the possibility of people's behavior in the future. Two dimensions of trust used in previous studies are the security and privacy. Several studies have found empirical evidence on the importance of safety and privacy on the adoption of information technology (Howcroft et al., 2002; Polatoglu and Ekin, 2001; Sathye, 1999). In addition, security and privacy are considered the main obstacle in adopting information technology. Communities are generally reluctant to provide information that is privacy to others, such as credit card information that is obtained via the internet. When people discover that public service through electronic transaction system is less, the CUs will ensure the security and confidentiality of information. In that case, they can assume the technology is not beneficial for him. Based on such proposition, the next hypothesis is proposed as the following.

H13: Trust has a positive effect on perceptions of benefits.

When there is more information, it is requested to support privacy in public services through ETS of CUs. The higher their likelihood to reject the adoption of ETS of CUs, it can be assumed that public service with CUs will be less ETS that provides convenience. Thus, the hypothesis is proposed as follows.
H14: Trust has a positive effect on perceived ease of use.

Training

Training is considered necessary for the use of information systems. It is expected to help one to understand and know how to operate information systems. The users should be trained and experienced so that it can influence the perspective of ease of use of information systems (Nor and Pearson, 2007). Thus, it can be predicted that the training has a positive effect on perceived ease of use of ETS of CUs. The hypothesis is as the following.
H15: Training is positively related to perceived ease of use of ETS of CUs.

RESEARCH METHOD

This research is a confirmatory study by using the survey method approach. Therefore, the first stage here is to build a model of information system use, and then it will test the relationship between variables by using data obtained from samples. The focus of this study is an information system in Credit Unions (CUs) that support the business activities of savings and loans. It uses the employees and manager that has been using and operating information systems at their CUs.

Concerning the limitation, it is predicted that not all employees and managers who work on the CUs are included in the study. These research sites are Yogyakarta Special Province (DIY), which covers four counties, namely: Bantul, Sleman, Kulon Progo, and Gunung Kidul. The analysis is conducted by means of SEM. The estimation in SEM is done by using the method of maximum likelihood. The number of samples used in this study is 195 respondents. This number is determined based on the consideration, e.g., that the estimate of the SEM producing a correlation between the indicators of the constructs is above 0.6 when the number of samples used exceeds 150. However, the number of samples that are too high, i.e. the range of 300, can lead to the estimation results to be very sensitive and it will always produce significant differences.

Thus, the size of the goodness of fit can be attained (Ghozali, 2008). In addition, in this study, a statistical software analysis tools is done by means of AMOS. This program is expected to be able to perform well if the number of data is not more than 200 samples Santoso, 2006). The technique of sampling is done by using a cluster sampling method followed by accidental sampling. By sampling cluster sampling, it is intended that the population in this study are distinguished geographically, namely according to the district. Then, accidental sampling is done because researchers also visit the CUs randomly. If in the CUs is by chance found an employee who is an expert or frequent use of information systems, he can be used as the target respondent.

The data were collected using questionnaires. The items for each variable of the research questions is referred to and collected from the results of previous studies. These items have proven valid and reliable. However, prior to a questionnaire containing question items are spread, the questionnaire has been discussed with experts through expert review and testing performed by the pilot studies. By using questionnaires that have been tested, the respondents or the users are asked to give responses based on their experience related to information systems at their CUs.

Each item questions graded on a scale of 1 to 6. To test the validity, the researchers needs three tests, namely content validity, criterion validity, and construct validity. Content validity is used to indicate the level of the items in this instrument can represent the concept being measured (Hartono,

2007). In this research, the researchers use a review of expert opinion (judgment) experts. Criterion validity of the method chosen in this study is the validity of the simultaneous (concurrent validity). Statistically test the validity of the criteria can be performed using a correlation test. Construct validity (construct validity) indicates how well the results obtained from the use of a measuring appropriate for theories that are used to define a construct (Hartono, 2007).

Construct validity in this study is conducted by convergent validity and discriminant validity. To assess the validation of items or questions, this study uses Confirmatory Factor Analysis (CFA). And, the reliability test is carried out in order to determine the extent to which the measurement results remain consistent, if the measurements were taken twice or more of the same symptoms using the same gauge (Hartono, 2008). In this study, the reliability testing is performed by calculating Cronbach's Alpha value of the constructs used.

Estimation with SEM requires that the data used should be normally distributed or can be considered normal (Hair et al., 2006; Ghozali, 2008).

Tests are used to determine that the data used in this study are not normally distributed or used test skewness and kurtosis. This test value of skewness and kurtosis of the distribution is confirmed by **z.** ±2.58 is the guideline for testing normality at 99% confidence level, and then the expected value of z is z. Thus, the data are categorized normally distributed if the value of critical ratio of skewness and kurtosis ratio is between the value of -2.58 and +2.58.

Outlier is the observation conditions of a data that has unique characteristic and look strikingly different from other observations, both for a single variable or combination of variables (Hair et al. 1998). Presence or absence of univaried outliers testing can be done by analyzing **Z** score value of research data. If the value is greater than Z66 ± 4.0 it will be categorized as outliers. Besides using the detection of outlier data, Z score value is recognized by observing the value of Mahalanobis distance.

SEM analysis requires that among the independent variables, there must have no connection (Hair et al., 2006). The symptoms for this problem can be observed through the correlation between two independent variables. If the correlation between independent variables is greater than 0.8, it can be concluded that the SEM model equation estimated has multicollinearity problem (Gujarati, 2009). Detection of multicollinearity is done by examining the correlation between observed variables that are not allowed to be ≥ 0.8 (Ghozali & Fouad, 2005).

SEM is a statistical technique that analyzes multiple variables of the latent variables, indicator variables, and measurement error directly. In addition, SEM has two main objectives in his analysis, namely to determine whether a reasonable or appropriate model based on data that is owned, as well as test various hypotheses that have been constructed previously (Ghozali & Fouad, 2005). Hair et al. (2006) and Ferdinand (2002) SEM divided into 7 stages as the following: (1) develop a theoretical model, (2) set path diagram, (3) select the type of input matrices and estimation models, (4) assess the model identification, (5) evaluate the estimated model, and (6) interpret the model and modified model.

DATA ANALYSIS AND DISCUSSION
Descriptive Statistics
These research sites are Yogyakarta Special Province (DIY), which covers four counties, namely: Bantul, Sleman, Kulon Progo, and Gunungkidul. While collecting data in the study was conducted using a questionnaire. The sampling is done using the cluster sampling method followed by accidental sampling. First of all, it divides the population into several groups (clusters) according to their respective districts and then the second stage is to select the samples from each county by using random accidental sampling. Respondents were interviewed before completing the questionnaire. The data col-

lection results is shown in Table 1.

The total questionnaires that were collected and filled by the respondents was 210 (100%), in which 195 (92.5%) of them met the criteria and the remaining 15 questionnaires (7.5%) are not eligible. Of the total, the most widely collected questionnaires from Kulon Progo district that is 52, Sleman 49, while in Bantul and Gunungkidul 47. Meanwhile, the questionnaires collected are 109 respondents for males and the remaining 86 per cent of respondents are females. When viewed in terms of age, a total of 174 respondents aged between 20 to 40 years, while the remaining 21 over 40 years. When viewed in terms of jobs, there are 10 respondents having a managerial position, while the remaining 185 are employees. Based on the levels of education, there are 106 of high school-educated respondents, 17 of them D3 (undergraduates), 70 S1 (graduates), and the remaining 2 of S2 (postgraduates).

Data Testing
Based on the result, the ratio of skewness and kurtosis test has provided evidence that the data are in a normal distribution. Thus, it is considered to have data which are not extreme or outliers. However, the test is still done to confirm that the variables are proved not to be extreme. Mahalanobis method is implemented to test such data. It is to measure. These tests follow the chi square distribution. At 99% confidence level, it is found that the value of chi square $x2$ (0, 01:52) is 76.153. Testing the outliers using Mahalanobis AMOS found that the value of all observations is not in excess of 76.153. It indicates that at 99% confidence level, statistically there is no question that it consists of extreme items or outliers in this study.

Another fining is that between the independent variables used in this study found no correlation between the independent variable with the value greater than 0.8. This means the test in this study the model has no serious multicollinearity problem. Normality test results found that the ratio of skewness and kurtosis ratio on all variables used in this study ranges in the expected value of z, between -2.58 and +2.58. This indicates that, at 99% confidence level, statistically the data used in this study are normally distributed. Thus, the statistical distribution of the observed variables data is in accordance with the rules of normality, so that the SEM can perform multivariate analysis (Hair et al., 2006; Ghozali, 2008).

The test for getting the construct validity of test results shows that the factor loading for all the variables is above 0.5. This indicates that all variables used in this study are valid. In terms of reliability, it shows that each variable can be either unreliable or reliable, because it has a Cronbach's alpha value which is above the critical value (> 0.60).

Hypothesis Testing
Results of hypothesis testing by using the SEM can be seen in the Table 2.

The relationship between innovativeness perception of technology with the benefits and perceived ease of use shows that this test failed to provide support to the fifth hypothesis, stating that the new system of electronic transactions will bring much more ease of use for managers and employees of CUs. This also applies to the fourth hypothesis stating that the new information system will be perceived by managers and employees of CUs will bring benefit to them.

On the contrary, the relationship between the perception of personal usefulness and perceived ease of use show a support

Table 1
Data Collection Results

Description	Total	%
The collected questionnaires	210	100,0
Incomplete questionnaires	15	7,5
The Complete questionnaires	195	92,5

Source: Adapted from the 2010 primary data

Table 2
Hypothesis Testing Results

	Estimate	S.E.	C.R.	P	Label
PKP < - - KTe	-,058	,045	-1,290	,197	par_33
PKP < - - KP	,456	,093	4,887	***	par_35
PKP < - - KA	,017	,060	,283	,777	par_36
PKP < - - KOM	,430	,068	6,321	***	par_38
PKP < - - KTu	,138	,071	1,932	,053	par_40
PKP < - - K	-,065	,070	-,918	,359	par_42
PKP < - - P	,082	,050	1,651	,099	par_43
PM < - - KTe	-,004	,042	-,089	,929	par_32
PM < - - KP	,250	,093	2,697	,007	par_34
PM < - - KOM	,144	,069	2,101	,036	par_37
PM < - - KTu	,269	,072	3,720	***	par_39
PM < - - K	,131	,068	1,922	,055	par_41
PEM < - - PKP	,089	,101	,881	,379	par_44
KMK < - - PM	,419	,121	3,474	***	par_45
KMK < - - PKP	,339	,104	3,245	,001	par_46

Note
Kte= Technology Innovativeness
KP=Personal Innovativeness
KA= Accessibility
KOM=Compatibility
KTu= Task Familiarity
K= Trust
P= Training
PM= Benefit Perception
PKP= Ease of Use Perception
KMK= Intent to Reuse

towards the sixth hypothesis and the seventh one. It indicates that managers and employees of CUs always try to get new information systems because they perceive that it can bring the benefits and provide convenience for them.

Next is the relationship between the accessibility and the perceived ease of use can not support the eighth hypothesis. For the results of testing the relationship between compatibility with the perception of the benefits and perceived ease of use, both showed support for the ninth and tenth hypothesis. Use of electronic transaction information system will be perceived by the easy and rewarding employees and managers of CUs when the system is perceived in accordance with work practices.

The relationship between task familiarity and the perception of benefits and perceived ease of use has shown support toward the eleventh and twelfth hypotheses. The results of this study indicate that the more familiar system of electronic transactions of CUs and the task performed by managers and employees of CUs, the less effort required to learn the system. Thus, it will be perceived as easy to use and helpful to them. The relationship between the variables of trust and perceptions of usefulness and perceived ease of use shows the results support the thirteenth hypothesis, stating that the variables are associated with the perception of the benefits of trust, but there is no support for the fourteenth hypothesis that states that the trust variable is positively related to perceived ease of use.

The results of testing the relationship between the variables of training with the perceived ease of use show support for the hypothesis proposed 15. The existence of training can help one to understand and know

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how to operate the information system, thus the training is in fact positively associated with perceived ease of use of the system.

Next is the result of testing the relationship between perceptions of usefulness and perceived ease of use with the desire to reuse the electronic transaction system of CUs. It indicates support for the hypothesis the first and second hypothesis.

Still, there is insufficient evidence to support the relationship between perceived ease of use and perceived benefits. The result indicate that managers and employees of CUs will reuse CU's electronic transaction system if they believe that the system can improve its performance in completing the job and it is also easy to use. Yet, this study failed to provide evidence that when the electronic transaction system CUs perceived ease of use, the system will also be perceived as beneficial.

CONCLUSION, IMPLICATION, SUGGESTION AND LIMITATIONS

Credit Unions (CUs) is one of the microfinance institutions which is still able to help for the poor and industries of small and medium enterprises. Such contribution is mainly related to financial and capital issues they experience. Some of the benefits and convenience of the public can be obtained in the presence of this CU, among other facilities is to gain access to financial services. In this case, customers do not require complicated requirements like other microfinance institutions.

Hundreds of studies have found evidence that the presence of CUs was formerly able to reduce poverty and empower the rural poor. However, the existence of this institution until now has been proved marginalized (Wilopo, 2006; Salam, 2008). Some of the variables that were allegedly to be the cause of underdeveloped CUs, among others are the unclear government regulations, no continuous supervision by the government, often occurs in the Credit Unions (CUs) own internal conflicts, lack of customer protection, and an inefficient use of infrastructure

(Salam, 2008; Krisnamurti, 2005).

This research focuses on the use of inefficient infrastructure which does not cause these CUs maximum operational activities. During the CUs being in such a condition, they still use the infrastructure that is still traditional. There are factors such as entire recording of transactions, estimates of investment, and financial reporting systems at CUs still use the traditional tools as revealed by Hermana et al. (2008).

For that reason, in order to improve the sustainability of its business, so as to serve the rural communities especially the poor with more efficient, it is necessary to implement the system of recording transactions / electronic in all CUs in the areas of provincial districts of Yogyakarta Special Region.

The application of information systems has been proved capable of improving the performance through improvements in planning and business management, as well as the ease of transaction activity. Thus, it can lower operating costs (Siu, 2001). The use of information on the cooperative system is also expected to improve customer satisfaction and accuracy in decision-making, and the media to inform the products to the international world.

However, it is believed that not every use of information technology can be adopted or accepted by the CUs. They will adopt and use an information system based on two factors, namely whether the system of the information is easy to use and whether the information system is useful for the performance of the organization (Davis, 1989; Davis, 1993; Venkatesh and Davis, 1996; Maurer, 2004). The higher a person's receiving system provided, it will provide time and cost to learn to use the system (Q. Ma, 2004; Galantone, 2006; Kumar, 2007).

This research is mainly to determine the determinants that affect the decisions by the managers and employees in adopting CU's electronic transaction system (ETS). This study has employed Technology Acceptance Model (TAM) developed by Davis (1989) to modify the earlier theories, such as the TRA,

TPB, and DOI.

It is found that the factors that are considered by the CUs employees and managers in using information systems KSP electronic transaction are the perception of benefits (perceived usefulness) and perceived ease of use (perceived ease of use). CU's employees and managers will adopt and use information systems if they think it can accelerate the completion of the work, increase performance, simplify work, improve effectiveness, and improve productivity. In addition, the employees and managers will adopt and use information systems when they believe that the system is easy to learn, easy to find interesting features, easy to understand and easy to be understood, flexible, and faster. Factors affecting the perception of personal benefit are the innovativeness, compatibility, task familiarity, and trust. On the other hand, the factors that affect the perception of personal convenience are innovativeness, compatibility, task familiarity task, and trainings.

In general, the variable benefits (perceived usefulness) and perceived ease of use (perceived ease of use) have statistically and significantly positive influence towards the use of electronic transaction systems at CUs. For that reason, in constructing or developing electronic trading systems at CUs, the implementer should note that completion of the system can work quickly, improve performance, simplify work, improve effectiveness, and improve productivity, easy to learn, easy to find features that are attractive, easy understand and be understood, and flexible.

Again, they should also note that the information system developed is simple and easy to operate. Yet, they should have a very good web interface, so that the employees and managers can immediately find the desired features. Besides the electronic transaction system, they must have a flexible nature, which is easily accessible from anywhere and anytime.

This study used a sample of managers and employees Credit Unions (CUs) in four districts in Yogyakarta. Therefore, the re-sults may not be for generalization for all CUs outside DIY. Possible factors to be considered can be differently such as those that are in certain areas related to culture or the culture of a particular job. Thus, it is necessary to develop a sample of this research into a Java or throughout Indonesia. For further research, the researchers can explore further by including the culture or the culture of acceptance model of information systems.

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