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"CHALLENGES AND OPPORTUNITIES OF THE LEADING EDGE IN WORLD CLASS SUPPLY CHAIN MANAGEMENT"

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THE PERCEPTION OF ADOPTING AN INFORMATION TECHNOLOGY INNOVATION ON THE RURAL BANKS OWNED BY LOCAL GOVERNMENT

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ABSTRACK

The performance of rural banks owned by the local government showed progress very proud. Therefore, policies and strategies for the future development of rural banks directed in accordance with the fundamental characteristics of rural banks, which is rural banks as community banks are healthy, strong, productive and spread throughout Indonesia and focused in the provision of financial services the small, micro and medium Enterprises (SME's) and local communities, especially in rural areas.

The purpose of this study was to find out which variables are to be determinant to measure the user's perceptions of adopting an information technology (IT) innovation on the rural banks owned by local government. Respondents in this study were employees as user's adoption of IT on rural banks. Data obtained from respondents' answers to the questionnaire. The factors that influence adopting an information technology innovation, which is voluntariness, relative advantage, compatibility, image, ease of use, result demonstrability, visibility, trial ability, and facilitating conditions to be determined by principle component analysis under Factor Analysis Techniques.

The adoption of information technologies by individuals and organizations has been an area of substantial research to extend information system. One of the important strategies that need to be done by the rural banks in order to increase competitiveness and outreach is empowering of supporting infrastructure industries owned by rural banks effectively, especially in information technology.

Keywords: information system, technology innovation, principle component

RESEARCH BACKGROUND

The role of the technology in the banking industry is needed. The development of the banking system is supported by the role of information technology (IT). IT bridges the facility which is applied to implement banking functions in order to facilitate the service in accordance with the objectives to be achieved. Thus, the more complex and diverse needs for technology adoption to be planned by the banking industry. Application of technology in a range of industries, including banking addressed to facilitate the company's internal

operations, and facilitate service to customers. Phenomena occurring in the banking industry is almost all the products offered to customers are a similar product. Therefore, the emerging competition in the banking industry is how to provide the product a very convenient, precise, and fast.

One of the financial institutions that still need to do research in order to develop and adopt a computerized information technology in conducting business activities are Rural Bank (RB). As part of the financial business, RB in Indonesia has distinctive features, which is one type of bank known to serve groups of micro, small and medium enterprises with a location that is generally close to the people who need it (www.bi.go.id). RB function not just lending to the micro, small and medium enterprises, but it also receives deposits from the public.

Lending activities to the public using principles of Right Time, Right Number, and Right on Target, because the credit is relatively rapid, simplified requirements, and so understand the needs of the Customer. The most important thing is RB operations must be based on the principles of prudential banking. Provides credit as of working capital loans, credits of investment, and credit of consumptions. Collecting public funds as deposits, savings, or other similar forms of it.

Third-party funds that have been collected by RB owned by Local Government (LG) in Central Java from 2009 to 2011 continued to increase with an average growth of 15.24 percent. Following the calculation of the Indonesian currency (IDR-Rupiah). Earlier in 2009 amounted to 2.95 trillion. In 2010 reached 3.4 trillion. In the year 2011 reached 3.91 trillion. Whereas net profit after tax generated in 2011 reached 113.8 billion. Value reached 80.2 billion in dividends from profits earned in 2011 amounted to 71.8 billion, and profit 8.3 billion from 2009 to 2010 with details of the provincial government 45.9 billion (57.26%), and 34.2 billion (42.74%) of the 35 regencies (cities).

The change from manual to digital systems (computerized) is not easy to manage the transactions that occur in the RB. The transformation from manual to computerized business activities in RB, for now and the future is a requirement and necessity. By implementing the appropriate IT operations in the RB, it will support the performance, competitiveness and sustainability of RB. What about the implications of the application of IT in RB? Certainly not out of the implications of the role of IT change itself. Before the IT implies evolving need to identify the proper response to the perception of IT users in adopting these IT.

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This study intended to determine the perceptions of users in adopting IT innovation. Users who adopted IT in this study were directors; managers; workers; are employees of the PD BPR BKK (RB owned by LG) in Central Java. The adoption of information technologies by individuals in an organization is part of the process of implementation in the information system. The discussion in this study using the context of adoption of the Personal Work Stations (PWS) individually. PWS is a microcomputer that is used by individuals to facilitate the implementation of work tasks while working in a computerized (Moore and Benbasat, 1991). Organizations with successful IT adoption and implementation processes would generate significant performance gains (Gahtani, 2003).

Perceptions that determine the adoption of IT in this PWS consists of voluntariness of use, relative advantage, compatibility, image, ease of use, result demonstrability, observability, trial ability and facilitating conditions. This research is the development of the research that has been conducted by Thompson and Higgins (1995), Tornatzky and Klein (1982), Davis (1986), Moore and Benbasat (1991). Those studies using behavioral theories are widely used to assess the adoption of information technology by end users such as Theory of Reason Action, Theory of Planned Behavior, Theory of Inter Personal Behavior, Diffusion on Innovation Theory, Task-Technology Fit Theory and Technology Acceptance Model. Technology Acceptance Model (TAM) is a research model most widely used to examine the adoption of information technology (Oliveira and Martins, 2011; Chuttur, 2009).

Recently, researchers in Information System (IS) have begun to rely on the theories of innovation diffusion to study implementation problems (Roger, 1983) cited in Jurison (2011) and Moore and Benbasat (1991). Individuals are seen as possessing different degrees of willingness to adopt innovations and thus it is generally observed that the portion of the population adopting an innovation is approximately normally distributed over time. A major focus in this research has been how potential user's perceptions of the information technology innovation influence its adoption.

This research aimed to prepare the user adoption of IT innovations, especially in RB owned LG. In addition, there is no less important in improving the performance of the banking industry, especially for micro banks. A growing number of transactions banks are implementing supplier finance programmers' from their large credit worthy customers who wish to support their supply chain partners. The vendor's partner RB in managing application and IT development, it should be able to accommodate the needs and the latest developments in the RB in the software being used, such as additional regulations related to the management of RB, such as the Know Your Customer, Financial Reports, Debt

Restructuring, and implementation of Statement of Financial Accounting Standards and Banking, as Accounting Standards for SMEs, Accounting Guideline RB.

LITERATURE REVIEW

The perceived attributes of an innovation are important parts of the explanation of the rate of adoption of an information technology (IT) innovation. This study describes the development of an instrument designed to measure users' perceptions of adopting an IT innovation. The adoption of IT by individuals and organizations is part of the process of information system (IS) implementation. The perceptions of adopting were initially based on the five characteristics of innovations derived by Rogers (1983) from the diffusion of innovations literature.

This study departs from Moore and Benbasat (1991) studies have established eight constructs, which consists of five constructs initial research Rogers (1983), namely the Relative Advantage, Compatibility, Complexity, Observability, and Trial Ability, and the addition of two constructs, namely Image and Voluntariness, and one constructs derived from the dimensions of observability and communicability, labeled Result demonstrability. While research in this paper adds one construct, namely facilitating conditions that have been developed by Thomson and Higgins (1995) in the model of personal computer utilization. Therefore, nine constructs used in this study to determine the perceptions of adopting PWS as IT innovation.

The Models of Information Technology Innovation Adoption

The main construct of interest in this research were the various perceived characteristics of using an innovation. The reason for focusing on the perceived characteristics of innovations is that the findings of many studies which have examined the primary characteristics of innovations have been inconsistent. Primary attributes are intrinsic to an innovation independent of their perception by potential adopters. The behavior of individuals, however, is predicated by how the perceive these primary attributes. Because different adopters might perceive primary characteristics in different ways, their eventual behaviors might differ (Moore and Benbasat, 1991). This is the root of the problem of using primary characteristics as research variables.

A perceived characteristic of innovations research describes the relationship between the attributes or characteristics of an innovation and the adoption and implementation of that innovation (Rogers, 1983). Recently, researchers in IS have begun to rely on the theories of innovation diffusion to study implementation problems (Gahtani, 2003). In determining what

attributes to examine in this research, the researcher relied primarily on the extensive work of Tornatzky and Klein (1982), Rogers (1983), Davis (1986), Moore and Benbasat (1991), and Thomson and Higgins (1995).

Tornatzky and Klein (1982) found that three innovation characteristics (1) relative advantage, (2) compatibility, and (3) complexity, had the most consistent significant relationships to innovation adoption. They found that compatibility and relative advantage were both positively related to adoption while complexity was negatively related to adoption. Rogers' seminal work "Diffusion of Innovations" as called DOI (1983) is one of the most often cited reviews of the perceived innovation characteristics literature.

DOI theory sees innovations as being communicated through certain channels over time and within a particular social system (Rogers, 1995). Individuals are seen as possessing different degrees of willingness to adopt innovations and thus it is generally observed that the portion of the population adopting an innovation is approximately normally distributed over time (Rogers, 1995). Rogers, in a survey of several thousand innovations studies, identified five antecedents (*relative advantage, complexity, compatibility, observability,* and *trial ability*) affecting the rate of diffusion of a technology. Rogers argues that up to 87 percent of the variance in rate of adoption is explained by these five attributes. Since the early applications of DOI to IS research the theory has been applied and adapted in numerous ways.

Davis (1986) to develop a Technology Acceptance Model (TAM) is quite similar to the model of DOI. In the TAM model included two constructs, namely Perceived of Usefulness (PU) and Perceived Ease of Use (PE). The similarity of the constructs PU with Relative Advantage and PE with Complexity seen obviously. While Davis "usefulness" term might seem to be a better name for this construct, it also suffers the same problem as relative advantage, being rather broadly based. One's job can be enhanced in many ways by the use of IT, which is all reflected in his scale items. On the other hand, innovations typically are developed with certain purposes in mind, and they must be perceived to fulfill their intended purposes better than their prose cursors if they are to be adopted (Moore and Benbasat, 1991).

Personal Computer Utilization (PCU) model developed by Thomas and Higgins (1995), using the basic theory of interpersonal behavior proposed by Trindis (1980). The theory states that behavior cannot occur, if the objective conditions in the environment prevented. PCU model showed that the use of the Personal Computer (PC or PWS) by a worker in the work environment will be determined by the affect, social norms, habits and facilitating conditions in the workplace that is conducive to using the PC.

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The Perceptions of Adopting an IT Innovation

The main constructs of interest in this study are the perception attributes to adopt and use an innovation. The perceptions of using the innovation such as personal computers (PWS) are of interest rather than the perceptions of the innovation itself, because the behavior of individuals is predicted by how they perceive the primary attributes of the innovation (Gahtani, 2003). Because different adopters might perceive primary characteristics in different ways, their eventual behaviors might differ. The importance of perceived attributes in diffusion research is clear and unquestionable. These nine constructs that are used as an instrument to measure the perceptions of users in adopting IT innovation.

Voluntariness. The degree to which use of the innovation is perceived as being voluntary, or of free will. Moore and Benbasat (1991) suggest that it is not necessarily actual voluntariness which will influence behavior, but rather a perception of voluntariness. Innovations diffuse because of the cumulative decisions of individuals to adopt them. It is not the potential adopters' perception of the innovation itself but their perceptions of using the innovation that are key to how rapidly the innovation diffuses. Venkatesh and Davis (2000) defined Voluntariness of use as the extent to which potential adopters perceive the adoption decision to be non-mandatory. Organizations often require their employees to use a certain technology. However, some people will not agree to follow such regulations.

Relative Advantage. The degree to which an innovation is perceived as better than the idea it supersedes. The degree of relative advantage is often expressed as economic profitability, social prestige, or other benefits. Rogers (1983) suggests that the relative advantage of an innovation, as perceived by members of a social system, is positively related to its rate of adoption. Diffusion scholars have found relative advantage to be one of the best predictors of an innovation's rate of adoption. Relative advantage indicates the benefits and the costs resulting from the adoption of an innovation (Gahtani, 2003). There are similarities between the constructs of perceived relative advantage with the perceived usefulness developed by Davis (1986).

Compatibility. The degree to which an innovation is perceived as being consistent with the existing values, past experiences, and needs of potential adopters. An idea that is more compatible is less uncertain to the potential adopter and fits more closely with the individual's life situation. Rogers (1983) suggests that the compatibility of an innovation, as perceived by members of a social system, is positively related to its rate of adoption.

Image. The degree to which use of an innovation is perceived to enhance one's image or status in one's social system. Rogers (1983) included image as an aspect of relative

advantage. Nevertheless, Tornatzky and Klein (1982) and some researchers have found the effect of image (social approval) to be different enough from relative advantage to be considered a separate factor. For these reasons, these papers also develop a scale to measure the image enhancing effects of PWS usage, as has been done by Moore and Benbasat (1991).

Ease of Use. The degree to which an individual believes that using a particular system would be free of physical and mental effort (Davis, 1986). There are similarities between the constructs of perceived ease of use with the perceived complexity developed by Rogers (1983). The degree to which an innovation is perceived as relatively difficult to understand and use. Any new idea may be classified on the complexity-simplicity continuum. Some innovations are clear in their meaning to potential adopters whereas others are not.

Result Demonstrability. The degree to which the results of an innovation are tangible and communicable to others, but it also included the idea of the innovation being visible. Moore and Benbasat (1991) suggest that the result demonstrability concentrated on the tangibility of using the innovation, including their observability and communicability.

Observability. The degree to which the results of an innovation are visible to others. The results of some ideas are easily observed and communicated to others, whereas some innovations are difficult to observe or to describe to others. Rogers (1983) gives an example of the software component of computers to explain the observability of an innovation. He argued that the software component of a technological innovation is not so apparent to observation, so innovations in which the software aspect is dominant possess less observability, and usually have a relatively slower rate of adoption.

Trial ability. The degree to which an innovation may be experimented with on a limited basis. The personal trying-out of an innovation is a way to give meaning to an innovation, to find out how it works under one's own conditions. This trial is a means to dispel uncertainty about the new idea. Rogers (1983) suggests that the trial ability of an innovation, as perceived by members of a social system, is positively related to its rate of adoption.

Facilitating Condition is that there are objective factors in the work environment, which makes it easy to do an action, for example by providing training to the user PC (Thomson and Higgins, 1985). Matters related to the process of transformation and adoption of IT innovations to be applied, it should be preceded or accompanied by training to human resource related.

Personal Work Station (Personal Computer) Technology Adoption

Moore and Benbasat (1991) define the Personal Work Station as microcomputer used by the individual to facilitate the implementation of work tasks while working in a computerized. PWS is a PC. Personal computer (PC) is a digital computer designed for use by only one person at a time. Rogers (1995) defines rate of adoption as "the relative speed with which an innovation is adopted by members of a social system." DOI theory posits that the rate of adoption of an innovation is influenced by the following sets of factors: (1) the individual's perception of the attributes of the innovation; (2) the nature of the communication channels diffusing the innovation; (3) the nature of the social system; (4) the extent of change agents' efforts in diffusing the innovation.

Employees RB owned by LG who use a PWS users are often unwilling to use available computer systems that, if used, Davis (1989) proposed would generate significant gain. Understanding why people accept or reject information technology is the first step toward the solution of the problem (Gahtani, 2003). Researchers in the field have been occupied in the last two decades predicting the determinants of IT adoption and use. Rogers (1983) argues that perceived attributes of an innovation are one important explanation of the rate of adoption of an innovation.

Research Hypotheses

As has been described earlier, this study aims to determine the various perception that an individual employee of Rural Banks (RB) owned by Local Government (LG) may have adopting an Information Technology (IT) innovation. Therefore, it can be compiled following research hypothesis:

H1: Voluntariness, Relative Advantage, Compatibility, Image, Ease of use, Result Demonstrability, Visibility, Trial ability, and Facilitating Conditions supposed to determine the perceptions of adopting an information technology innovation.

H2: Sequence of variables thought to determine the perceptions of adopting an information technology innovation.

RESEARCH METHOD

Essentially, the current research is part of the development of information system innovation in the banking industry, especially RB owned LG is incorporated in The Union of Rural Bank owned by Local Government, which is called PERBAMIDA in the region of Central Java. The research methodology thought to be most appropriate was survey questionnaire. Newsted et al. (1998) cited by Gahtani (2003) argue that surveys are among the more popular methods used by the IS research community. Their argument includes (1)

surveys provide responses that can be generalized to other members of the population studied and often to other similar populations and (2) surveys can be reused easily and provide an objective way of comparing responses over different groups, times, and places.

Research Sample

The study was conducted in RD owned by LG which is located in Central Java. The population used as sampling frames in this study were all directors, managers, and staff RD owned by LG which uses PWS in doing his job. The sampling technique used in this study is the convenience sample technique, which is an easy way to be implemented and used to fulfill requirements to get a sample of the selected population.

The sampling technique used in this study is the convenience sample technique, which is an easy way to be implemented and used to fulfill requirements to get a sample of the selected population. The samples obtained from the participants who attend regular education organized by PERBAMIDA. There are thirty four RB owned LG which is called PD BPR BKK. **Appendix-Table 1** shows the samples was acquired considered representative of the entire population.

Survey Questionnaire

Appendix-Table 2 shows the number of questionnaire items as much as forty six of the nine constructs. The nine perceptions of adopting IT of using an innovation constructs that are investigated in this research are measured using five Likert - scales. Those instruments were published in leading journals in the field and applied for similar research projects. The perceptions such as Voluntariness of Use, Relative Advantage, Compatibility, Image, Ease of use, Result Demonstrability, Visibility, Trial ability, and Facilitating Conditions. The numbers of 300 questionnaires were distributed with a response rate slightly over 77%.

RESULT AND DISCUSSION

A technique of data analysis used in this study is Factor Analysis. Using factor analysis techniques in accordance with the purposes of this study is to identify the key factors that determine the perceptions of adopting an information technology innovation. Factor analysis aims to identify the principal components that explain the pattern of correlations within a set of observed variables (Hair, 1998). Factor analysis is frequently used to develop questionnaires. Questionnaires are made up of multiple items each of roommates elicits a response from the same person (Field, 2005).

Based on the results of data processing are shown in **Appendix-Table 3**, the value of the MSA (Measure of Sampling Adequacy) is 0.720 (> 0.50), so it feasible to be examined by factor analysis. These results were confirmed by a number Bartlett's Test of Sphericity reached Approximate Chi-Square is 868 516 with a highly significant (p <0.001), and therefore factor analysis is appropriate.

Hypothesis testing is conducted based communalities, which shows how much the conditions can be explained by changes in these factors. The greater the communalities, then it become increasingly important factors and need to be selected. Communalities highlight the contribution the variable when it is used to identify the latent dimension represented in the original variables. A restriction of the value of communalities was 0.30 and if above 0.60 are most variables (Hair, 1998).

Appendix-Table 4 shows that of the forty-six-item questionnaire of nine constructs were tested the overall has a value above 0.60. Thus all the observed items have characteristics that could explain each group (communal).

The results of the test factors

Factor Extraction. According to **Appendix-Table 5** of the forty-six items were analyzed, it was extracted into twelve factors (eigenvalues greater than 1), which is taken as a component factor worthy of observation. Factor 1 with the largest eigenvalue 13,211 unable to account for the model as much as 28,179%. So then, up to a factor 12 is only able to explain 3777%. Accordingly, the twelve factors, overall was able to explain changes in perception as much as 88,535% variation.

Principal Component. The next step after determining the number of principal component factors is to identify constructs that determine the perception of IT innovation adoption. In the first phase are reviewed its position on the table component matrix. In the first phase are reviewed its position on the table component matrix. Then be compared to its position at the rotated component matrix with factor loading coefficient of 0.50. Furthermore, it can be determined that constructs become a member of a factor.

Based on the comparison of the position of an item of the construct in **Appendix-Table 6** and **Table 7** can be determined items of constructs that are members of a factor. Based on the comparison of the position of an item of the construct in Table 6 and Table 7 can be determined items of constructs that are members of a factor. Ultimately, the comparison between the matrix and the rotated component matrix component can provide answers for **Hypothesis 1** are shown in **Appendix-Table 8**. The perceptions of adopting an information technology innovation is determined by the perceived of Relative Advantage,

Voluntariness of Use, Compatibility, Observability, Facilitating Conditions and Image, which is perceived by the user PWS or PC.

Latent Root Criterion. Factors that have eigenvalue greater than 1 (>1) will be selected and sorted from largest factor loading sequence. Table 8 presents the factor loadings for each variable (construct) in context of the a priori attribute names and the questionnaire items. The first factor (**Appendix-Table 8)** consisted 6 of the 9 relative advantage items. The perceptions of adopting an information technology innovation in the use of PWS are largely determined by their perception of the relative advantage that suggests that using a PWS enhances their effectiveness on the job. Conclusion of the results of this test is that the perception of the users of PWS (PC) more considering the potential benefits (Relative Advantage).

The second factors on **Appendix-Table 8,** shown that construct of Compatibility to determine of adopting an information technology innovation. The users of PWC perceived that using a PWS fits into their work style. They think that using a PWS fits well with the way they like to work. And they used of a PWS is voluntary. The next factor which determines the adoption of IT innovation was facilitating conditions and observability. In the context of the use of a PC, providing support to users of personal computers is a condition that provides facilities that can affect the utilization and adoption of the system.

The final result is obtained disappearance trial ability, ease of use, and result demonstrability. Perceived of trial ability suggests that most users do not have the chance to try. In addition, the users need someone who can assist in the use of a PC. Perceived ease of use of a common item in question to construct relative advantage constructs. Result demonstrability is the result of development carried out by the Moore and Benbasat (1991), which is a fraction of the construct of observability and communicability.

CONCLUSION

This study was conducted in light of the need to find out which variables are to be determinant to measure the user's perceptions of adopting an information technology (IT) innovation on the RB owned by LG. Because of the time, expense, and effort needed to develop useful and interesting technological innovations for preparing and deal with globalization in the banking industry, especially micro banking.

The instrument development research described here several contributions. The most obvious is the creation of an overall instrument to measure various perceptions of using or adoption an information technology innovation. Managing a management change is a step

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that needs to be executed. One is activity to do transforms from manual to digital (computerized) requires strategies to manage change. It cannot be avoided, there are likely some human resource resist change, either for reasons of psychological, sociological, and rational. Board of RB should be able to motivate and transmit the urgency or vision changes the transformation from manual to digital or IT in RB scope, and that vision should be able to direct and guide all human reaching changes.

Provides additional constructs, namely perceived of facilitating conditions proposed by Thomson and Higgins (1995) to develop the beginning of IS research that has been done by Moore and Benbasat (1991), Davis (1986), Tornatzky and Klein (1982). Although it has appeared a variety of technology acceptance model, such as the TAM model by Davis et al (1989), Unified Theory of Acceptance and Use of Technology (UTAUT) model, which was raised by Venkatesh et al (2003) and others.

This study was also limited by the sampling strategy used in the primary data collection. These data were drawn from a convenience sample of participants who attend regular education organized by PERBAMIDA. The obstacles encountered are some of them are not willing to participate in filling out the questionnaire. Future research includes testing the other instruments and constructs that can measure the perceptions of users in adopting internet banking as one of banking services.

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Appendix

Table 1. Sample Demographics

Demographics	Frequency	N
Gender		
Male	124	
Female	108	232
Level		
Director	16	
Manager	33	
Staff	183	232
Education		
High School	15	
Diploma	60	
College Graduate	33	
Post Graduate	24	232
Age		
Under 25	60	
25 – 34	103	
35 – 44	53	
45+	16	232

Table 2. Number of items the constructs

Constructs	Number of items
Voluntariness of Use	4
Relative Advantage	9
Compatibility	4
Image	4
Ease of Use	8
Result Demonstrability	4
Observability	5
Trial ability	5
Facilitating Conditions	3

Table 3. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.720
Bartlett's Test of Sphericity	Approx. Chi-Square	868.516
	df	46
	Sig.	.000

Table 4. Communalities

	Initial	Extraction
Voluntariness of Use_1	1.000	.792
Voluntariness of Use_2	1.000	.942
Voluntariness of Use_3	1.000	.867
Voluntariness of Use_4	1.000	.702
Relative Advantage_1	1.000	.847
Relative Advantage_2	1.000	.848
Relative Advantage_3	1.000	.882
Relative Advantage_4	1.000	.883
Relative Advantage_5	1.000	.802
Relative Advantage_6	1.000	.859
Relative Advantage_7	1.000	.914
Relative Advantage_8	1.000	.794
Relative Advantage_9	1.000	.793
Compatability_1	1.000	.962
Compatability_2	1.000	.978
Compatability_3	1.000	.919
Compatability_4	1.000	.909
Image_1	1.000	.962
Image_2	1.000	.977
Image_3	1.000	.980
Image_4	1.000	.968
Ease of Use_1	1.000	.905
Ease of Use_2	1.000	.948
Ease of Use_3	1.000	.863
Ease of Use_4	1.000	.833
Ease of Use_5	1.000	.889
Ease of Use_6	1.000	.895
Ease of Use_7	1.000	.951
Ease of Use_8	1.000	.958
Result Demonstrability_1	1.000	.958
Result Demonstrability_2	1.000	.777

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Result Demonstrability_3	1.000	.892
Result Demonstrability_4	1.000	.930
Observability_1	1.000	.842
Observability_2	1.000	.822
Observability_3	1.000	.927
Observability_4	1.000	.703
Observability_5	1.000	.777
Trialability_1	1.000	.928
Trialability_2	1.000	.906
Trialability_3	1.000	.839
Trialability_4	1.000	.877
Trialability_5	1.000	.923
Faciliting Conditions_1	1.000	.898
Faciliting Conditions_2	1.000	.965
Faciliting Conditions_3	1.000	.941

Extraction Method: Principal Component Analysis.

Table 5. Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	13.211	28.719	28.719	13.211	28.719	28.719	6.100	13.261	13.261
2	6.117	13.298	42.017	6.117	13.298	42.017	5.782	12.571	25.831
3	3.553	7.724	49.741	3.553	7.724	49.741	3.707	8.058	33.890
4	3.108	6.757	56.498	3.108	6.757	56.498	3.519	7.650	41.539
5	2.803	6.093	62.591	2.803	6.093	62.591	3.519	7.649	49.188
6	2.727	5.929	68.520	2.727	5.929	68.520	3.403	7.398	56.586
7	2.310	5.021	73.541	2.310	5.021	73.541	3.076	6.687	63.273
8	1.848	4.017	77.558	1.848	4.017	77.558	2.733	5.940	69.213
9	1.535	3.338	80.896	1.535	3.338	80.896	2.660	5.783	74.997
10	1.277	2.776	83.672	1.277	2.776	83.672	2.318	5.040	80.037
11	1.184	2.574	86.247	1.184	2.574	86.247	2.172	4.721	84.758
12	1.053	2.288	88.535	1.053	2.288	88.535	1.737	3.777	88.535
13	.856	1.861	90.396						
14	.742	1.612	92.008						
15	.626	1.360	93.368						
16	.534	1.160	94.528						
17	.410	.892	95.420						
18	.359	.780	96.200						
19	.322	.701	96.901						
20	.236	.514	97.415						
21	.205	.445	97.860						
22	.195	.424	98.285						
23	.163	.353	98.638						
24	.125	.272	98.910						
25	.104	.227	99.137						

26	.088	.192	99.329							
27	.085	.184	99.513							
28	.052	.114	99.627							
29	.043	.093	99.720							
30	.039	.085	99.804							
31	.026	.056	99.860							
32	.018	.038	99.898							
33	.017	.036	99.935							
34	.013	.029	99.964							
35	.009	.019	99.983							
36	.004	.008	99.991							
37	.003	.006	99.997							
38	.001	.003	100.000							
39	3.784E-15	8.226E-15	100.000							
40	1.233E-15	2.681E-15	100.000							
41	8.316E-16	1.808E-15	100.000							
42	-1.462E-15	-3.179E-15	100.000							
43	-3.181E-15	-6.915E-15	100.000							
44	-4.300E-15	-9.347E-15	100.000							
45	-5.385E-15	-1.171E-14	100.000							
46	-7.084E-15	-1.540E-14	100.000							

Extraction Method: Principal Component Analysis.

Table 6. Component Matrix[a]

	Component											
	1	2	3	4	5	6	7	8	9	10	11	12
Voluntariness of Use	.175	-.291	-.243	.022	.035	.443	-.089	-.375	-.276	.255	.350	.088
Voluntariness of Use	.351	.616	.238	-.408	.100	.176	.174	.122	-.330	-.117	-.005	-.083
Voluntariness of Use	-.150	.176	.291	.045	-.116	-.353	.209	.536	.291	-.167	-.348	.157
Voluntariness of Use	-.220	.286	.411	.104	.145	-.426	.299	.233	.128	-.157	.004	-.068
Relative Advantage	.638	-.519	.019	-.141	.144	-.055	.308	-.110	.047	-.068	-.065	.089
Relative Advantage	.624	-.502	.105	.026	.144	-.133	.351	-.091	.004	.034	-.112	-.107
Relative Advantage	.645	-.537	.039	-.137	.201	-.017	.243	-.124	-.069	-.087	.009	.174
Relative Advantage	.684	.550	.122	-.065	-.108	-.040	.100	-.029	-.231	-.036	-.069	-.099
Relative Advantage	.627	-.158	.148	.395	.221	-.228	-.132	-.003	.048	.222	-.073	-.173
Relative Advantage	.615	-.525	.056	-.129	.165	-.077	.346	-.083	.034	-.080	-.113	.072
Relative Advantage	.614	-.545	.072	-.139	.203	-.016	.325	-.111	-.034	-.118	-.066	.188
Relative Advantage	.604	-.402	.129	.237	.125	-.054	-.013	-.008	-.135	.271	-.074	-.281
Relative Advantage	.556	-.424	.182	.160	.206	-.139	.259	-.101	-.113	.142	-.050	-.268
Compatability	.438	.471	.272	-.152	-.442	.168	.415	-.065	.012	.166	.109	.105
Compatability	.417	.425	-.025	-.480	.110	.208	.413	.129	.104	.373	.007	-.027
Compatability	.503	.567	-.212	-.139	.246	-.065	.125	-.171	.324	.217	-.077	.108
Compatability	.510	.695	.152	-.088	.175	.106	.015	-.242	.145	.000	-.097	-.060
Image	-.616	.108	.263	.116	.378	.536	.091	.103	-.007	.130	-.103	.111
Image	-.534	.290	-.074	.476	.316	.181	.307	-.039	-.180	.200	-.180	.205
Image	-.500	.263	.188	.267	.563	.403	.062	-.049	-.019	.058	-.208	.147

Image	-.432	.157	.162	.592	.285	.253	.170	.000	-.344	-.251	.014	.157
Ease of Use	-.489	-.015	.273	.315	.002	-.299	-.118	-.396	.391	.256	.029	.112
Ease of Use	-.719	-.384	-.013	.167	.244	.054	.077	.078	.341	.047	.245	.053
Ease of Use	-.601	-.404	.382	-.004	.285	-.028	-.022	.123	-.169	-.149	.157	-.142
Ease of Use	-.439	.182	.447	.032	.118	-.393	.237	.112	-.100	.121	.328	.190
Ease of Use	.377	-.051	-.182	.391	-.653	.047	.222	.010	-.129	.012	-.028	.251
Ease of Use	.475	.335	-.197	.497	-.168	-.281	.329	-.164	-.030	-.056	.152	.042
Ease of Use	.578	.419	-.430	.205	.249	.147	-.038	.018	.026	-.306	.014	-.186
Ease of Use	.497	.400	-.461	.287	.205	.190	-.030	-.088	.268	-.263	-.014	-.168
Result Demonstrability	.500	.188	.161	.422	-.537	.300	.117	.108	.117	-.045	.202	.093
Result Demonstrability	.531	-.067	.382	.253	-.159	.326	-.307	.118	.112	.028	-.165	-.002
Result Demonstrability	.640	-.322	-.035	.337	.025	.217	-.152	.340	.060	.184	-.194	.049
Result Demonstrability	.573	-.009	-.178	.326	.035	.382	.053	.450	.247	.122	.170	-.074
Observability	.531	-.130	.617	.250	-.078	.058	-.199	-.034	.076	.071	.029	-.196
Observability	.637	.066	-.242	.078	.345	.012	.199	-.116	.251	-.217	.247	-.063
Observability	.483	.306	-.007	.504	-.190	-.425	.014	-.114	-.319	.069	-.095	3.602E-5
Observability	-.524	.397	.201	.223	-.019	-.018	.204	-.124	.053	.012	.040	-.343
Observability	-.541	.437	.260	.105	.118	-.207	.120	-.117	.046	.060	.317	-.152
Trialability	.512	.625	.213	-.246	.184	-.022	-.276	-.026	-.222	.009	-.091	.004
Trialability	.619	.393	.331	-.241	.105	-.030	-.279	-.090	.136	.222	-.009	.187
Trialability	.628	-.126	.174	.013	.174	-.172	-.264	.393	-.216	.169	.199	.001
Trialability	.570	.075	-.154	.094	.288	-.388	-.376	-.075	.133	-.014	.124	.317
Trialability	.546	.308	-.104	.172	.362	-.350	-.360	.052	-.208	-.104	.023	.223
Faciliting Conditions	.617	.047	-.077	-.112	.201	.060	.091	.522	-.022	.011	.410	.062
Faciliting Conditions	.444	-.075	.687	-.023	-.117	.299	-.179	-.202	.120	-.290	.081	.094
Faciliting Conditions	.494	-.142	.677	-.008	-.032	.243	-.081	-.225	.104	-.275	.104	.060

Extraction Method: Principal Component Analysis.

a. 12 components extracted.

Table 7. Rotated Component Matrix[a]

	Component											
	1	2	3	4	5	6	7	8	9	10	11	12
Voluntariness of Use	.168	-.047	.030	.071	.070	-.022	-.011	-.098	.001	.110	-.853	-.026
Voluntariness of Use	-.025	.754	.145	.058	-.041	.051	.017	.141	-.091	.090	.069	.551
Voluntariness of Use	-.058	.006	-.008	.040	.078	-.150	-.013	.002	-.086	.089	.903	-.049
Voluntariness of Use	-.059	.042	.015	.135	-.024	-.028	.007	.522	.045	-.013	.634	.002
Relative Advantage	.872	.048	.109	-.182	.038	.071	.036	-.127	.082	.071	-.057	-.005
Relative Advantage	.825	.026	.090	-.138	.089	.070	-.033	-.042	.350	.038	.007	.001
Relative Advantage	.878	.023	.149	-.122	.024	.022	.144	-.107	.045	.099	-.157	.059
Relative Advantage	.061	.689	.181	-.129	.344	.213	.177	.025	.184	-.002	.059	.350
Relative Advantage	.319	.053	.181	-.055	.116	.186	.331	-.059	.684	.111	.030	-.141
Relative Advantage	.891	.040	.100	-.147	.026	.053	.017	-.115	.107	.053	.006	.017
Relative Advantage	.923	.025	.147	-.077	.026	.015	.085	-.115	.018	.067	-.070	.048
Relative Advantage	.464	-.003	.142	-.098	.077	.022	.081	-.130	.693	.124	-.153	.029
Relative Advantage	.662	.012	.101	-.056	.061	.057	-.012	.073	.567	.031	-.068	.043
Compatability	.052	.705	.257	-.106	.517	-.075	-.249	.127	-.108	.142	.019	.025
Compatability	.184	.864	-.161	-.044	-.051	.051	-.216	.002	-.046	.340	-.006	.001
Compatability	.093	.748	-.142	-.035	.053	.430	.225	-.033	-.018	.054	.035	-.293
Compatability	-.050	.788	.259	.060	.042	.417	.152	.048	.064	-.091	.039	-.013
Image	-.263	-.046	.054	.786	-.357	-.177	-.283	.028	-.125	.088	-.007	-.081
Image	-.226	-.040	-.347	.861	.125	-.020	-.072	.128	-.007	-.097	.023	-.123

Image	-.223	.031	.008	.896	-.312	.040	-.052	.053	-.055	-.079	.028	-.110
Image	-.177	-.312	.069	.835	.150	.064	.026	.241	-.052	-.071	.011	.211
Ease of Use	-.247	-.227	.084	.133	-.023	-.163	.034	.312	.084	-.344	.080	-.714
Ease of Use	-.091	-.612	-.149	.270	-.342	-.092	-.241	.239	-.173	.151	.017	-.420
Ease of Use	-.010	-.538	.092	.242	-.468	-.335	-.135	.360	.026	-.026	.062	.145
Ease of Use	-.131	-.019	-.051	.204	-.007	-.417	.104	.705	-.084	.068	.259	-.099
Ease of Use	.119	-.052	.047	-.108	.882	-.023	-.056	-.257	-.008	.081	-.054	.024
Ease of Use	.129	.171	-.081	-.026	.737	.423	.195	.237	.155	.000	.036	-.040
Ease of Use	.018	.272	-.032	.018	.142	.821	.240	-.152	.083	.141	-.068	.261
Ease of Use	-.023	.222	-.007	.033	.157	.901	.141	-.192	.047	.093	-.057	.007
Result Demonstrability	-.053	.132	.487	-.050	.721	.170	-.129	-.103	.055	.346	-.010	-.014
Result Demonstrability	.041	.107	.650	.011	.154	.027	.069	-.407	.330	.190	.033	-.012
Result Demonstrability	.312	-.046	.197	.030	.186	.094	.158	-.556	.435	.429	.005	-.031
Result Demonstrability	.114	.077	.129	.034	.221	.399	-.051	-.297	.246	.729	-.030	-.038
Observability	.159	.092	.706	-.098	.099	-.031	.064	.003	.523	.097	.031	-.043
Observability	.442	.196	.057	-.095	.053	.683	.175	.104	.013	.231	-.104	-.044
Observability	.010	.178	-.023	-.035	.669	.126	.415	.091	.444	-.176	.085	.120
Observability	-.449	.011	-.042	.267	.006	.083	-.358	.451	.100	-.229	.158	-.053
Observability	-.446	.042	-.056	.198	-.088	-.027	-.087	.690	-.025	-.110	.106	-.135
Trialability	-.131	.733	.235	-.040	-.075	.109	.441	-.019	.119	-.035	.014	.299
Trialability	.041	.707	.394	-.160	-.051	-.004	.416	-.074	.108	.099	-.001	-.147
Trialability	.226	.120	.173	-.210	-.017	-.107	.481	-.040	.416	.485	-.014	.216
Trialability	.192	.127	.055	-.214	.039	.267	.799	-.055	.073	.099	-.029	-.212
Trialability	.056	.221	.011	-.007	.083	.270	.855	-.016	.174	.061	.036	.156
Faciliting Conditions	.274	.238	.030	-.161	.029	.180	.238	.042	.033	.769	-.004	.237
Faciliting Conditions	.207	.145	.945	-.046	.019	-.018	.032	-.018	-.025	-.019	-.034	.038
Faciliting Conditions	.340	.134	.893	-.035	.010	.011	.031	.052	.033	-.011	-.042	.036

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 14 iterations.

Table 8. Principle Component

Factors and Constructs	Eigenvalue	%Value	Commulative	Loading Factor	P or NP
FAKTOR 1	13.211	28.719	28.719		
Relative Advantage_1				.872	P
Relative Advantage_2				.825	P
Relative Advantage_3				.878	P
Relative Advantage_6				.891	P
Relative Advantage_7				.923	P
Relative Advantage_9				.662	P
FAKTOR 2	6.117	13.298	42.017		
Voluntariness of Use_2				.754	P
Compatibility_3				.748	P
Compatibility_4				.788	P
Relative Advantage_4				.689	NP
Trial ability_1				.733	NP
Trial ability_2				.707	NP
FAKTOR 3	3.553	7.724	49.741		
Observability_1				.706	P
Facilitating Conditions_3				.945	P
Facilitating Conditions_4				.893	P
FAKTOR 4	3.108	6.757	56.498		
Image_4				.835	P

FAKTOR 5	2.803	6.093	62.591		
Observability_3				.669	NP