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Behavioral analysis of use personal service e-balance Indonesian social security

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Abstract. Indonesian Social Security is the one of the government agencies that is trusted to organize social security. With help of Information technology that growing these day, Indonesian Social Security is also developing E-Balance application, where previously all activities for checking balance is done by giving their slip details through the nearest branch to be distributed to each company. So far there is no research that reviewing e-Balance. Hence, the authors is interested to do research related factors that influence the behavior of the use of E-Balance Indonesian Social Security in the Jakarta area and model that can describe those factors Authors distributing questioners to 193 respondents and perform data processing. The result of this study is to know the factors that influence the behavior of use Personal Service E-Balance Indonesian Social Security and model that can describe those factors. The result shows that UTAUT 2 model is not match with this research and need to be enhanced. After enhancement, there are 3 factors that being significant. Such as Behavioral Intention, Effort Expectancy and Social Influence while the others are not supported and need to be customize.

1. Introduction

Indonesian social security has implemented in Indonesia. Based on the data a few years ago, Indonesian Social Security program has given the good impact to the members because they can save money by deduct from their payroll every month for their old age. But, using paper every year to inform their balance is not effective and they cannot see it real time. It became difficult when the member move to another company, they need to check with the nearest branch for the information. Implementation refers into all organization activity for adoption, management and routine innovation. Successful implementation need some factors, such as : 1)Support from Management. 2) Behavioral Intention from users. 3) Supporting team to give information about system and influence users. From the implementation of this application, the registered workers do not need to get a slip details for the balance every year, but they can perform real-time checking of the balance that's automatically updated if there is a balance replenishment. This system was developed by the outsourced vendor and further developed by the Department of Information Technology Development Employment BPJS itself. E-Balance has been implemented into all branches since 2015 until today. So far the process of checking the balance of JHT and JK can be done by E-Balance. The decision to adopt a system of information technology in the hands of the manager, but the success of these technologies depends on the user and the reception and use of each individual wearer (Hartono, 2007).
UTAUT 2 models shows that the intention to behave (behavioral intention) and behavior to use a technology (use behavior) affect to expectation of performance (performance expectancy), hopes of effort (effort expectancy), social influence (social influence),

supporting conditions (facilitating conditions), pleasure and comfort (hedonic motivation), the benefits of the cost (price value), and actions performed repeatedly (habit). The seventh factor is moderated by a factor of sex , gender , age and experience (Vankatesh et al, 2012). The objective in this study is to analyze the behavioral the system which is called E-Balance Indonesian Social Security.

2. Literature Review

Behavior is basically oriented on the goal. In other words, our behavior is generally motivated by a desire to achieve a particular goal. The specific objectives are not always known consciously by the individual concerned (Winardi, 2004). Definition of behavior as a result of the construction theory and research, as follows: 1) Behavior is something that is caused by something. 2) Behavior shown toward the specific goal. 3) Behavior that can be observed also can be measured and 4) Behavior cannot observed directly (example: think and perception) is also important in order to achieve objectives. Self-Service Technology (SST) is defined as an interface technology that allows consumers to generate a service independently of direct employee involvement (Meuter et.al, 2000). Self-Service Technology is one of the Technology Infusion Strategy or strategies to measure the extent to which technology can penetrate an organization that is trying to use technology to improve and satisfying experience of service encounters customers, both in terms of customization and flexibility, improved service recovery, as well as the provision of spontaneous delight. Implementation of self-service technology enables the company to provide additional services with more value from core business which is running. The advantages of self-service technology can be viewed from two sides, such as service providers and customers. From services provider enterprise technology, it could be an opportunity to accelerate the delivery of services, precision, customization, reduce costs and improve productivity. For customer self-service technology also provides several advantages such as saving time and costs, higher control on the services, shortening the waiting time, convenience of location, the pleasure in the process of production and the ease of use of. Unified Theory of Acceptance and Use of Technology 2 is the development of models that's stated UTAUT by Venkatesh et.al (2003).UTAUT has four main variables that plays a fundamental role, such as performance expectancy, effort expectancy, social influence and facilitating condition that affects behavioral intention and use behavior. In addition, there are four moderators: gender, age, experience and voluntariness of use, which is positioned to support the impact of constructs - constructs on behavioral intention and use behavior. Later on UTAUT is developed by Venkatesh, Thong and Xu. According to Venkatesh et.al. (2012: 157), developed of models UTAUT to be UTAUT 2 is to study the acceptance and use of technology in the context of the consumer. Venkatesh et.al. added three new constructs into UTAUT models, such as Hedonic Motivation, Price Value, and Habit and include three moderator variables, ie Age, Gender, and Experience.

3. Research Method

This study includes data applied research (Applied Research) which is used to improve existing practices and increase effectiveness. The study was conducted using a quantitative approach that emphasizes the analysis of numerical data were processed with statistical methods. This study employs a structural equation modeling (SEM) approach to develop a model that represents the relationships among the seven variables and the dependent variable in this study: PE, EE, SI, FC, HM, PV, HB and BIU, UB (dependent variable). Data were

collected using a survey questionnaire which comprises questions on participants' characteristics and multiple items for each variable in the study. Participants were 193 of workers' registered on Indonesian Social Security in Jakarta area. The mean of the age of participant under productive age on 20 – 25 years old (51%) and 63.7% were Male and their experience of work between 1 – 5 years. This research is using UTAUT 2 Model, it is a model which is can shows the user behavioral and acceptance of the system that has implemented in organization.

4. Results and Discussion

The stages for behavioral analysis : (1). Create Path Diagram, (2). Model Identification, and (3). Testing feasibility model. The Diagram Initial Model described in figure 1 below:

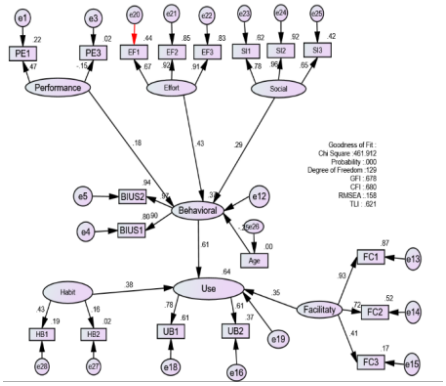

Figure 1. Output Path Diagram Initial Model

AMOS output results shows that the indicators of age, PE1, PE3, FC3, HB1 and HB2 factor loading values <0.50. Furthermore, the indicator eighth deleted. Therefore Performance Expectancy indicators and Habit has no indicator then this variable deleted from the model. Then, after removal of all the indicators and variables, the GOF results are not much better than the previous test results. Figure 2 is a diagram of the resulting new path after the abolition of indicators and variables.

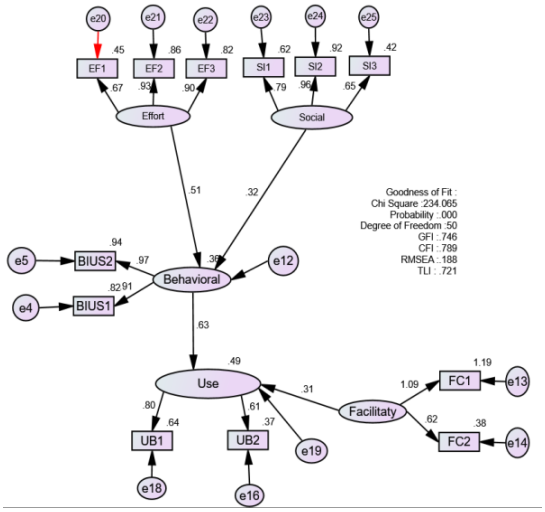

Figure 2. Output Path Diagram After Indicators and Variables Elimination

Because the research of the model still does not meet the recommended value GOF, the study concluded that the model does not fit with the data obtained. Hence, hypothesis testing / structural model cannot be done.

Conducting Interpretation and Modifying Model

Hence, the modification of the model is done for subsequent research, to know the factors that influence the behavior of the level of usage of the application of E-BalanceIndonesian Social Security.

Modifications model performed in this study based on the theory described by Arbuckle in AMOS 16.0 User's Guide (2007) which discusses how to modify the model to see Modification Indices produced by AMOS. Arbuckle explains that the Modification Indices provide some additional recommendations dashed lines / connection to minimize the chi-square value so as to make the model becomes more fit. In addition based on the theory of Arbuckle, the determination of where the connection lines are added is also based on some other theory. According to James L. Arbuckle (2007) at the AMOS 16 User's Guide, the numbers in the table Modification Indices that are below, indicating substantial minimum chi-square value would go down if the corresponding variable is connected. For example, if the variable Effort Expectancy associated with Social Influence, then the chi-square value will drop a minimum of 24.045.Figure 3 is the output path diagram generated after linking variables - variables.

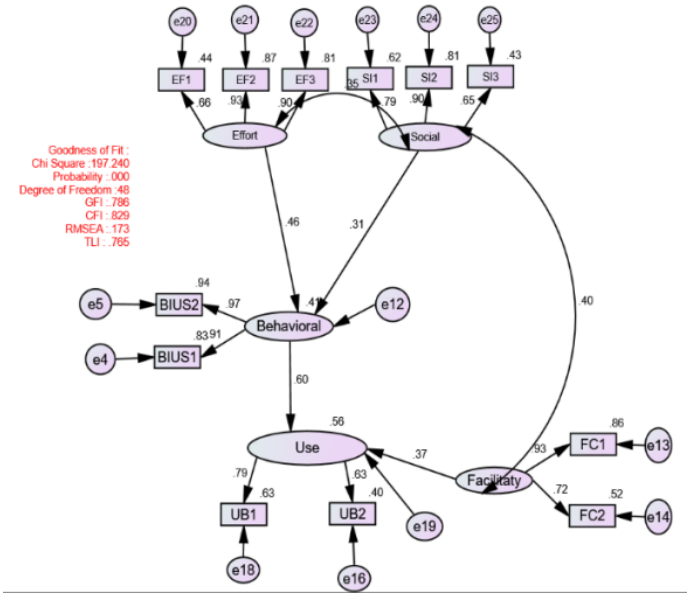

Figure 3 Output Path Diagram Initial Modification

Based on test results GOF, the model results of this initial modification is still not fit with existing data. Hence, the addition of a line connection needs todone again, each time you make modification, the results table for Modification Indices AMOS output will vary. Extra connection error between variables is performed continuously until finally declared fit models. After conducting several additional correlation error variables, finally obtained a model which is declared fit with existing data. Figure 64 is a model last modified after the addition of the correlation connection.

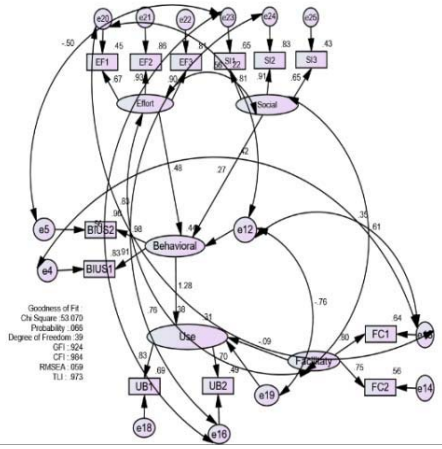

Figure 4. Output Path Diagram Latest Modification

Hypothesis testing is done by comparing the value C.R at 4:20 table with critical values that Identic with t value is 1.65 at the 5% significance level. If the value C.R greater than the critical value at significance level of p <0.05, then the hypothesis is accepted. However, if the value of C.R not reach the critical value at significance level of p> 0.05, then the hypothesis is rejected.Based on the table it can be seen that from the model that most contribute to and influence on the use of e-Balance is user intent to use (Behavioral Intention) e-balance by 126%, and ease of use (Effort Expectancy) by 53%, and the influence of the surrounding environment (Social influence) by 25%.So it can be assessed that the intention of the user to use E-Balance is a very influential factor in the behavior of the user. With the intention to access the application will be the start / beginning of influencing factors - other factors. In this case, it is expected that Indonesian Social Security can increase the sale and continue to invite the participants to use E-Balance.Factor in the ease of use of E-Balance (Effort Expectancy) are also factors that have an influence on the behavior of the user. In this case the user would find it easy to use e-applications will often use this balance and user behavior, the better. The user-friendly application is certainly a key success so that users want to use the application.The last factor that influence the effect of the environment around the user and encouragement from the people around (Social Influence) which is very important in influencing the behavior of the use of E-Balance.

5. Conclusions

This study shown that UTAUT 2 Model is not match as a behavior modelof use Personal Service e-Balance Indonesian Social Security in the Jakarta area. It is because, Indonesian citizen and environment has characteristic and specificity. In order to solve the problem, we should enhanced and modified the modelin advance. Then, it can then be testing the hypothesis. Our Modifications were done is remove the variables age, performance expectancy and habit. While the variable price value and hedonic motivation has been removed first for only the variables which are not allowed in AMOS then some variables that are not correlated deleted. Deletion of the age variable in the model, which indicates that the age factor cannot be used as a measurement of the level of application usage behavior E-Balance Indonesian Social Security, due to the age of the workforce who were respondents in

this study are in the age range 20-25 years which is equivalent , the inappropriateness of this model to study the behavior of use among participants Indonesian Social Security in the Jakarta area caused by the data distribution is not normal and also the indicator / gauge does not measure variables well.

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