

MEASUREMENT OF ACCEPTANCE OF ONLINE ATTENDANCE SYSTEM WITH TECHNOLOGY ACCEPTANCE MODEL APPROACH: CASE IN DIRECTORATE GENERAL OF CHRISTIAN COMMUNITY, MINISTRY OF RELIGIOUS AFFAIRS OF THE REPUBLIC INDONESIA

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ABSTRACT

The purpose of this study is to analyze the attitude of user acceptance of online attendance at Directorate General of Christian Community Ministry of Religious Affairs Republic of Indonesia (RI) with Technology Acceptance Model (TAM) approach. TAM is a method for analyzing acceptance of information systems. The population of this study are employees who use the online presence system in their daily present. The sampling technique used is simple random sampling. Total sample used is 60 samples. The data was processed using SmartPLS version 3.0 with the Structural Equation Modeling (SEM) analysis method. The results of the analysis of this study found that Perceived Ease of Use (PEU) had a significant effect on perceived usefulness (PU), Perceived Ease of Use (PEU) had a significant influence on Attitudes Toward Using (ATU) and Perceived Usefulness (PU) had significant effect on Attitude Toward Using (ATU). The implication of this research is that it is necessary to develop a more informative attendance system and add other features in order to improve employee performance at Ministry of Religious Affairs RI.

Keywords: *Online Presence System, Perceived Ease of Use, Perceived Usefulness, Attitude towards Using Technology, Technology Acceptance Model*

1. INTRODUCTION

The development of information and communication technology is one aspect of people's lives that cannot be avoided. Large-scale and rapid developments have taken place in technology in recent years. Everything can be solved in practical ways and every innovation of technology is created to provide positive benefits for human life in all aspects. According to [1], the use of information technology in the company's operational and administrative processes has developed very quickly. Human Resources is one of the fields that has undergone a transformation of conventional administrative methods that contain high complexity, into a well-ordered, effective and efficient optimization of information systems.

The outbreak of the COVID-19 pandemic is also the right moment to accelerate digital transformation. All activities that were previously done physically have become limited online. The government sector through the Ministry of Communication and Informatics is also encouraging the acceleration of national data integration with the construction of the National Data Center (PDN) in order to accelerate the digital-based public service revolution [2].

The New Normal or often called the new order is a reference for the head of the State Personnel Agency (BKN) said to create an employee work system that remains productive in the midst of a pandemic. Circular of the Minister of [3] concerning Enforcement of the Work

System of State Civil Employees in the New Normal Order also supports the continued priority of health and safety of State Civil Employees (SCE). One of the government agencies, namely the Ministry of Religious Affairs of the Republic of Indonesia, carried out a digital transformation through fingerprint-based attendance recording into an online attendance recording application under the name "Online Attendance System of the Central Ministry of Religious Affairs".

Employee attendance control features such as recording arrival and departure times, recording absences, filing complaints and recording allowances are summarized in the online presence system that has been developed. Regulation of the Minister of Religious Affairs concerning Discipline of the Attendance of Civil Employees in the Ministry of Religious Affairs also supports the operation of the online presence system where article 4 states that the attendance list on every working day must be filled out by employees through the electronic attendance list system in their respective work units [4].

Employees of the Ministry of Religious of Affairs of the Republic of Indonesia, who in this case are active users of the attendance system, are expected through the implementation of the attendance system, work effectiveness and attendance management to be better and have an impact on improving performance. The development of Information Technology (IT) provides many benefits for its users and will result in a reaction of acceptance or rejection of the information technology. The reaction or attitude of the technology users is one of the factors of successful implementation [5].

Measurement of the attitudes of users of the presence system is needed to determine the extent of the acceptance of the system. Many measurement methods have been developed to test the acceptance of a system, but so far Technology Acceptance Method (TAM) is the concept that is considered the most effective for measuring the success of using information systems.

This makes it interesting to examine the implementation of the online presence system at the Ministry of Religion of the Republic of Indonesia using the original construct of TAM, namely perceived ease of use, perceived usefulness, and attitude toward using.

Related Work

The use of information systems will become a habit if the use of information systems is useful and easy to use. To evaluate the use of Human Resources information systems, especially the attendance module. Evaluation in many studies regarding the behavior and acceptance of information systems is using the Technology Acceptance Model (TAM) approach.

Our Contribution

Based on the explanation above, the formulations in this research are: a) Does perceived ease of use affect perceived usefulness? b) Does perceived ease of use affect attitudes toward using? c) Does perceived usefulness affect attitudes toward using? This research is expected to be input for system developers to develop systems so as to bring convenience and usability to users and become an informative reference for further researchers to develop research.

2. THEORITICAL REVIEW AND HYPOTHESIS DEVELOPMENT

Theoretical Review

Technology Acceptance Model (TAM)

The concept used for human behavior in related system applications is the concept of (TAM). This model, developed by [6], states that a computer system cannot increase performance if it is not used. However, managers and professionals who are users show resistance to the system [6]. Therefore, it is important to know why they reject or accept a system that is influenced by user beliefs and attitudes. The model was developed from the rational action theory (TRA) discovered by Fishbein and Ajzen in 1980. TAM uses two main variables in the development of technology-based systems, "perceived usefulness," which is defined as the degree to which a person believes that by using a particular system, users will improve their job performance, and "perceived ease of use" which is defined as the user's confidence level at which users require the least effort when using a new technology [7], [8]. The model explains that a person's intent to use technology is influenced by the perceptions of technology users. From this model, it is reasonable that at whatever point one perceives that utilizing a particular innovation will help improve implementation or will bring some benefit to the organization, the individual will be willing to accept it. At the same time, if the innovation just seen as something that difficult to actualize, individuals will not hesitate to reject it. Therefore, if individuals understand the advantages of using technology software and can use it without difficulty, then they can more effectively identify technology software and its usefulness in using the system. The TAM was first developed using five constructs, namely: perceived ease of use, perceived usefulness, attitudes toward behavior or attitudes towards using technology, behavioral intention to use technology (behavior intention to use) and behavior (behavior) or actual technology use (actual technology use). The model of TAM is shown below:

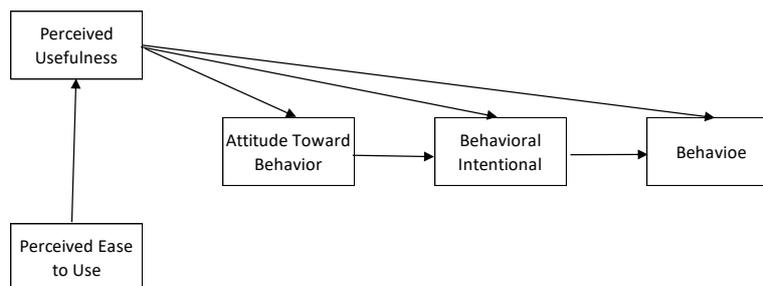


Figure 1 Technology Acceptance Method

Some researchers try to develop the TAM model by append several external variables which further explain or be the cause (antecedent) of perceived usefulness and perceived ease of use. The TAM model modified by adding external variables is shown in the following figure:

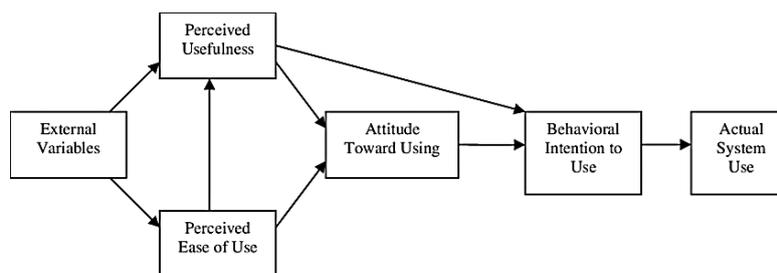


Figure 2 Technology Acceptance Method Developed

Information System

In general, the system can be defined as parts of the totality of the set that are interconnected in such a way as to each other so that they become an integrated whole in order to achieve a certain goal. This understanding is in line with the opinion of [8], that basically the system is a group of elements that are closely connected, interconnected and which function together to achieve certain goals. Decision making for companies requires information, therefore information is a very important component for companies. According to [9], information is the organization or processing of a set of data or facts in a certain way so that it has meaning for the recipient. The information system itself is a network formed from a collection of interacting and related elements in order to achieve certain goals, namely in the form of information needed in the decision-making process both for now and in the future. The definition of an information system technically as a series of interrelated components, useful in processing, collecting, returning, storing and disseminating information to support decision making and corporate control [10].

Human Resources Information System

Human Resource Information System or commonly referred to as personnel management information system includes employee data, processing data, procedures, work flow, human resources and information technology to create fast, complete and accurate information to support personnel management. Human Resource Information Systems (HRIS) is a combination of scientific fields between Human Resource Management (HRM) and Information Technology.

Online Attendance System

According to a quote from the dictionary, attendance or attendance list is identity and validation data contained in a form containing a person's initials or signature and is useful as a sign of someone's participation or proof of their presence in an activity. From the understanding of the system and attendance, it can be concluded that the attendance system is a system or tool that is useful in recording and recording evidence of employee attendance. The presence system itself is a function of the human resource information system.

Hypothesis Development

Perceived Usefulness (PU). The use that is considered easy (ease of use) and felt will reduce the effort of the user to learn a system so as to produce more benefits. The results of this study are in line with the results of research [11] and [12].

H1: There is a positive and significant influence of Perceived Ease of Use (PEU) on Perceived Usefulness (PU)

The results of the research revealed by [12] state that Perceived Usefulness (PU) has a positive influence on Attitude Toward Using (ATU). Influence occurs when someone believes that the system is useful so that the resulting attitude response to its use is good. The results of the study [12] are in line with the results of research (Umamah, 2018), and ([11] which state that Perceived Usefulness (PU) has an influence on Attitude Toward Using (ATU).

H2: There is a positive and significant effect of Perceived Usefulness (PU) on Attitude Toward Using (ATU).

Based on research conducted by [13], it is proven there is a positive and significant influence between the Perceived Ease of Use (PEU) variable on the Attitude towards Using (ATU) variable. In general, rejection from system users on the developed system can be avoided if a system is easy to apply without expending effort that is considered burdensome on the part of the user. This is in line with the research conducted [5], [14], [11], and [12].

H3: There is a positive and significant influence of Perceived ease of Use (PEOU) on Attitude Toward Using (ATU).

Based on the hypotheses that have been described, the framework as follows:

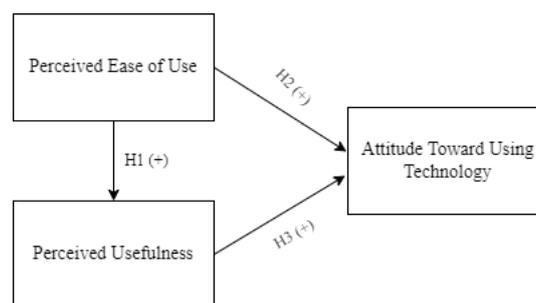


Figure 3 Research Model
Source: (Processed by the Author, 2021)

3. METHODOLOGY

This study uses an explanatory research design which aims to examine the cause and effect of certain variables. The research used is quantitative approach. The collected data is processed using a data processing application, namely SmartPLS ver. 3.0.

The population in this study is the end user of the online presence system at the Directorate General of Christian Community at the Ministry of Religious Affairs of the Republic of Indonesia as research subjects or respondents. The population is 130 people who are registered as active employees. Samples were taken using simple random sampling method. In this study, 60 samples were taken.

Variable Operationalization. The dependent variable (Y) in this study is Attitude Toward Using (ATU). The questionnaire indicators of this ATU construct are bad/good idea, foolish/wise idea, dislike/like the idea of using, unpleasant/pleasant usage [15]. The

independent variable (X) in this study is perceived usefulness and perceived ease to use). The perceived usefulness questionnaire constitutes Work More Quickly, Job Performance, Increase Productivity, Effectiveness, Make Job Easier, and Useful [16]. Whereas, Perceived Ease to Use questionnaire constitutes Ease of Learn, Controllable, Clear and Understandable, Flexible, Ease to Become Skillful and Easy to Use [16]. This question uses a Likert scale with a scale of 1 to 5.

Demographics of valid respondents are 60 respondents with details in the table below:

Table 1 Demographics of Respondents

Descriptions	Respondents						
	Male		Female		Total		
Total	21	35%	39	65%	60	100%	
Age	25-30	31-35	36-40	41-45	46-50	51-55	56-60
Total	3	3	12	11	15	10	6
%	5%	5%	20%	18%	25%	17%	10%

Source: Processed by the Author

The data collected was tested for the validity and reliability of the data. The validity test uses the Average Variance Extracted (AVE) value where the data is declared valid if the AVE value shows a value of more than 0.5. While reliability uses the indicator value of Cronbach alpha and composite reliability where the data is declared reliable if it has a value greater than 0.7. The results of this test can be seen in the table below:

Table 2 Validity and Reliability Test

Variables	AVE	Cronbach's	Composite
		Alpha	Reliability
Attitude Towards Using)	0.563	0.889	0.911
(Perceived Ease of Use)	0.634	0.884	0.912
Perceived Usefulness)	0.645	0.889	0.916

Source: Smart PLS V3.0

Based on Table 2, the value of AVE, Cronbach's alpha and composite reliability has a value that is more than the required value, it can be said that the data collected is valid and reliable so that hypothesis testing be carried out.

4. TEST RESULT, CONCLUSION, AND LIMITATION

Test Result

Hypothesis testing uses path coefficient at 95% confidence level with 5% Alpha of 1.96 or p-value ≤ 0.05 . The results of this test can be shown in the table below:

Tabel 3 Path Analysis Test

	Original Sample (O)	T Statistics	P Values
Perceived Ease to Use to Attitude Toward Using	0.396	2.838	0.005
Perceived Ease to Use to Perceived Usefulness	0.783	11.765	0
Perceived Usefulness to Attitude Toward Using	0.48	3.669	0

Source: Smart PLS V3.0

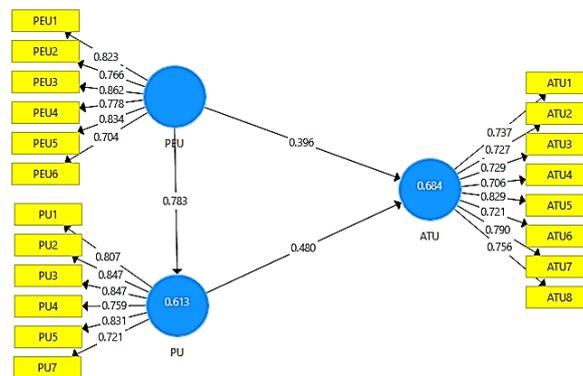


Figure 4 Path Analysis Result
 Source: Smart PLS V3.0

Based on table 3, it is concluded that there is a positive and significant influence between the Perceived Ease to Use variable on Attitude Toward Using (system) with a regression coefficient value of 0.396, the t-statistic value. of 2.838 and p-value of 0.005. The results of this study are in line with the research of [5], [11], [12] but contradict the results of research from [14].

Likewise Perceived Ease to Use has a positive influence on Perceived Usefulness. This shows that the regression coefficient value is 0.783 and the t-statistic value is 11.765 and the p-value is 0.000. The results of this study are in line with research conducted by [12], [14], [11]. However, contrary to the results of research conducted by [5] and [13].

The last hypothesis shows that Perceived Usefulness has a positive influence on Attitude Toward Using which is indicated by a regression coefficient value of 0.48, a t-statistical value, and a p-value of 0.000. This research is in line with previous research conducted by [5], [13], [14], [11], and [12].

Hence, the results of this third hypothesis, based on the research model that was built, it can be stated that the perception is easy to use the system, then through having the perception that the system has benefits so that the use of the system has become a behavior or attitude in using the system.

Conclusion

If employees who use the online presence system have a perception of ease of operating the system, then the usefulness of the system will increase so that work becomes faster and more efficient because the information system is easy to operate in their daily lives, creating a good or comfortable feeling towards its use. From the research model that was built and the results of the processed data, it can be stated that the perception is easy to use the system, then through having the perception that the system has benefits so that the use of the system has become a behavior or attitude in using the system.

The implication of this research is in designing and developing information systems, in this case the HRIS, the importance of system acceptance of the information system implemented for users. The system must be easy to implement such as a simple process, user friendly, easy to implement without using system jargon that is already understood, and so on. In addition, the system will be felt useful if it has useful values, such as analyzing a person's performance, for planning human or company development, monitoring, producing a database that is easy to analyze.

Limitation

Limitations in this study include: (a) The population studied is only limited to one directorate general which is a sub-section of the ministry or company, (b) respondents with the sample used in this study did not include all existing employees because data collection was carried out in during Large-Scale Social Restrictions (lockdown) where employees take turns to work from the office., and (c) This research only takes the TAM construct. Based on the limitations that have been described, further researchers are expected to be able to develop this research again by looking at the limitations of this study. Based on the conclusions and limitations that have been explained, the suggestions that can be given are as follows: (a) further researchers can increase the number of samples and external constructs from TAM so that the quality of further research can be improved, (b) For online attendance system developers in The Directorate General of Christian Community is advised to pay attention to the menu displayed in order to have qualified information regarding how to use the system.

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