

# E-Readiness System E-Government ( Case of Communication and Information Office of Badung Regency)

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**Abstract:** The development of technology has an impact in various fields, one of them is government. Transferring works manually to the technology system tends to have certain problems, one of them comes from employees who use the system. E-Readiness is an E-Government system which applies Technology Acceptance Model (TAM) method. It is an analysis that is conducted towards the readiness of employee of Communication and Information Office of Badung Regency in using the E-Government system. The analysis of employee readiness is performed in order to support the development of the E-Government system. Therefore, it can be used as needed and help the performance of the Communication and Information Office of Badung Regency. The results of the study showed that the employees are ready to use the E-government system. This study used questioners that are distributed to 100 respondents who are the employee of Communication and Information Office of Badung Regency.

**Keywords:** E-Government; Technology Acceptance Model (TAM); E-Readiness; technology; employee.

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## 1. INTRODUCTION

The development of technology in various fields also influence the government sector. An application of technology in an institution has a risk of failure which is not small. However, in its development, information technology provides the possibility of transformation and increases productivity [1]. E-Government is the implementation of information and communication technology applied by the government in order to help their performance in terms of work and community service. The purpose of E-Government is indeed to improve government performance and services to the community. Sometimes, in implementing an E-Government product, there are several factors that cause it is not working as it should or even useless at all.

Communication and Information Office of Badung Regency is one of the government offices in Bali Province which implementing E-Government. It certainly requires readiness from the users. In this case, the users are the employee and the community who also felt the impact of E-Government. The success of an E-Government product depends on collaboration between system developers and managers in planning and implementing changes for various government activities and practices.

E-Readiness is a study of readiness of an individual or a company in accepting the application of information and communication technology. It also takes a role as the first step in order to make the E-Government products can be used properly. The Technology Acceptance Model (TAM) tells the main factors in accepting technology and explaining the behavior of the end user.

## 2. OBJECTIVE OF THE STUDY

This study aims to find out the level of readiness of employees at the Communication and Information Office in Badung Regency in using the E-Government system.

## 3. LITERATURE REVIEW

"Application of the Technology Acceptance Model (TAM) in Testing the Regional Financial Information System Acceptance Model (Original Title: Penerapan Technology Acceptance Model (TAM) Dalam Pengujian Model Penerimaan Sistem Informasi Keuangan Daerah)" is a study which analyzes the factors that influence the use of SIPKD by using the Technology Acceptance Model (TAM) approach. There are two variables, namely the independent variables, such as the use of technology (Perceived Usefulness) and ease of using technology (Perceived Ease of Use); and the dependent variable which is technology acceptance variable, as in this study, it is the acceptance of the Regional Financial Information System. The results showed that civil servants in the Yogyakarta region thought that the Regional Financial Information System was easy to use, therefore it could be accepted and used in supporting the work [2].

A similar study related to the analysis of readiness level in accepting a system was also conducted by Endang Fatmawati with the title "Technology Acceptance Model (TAM) for Analyzing The Acceptance of Library Information Systems (Original Title: Technology Acceptance Model (TAM) Untuk Menganalisis Penerimaan Terhadap Sistem Informasi Perpustakaan)". In analyzing, this study used several variables, namely: ease of use perception, usefulness perception, attitudes towards the use of information systems, intensity of information system users' behavior, actual use of information systems, and acceptance. The analysis of information systems acceptance in the library is conducted in order to determine the user attitude in accepting a technology that can be seen from the perception of ease of use and usefulness [3].

"Literature Study of the Integration of Two Methods of Readiness and Users Acceptance of Information and Communication Technology. (Original title: Studi Literatur

Pengintegrasian Dua Metode Kesiapan Dan Penerimaan Pengguna Terhadap Teknologi Informasi Dan Komunikasi” discussed some common methods that are used to measure the level of readiness of users in using or adopting information and communication technologies. The technologies are Technology Readiness (TR) and Technology Acceptance Model (TAM), as well as the development of both methods namely Technology Readiness and Acceptance Model (TRAM). The measurement of usability and ease in using TAM specifically refers to a system. Technology Readiness is specifically for individuals who believe in using technology generally. This is the basis which tells that TAM and TR methods are intuitively related to one another. Combining these two methods resulting in a new method called as TRAM. It can explain why people who have high scores on TR do not always adopt new technology because the characteristic of the system, such as usability and ease of use also dominate the decision of making a process in adopting behavior [4].

“Readiness Level of E-Learning Implementation in High School of Yogyakarta City (Original Title: Tingkat Kesiapan Implementasi E-Learning Di Sekolah Menengah Atas Kota Yogyakarta)” analyzed school readiness and critical success factors in implementing E-Learning by using E-Learning Readiness (ELR) method by Chapnick. It can be classified into 8 categories, such as Psychological Readiness, Sociological Readiness, Environmental Readiness, Human Resource Readiness, Financial Readiness, Technological Skill (Aptitude) Readiness, Equipment Readiness, and Content Readiness. Based on assessments of the 8 ELR factors, high schools in Yogyakarta are quite ready in implementing E-Learning [5].

## 4. CONCEPTS AND THEORIES

### 4.1 Information System

System is a network of various kinds of interconnected work processes. The process may be different, but it carries out an activity together to accomplish a certain goal. Information is the result of processing a model, design, formation, organization or a change in the form of data that has a certain value and it can be used to increase knowledge for those who receive it. Information systems can be interpreted as a combination of information technology and individuals who use technology to help in management settings where there are determined procedures in it. In addition, it provides information about management in building company operations and making decisions. The purpose of this system is to process data into information that is right on target and useful for the recipients [6].

### 4.2 E-Government

The World Bank Group defines E-Government as information technology used by government to support their relations with the community, business cooperation, and other parties. In addition, it is also considered as a process of transaction between the government and the community through the use of automated systems and internet networks. According to Kumorotomo, there are many failures often happened in the implementation of e-government. It is due to different opinion regarding the definition of e-government. In Indonesia, the meaning of e-government often refers to the use of computers in service procedures administered by government organizations. In fact, e-government as in the international meaning refers to the administration of government through the use of internet technology [7].

### 4.3 E-Readiness

E-Readiness is a new concept. It derives from the word ‘Readiness’ which means ready physically and mentally to do something. The concept of readiness is not only about physical maturity, but it is also a combination of emotional stress and situations as a result of the learning environment and new operations.

### 4.4 Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) is a development of the Theory of Reasoned Action (TRA) which is directed to model user acceptance towards information systems. Davis (1986) developed the TAM based on the theory of TRA in order to understand the causal relationship between users’ beliefs, attitudes, and internal intentions, as well as to predict and explain the acceptance of computer technology [2]. The use of TAM theory is able to determine the effect on beliefs, attitudes, and goals of its users. Beside it is based on a strong theoretical basis, the advantage of the TAM model is that it can answer doubtful question because of many failures in the application of technological systems [3]. The purpose of TAM is to explain the determining factor in the general acceptance of information-based technology and the behavior of the information technology end-user with a fairly wide variation, as well as user population. TAM has 5 main variables, such as (1) Perceived Usefulness, (2) Perceived Ease of Use, (3) Attitude toward Using Technology, (4) Behavioral Intention to Use, and (5) Actual Technology Use. In this study, the TAM model will add external variables, namely Self-efficacy, Complexity and Lack of Time.

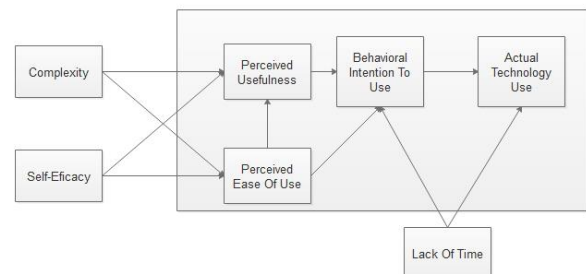


Figure. 1 Technology Acceptance Model

## 5. RESEARCH OF METHODOLOGY

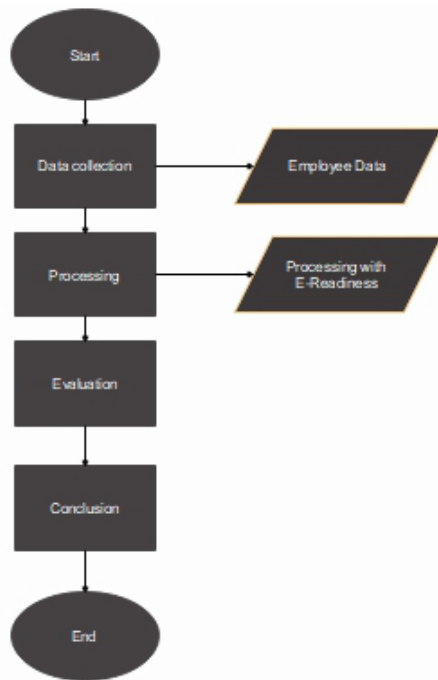


Figure. 2 Research Flow

The first step is collecting questionnaire data from the employees of Communication and Information Office of Badung Regency. The questionnaires were distributed to 100 respondents in various fields of the office. The second step is processing questionnaire data. After distributing questionnaires, it will be processed with a processing application. The third step is evaluating the results. The evaluation is carried out in order to review the results of data processing. The fourth step is obtaining conclusions from data processing and the evaluation of it. The last step is results.

## 6. RESULT DATA PRESENTATION & ANALYSIS

### 6.1 Self Efficacy

Variable data of Self-Efficacy in the questionnaire consisted of 2 statements using 2 alternative answers "yes" and "no". The Self-Efficacy has a minimum value of 0 and a maximum value of 2. It is obtained based on the answer of each questionnaire item. The questionnaire data are processed through SPSS. Then, it obtained an average value of 1.7889, a median value of 2.00 and a mode value of 2.00, a standard deviation value of 0.55068 and a variant value of 0.303. Then, the total value is classified into 2 criteria, namely confidence and not confidence. The result reveals how the employee confidence in using E-Government. It shows that 89.4% of employees feel confident and 10.5% of them feel unconfident.

### 6.2 Complexity

In the questionnaire, the variable data of Complexity consisted of 3 statements using 2 alternative answers "yes" and "no". The Complexity has a minimum value of 0 and a maximum value of 3. It is obtained based on the answer of each questionnaire item. The questionnaire data are processed through SPSS. As the result, it obtained an average value of

0.6333, a median value of 0.00 and a mode value of 0.00, a standard deviation value of 0.94155 and a variant value of 0.887. The total value is classified into 2 criteria, such as complicated and uncomplicated. The result shows that 21.1% of employees feel the use of the E-Government system is quite complicated and 78.8% of them feel it is not.

### 6.3 Lack Of Time

Variable data of Lack of Time in the questionnaire consisted of 3 statements using 2 alternative answers "yes" and "no". The Lack of Time has a minimum value of 0 and a maximum value of 3. It is obtained based on the answer of each questionnaire item. The questionnaire data is processed through SPSS and it obtained an average value of 1.0222, a median value of 1.00 and a mode value of 1.00, a standard deviation value of 1.00535 and a variant value of 1.011. Then, the total value is classified into 2 criteria, namely limited and unlimited. In learning and using the E-Government system, the result shows that 34.07% of employees have limited time and 65.92% of them have no time constraints.

### 6.4 Perceived of Usefulness

In the questionnaire, the variable data of Perceived of Usefulness consists of 6 statements using 2 alternative answers "yes" and "no". The Perceived of Usefulness has a minimum value is 0 and a maximum value of 6. It is obtained based on the answer of each questionnaire item. The questionnaire data is processed through the SPSS application. Furthermore, it obtained an average value of 5.7, a median value of 6.00 and a mode value of 6.00, a standard deviation value of 0.85394 and a variant value of 0.729. The total value is classified into 2 criteria, such as useful and useless. In helping the employee with their work, the results of it show that 95% of them think it is useful and 5% of them think it is useless.

### 6.5 Perceived Ease of Use

Variable data of Perceived Ease of Use in the questionnaire consisted of 6 statements using 2 alternative answers "yes" and "no". The Perceived Ease of use has a minimum value of 0 and a maximum value of 6. It is obtained based on the answer of each questionnaire item. The questionnaire data is processed through SPSS. It obtained an average value of 5.1444, a median value of 6.00 and a mode value of 6.00, a standard deviation value of 1.26811 and a variant value of 1.608. Then, the total value is classified into 2 criteria: easy and hard. The results show that 85.7% of employees think that the E-Government system is easy to use and 14.2% of them think it is hard.

### 6.6 Behavioral Intention to Use

In the questionnaire, the variable data of Behavioral Intention To Use consisted of 5 statements using 2 alternative answers "yes" and "no". The Behavioral Intention to Use has a minimum value of 1 and a maximum value of 5 obtained based on the answer of each questionnaire item. The data is processed through SPSS. Then, it obtained an average value of 4.7222, a median value of 5.00 and a mode value of 5.00, a standard deviation value of 0.67087 and a variant value of 0.450. The total score is classified into 2 criteria, namely high and low. The results of the processing show that the intention of the employee using the E-Government system. It reveals that 94.4% of employees having high intention and 5.5% of them having low intention of the E-Government system.

## 6.7 Actual Technology to Use

Variable data of Actual Technology to Use in the questionnaire consisted of 6 statements using 2 alternative answers "yes" and "no". The Actual Technology to Use has a minimum value of 1 and a maximum value of 6. Then, it is obtained based on the answer of each questionnaire item. The questionnaire data was processed through SPSS. As the result, it obtained an average value of 4.4778, a median value of 4.00 and a mode value of 6.00, a standard deviation value of 1.41602 and a variant value of 2.005. The total value then is classified into 2 criteria, namely using and not using. The results show that 74.6% use the E-Government system and 25.3% do not.

## 7. CONCLUSION AND RECOMMENDATION

The results of this study showed that the variable factors, such as Self Efficacy, Lack of Time, and Complexity are external factors that have an influence on the use of E-Government in the Communication and Information Office of Badung Regency. The results reveal how the employees react to the e-government system. The reactions are 78.8% of them feel it is uncomplicated; 89.4% of them feel confident in using it; 65.92% of them feel they have no time constraints on learning and using it; 95% of them think that it is useful in helping their works; 85.7% of them think that it is easy to use; 94.4% of them have a high intention towards it; and 74,6% of them use it directly.

The suggestions that can be given after conducting a study on E-Readiness of the E-Government System at the Communication and Information Office in Badung Regency are as follows:

1. Holding some special training to provide opportunities for employees of the Communication and Information Office in Badung Regency to learn more about the E-Government system.
2. Supervising the employees in using the E-Government system gradually starting from the introduction to the use of the system.
3. For the developer, the system should be adjusted, therefore it can be easier for the users to use the system (user-friendly).
4. For the following research developer, it is expected that the variables used can be added or further developed with other methods in order to find out the level of acceptance that is not yet available in this study method.

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