

# The Application of TAM on Utilization of Financial Information Technology in South Sulawesi

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## ABSTRACT

In the industrial revolution era and information technology advancement, TAM must align with development and progress. TAM is believed able to fulfill the needs of relevant technology users. This study aims to analyze the factors that influence the utilization of regional financial information systems in OPD of South Sulawesi Province. This research method applied a quantitative approach, and the data is collected from 147 users in 49 provincial OPD in South Sulawesi using a questionnaire. The non-probability sampling was used and analyzed using SPSS version 21. Hypothetical test results reveal that perceived usefulness, perceived ease of use, perceived security, perceived reliability, relative advantages, compatibility, service quality, self-efficacy, work facilitation, cost reduction, and time saving have a positive and significant effect on the intention to use SIPKD, while, energy saving has no effect on the intention to use SIPKD. The results of this study show the importance of creating a financial information system that is easy to use and relevant for any users to improve the performance in serving the public.

**Keywords:** *TAM, Intention to use SIPKD, Perceived Usefulness, Perceived ease of use, USTAM.*

## 1 INTRODUCTION

TAM is demanded in line with the developments in the industrial revolution era and the information technology advancement. Therefore, TAM also undergoes construction modifications so that it can fulfill technological developments and advancements. In technology acceptance, this TAM model requires collaboration with other theories to study and measure the users' perception of relevant technologies at present.

Sepasgozar et al. (2019) reveal a technology acceptance model that combines the TAM theory model and the SCT (Social Cognitive Theories), which is called the Urban Society Technology Acceptance Model (USTAM). This model can help urban communities in developing countries in selecting technolo-

gies. Moreover, this model can convince all decision-makers and the planning part to adopt and receive new technologies before going to the public.

Regional financial information systems support is required to improve public services and create transparency and accountability-based good governance. Many regulations governing financial management, ranging from central to regional, require a financial information system based on efficiency, economy, effectiveness, transparency, accountability, and auditable. In South Sulawesi, there are 24 (twenty-four) districts/cities where 17 (seventeen) of them use the new SIPKD application.

Based on the Ministry of Home Affairs 2010, the Regional Financial Management Information Systems (SIPKD) is an integrated application used as a tool for local govern-

ments to improve the effectiveness of regional financial management based on the principles of efficiency, economy, effectiveness, transparency, accountable, and auditable.

From 2003 to 2018, through a systematic search using EBSCO Discovery Service to develop TAM review literature form, Granić and Marangunić (2019) state that 71 relevant studies have been identified and the studies prove that two TAM constructions influence the interest of technology utilization.

One of the motivations underlying this research is to assess the theory or model of USTAM, developed by Sepasgozar et al. as the utilization of the SIPKD technology system in Regional Apparatus Organization (OPD) South Sulawesi that is still rarely studied. Another reason is finding out the factors that influence SIPKD utilization in OPD of South Sulawesi province.

### 1.1 Urban Security Technology Acceptance Model (USTAM)

This research is conducted to reveal the factors that influence the intention to use the SIPKD in the regional government of South Sulawesi. The researchers use a model introduced by Sepasgozar et al. in order to reveal these factors. This model is called Urban Security Technology Acceptance Model (USTAM). USTAM hypothesizes that the critical factors related to technology include Self-Efficacy, Operations, Work Facilitation, Relative Advantages, and Compatibility. USTAM is a valuable model for predicting technology acceptance in Smart city implementations.

The model presented by USTAM can achieve goals in selecting the right technology that is useful for some areas with different cultural identities and characteristics and the one who wants to start a smart city strategy. Therefore, the authors think it becomes relevant if the USTAM Model is applied to analyze the factors that influence the utilization of SIPKD in the OPD of the South-Sulawesi government.

### 1.2 Technology Acceptance Model (TAM)

TAM model is a theory that intends to explain that a person's perception of something will determine the attitude and behavior of that person towards the acceptance of technology (Jati and Laksito 2012). Various literature reveals the development of TAM models, which aims to understand and explain the main factors/keys of the user toward the acceptance of technology. Davis (1989) argues that the acceptance level of information technology is determined by external variables, namely complexity using the internet.

Chau and Hu (2001) in Mun and Hwang (2003) believe that the development of technology acceptance model literature provides six variable keys: Perceived Security, Relative Advantage, Perceived Ease of use, Perceived Usefulness, Compatibility, and Reliability, which are considered the most influential to the intention to utilize technology. Ribbink et al. (2004) assume that service quality is the most important variable used in measuring continuous technology acceptance and the results significantly affect the technology acceptance.

## 2 RESEARCH METHODS

### 2.1 Research Design

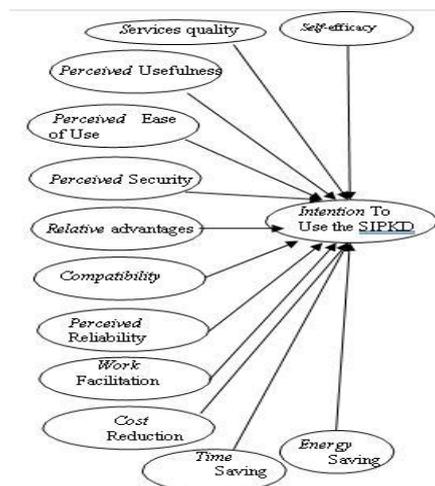


Figure 1. Research Design

$$\begin{aligned}
 Y = & \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 \\
 & + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 \\
 & + \beta_9 X_9 + \beta_{10} X_{10} + \beta_{11} X_{11} + \beta_{12} X_{12} \\
 & + \mu
 \end{aligned}
 \tag{1}$$

Where

X1 = Perceived Usefulness

X2 = Perceived ease of use

X3 = Perceived Security

X4 = Relative Advantages

X5 = Compatibility

X6 = Perceived Reliability

X7 = Service Quality

X8 = Self-efficacy

X9 = Work Facilitation

X10 = Cost Reduction

X11 = Energy Saving

X12 = Time Saving

Y = Intention to Use the SIPKD

## 2.2 Research Methodology

This research applied a quantitative approach to determine the factors that influence SIPKD utilization in OPD of South Sulawesi Province. This research was conducted in the working area of the Provincial Government of South Sulawesi.

Primary data collection was conducted by doing a direct survey method using questionnaire media. The data were analyzed through linear regression techniques using (SPSS) tools.

## 3 RESULTS AND DISCUSSIONS

This research is conducted to reveal the factors that influence the intention to utilize the SIPKD. The data was collected by distributing non-probability sampling questionnaires to forty-nine OPD in Makassar, South Sulawesi. There were 147 questionnaires distributed, and 140 questionnaires were returned, but the questionnaires processed were only 133.

Table 1. Research Results

Influence Variable X to Y		Coef-ficient	T	Sig.	Descrip-tion
(X1)	Y	0.174	2.240	0.027	Accepted
(X2)	Y	0.287	4.296	0.000	Accepted
(X3)	Y	0.176	2.094	0.038	Accepted
(X4)	Y	-0.320	-2.712	0.008	Accepted
(X5)	Y	-0.294	-3.536	0.001	Accepted
(X6)	Y	0.143	1.990	0.049	Accepted
(X7)	Y	0.271	2.418	0.017	Accepted
(X8)	Y	0.182	2.281	0.024	Accepted
(X9)	Y	0.213	2.097	0.038	Accepted
(X10)	Y	0.158	2.419	0.017	Accepted
(X11)	Y	0.036	0.305	0.761	Rejected
(X12)	Y	0.121	2.265	0.025	Accepted

The Significant Above  $\alpha = 5\%$ ;  $F = 53.421$ ;  $R^2 = 0.842$ ;  $N = 133$

Table 1 exhibits that perceived usefulness shows significant results, which means that the SIPKD application is very beneficial for users in improving the users' performance. These results are supported by Sepasgozar et al. (2019); Kabbiri et al. (2018) research.

In Table 1, the influence of perceived ease of use also shows significant results. This means that the SIPKD application is easy to use, and the application is believed can improve the user's performance. These results are supported by Sepasgozar et al. (2019); Kabbiri et al. (2018) research.

The influence of perceived security on Table 1 also shows significant results. This means that the SIPKD application is very safe to use and the application is believed can improve its users' activity performance. These results are supported by Sepasgozar et al. (2019); Denaputri and Usman's (2019) research.

The significant result is also shown in Table 1 due to the influence of relative advantages. This signifies that many users believe that the SIPKD application is the best technological innovation and that the application is believed to improve the users' performance. These results are supported by Sepasgozar et al. (2019); Al-Rahmi et al.'s (2019) research.

Still, in Table 1, the influence of compatibility

also shows significant results. This means that the SIPKD application can convince the users that the application fits all users who sometimes still have activities outside office hours and the application is believed can improve the users' performance. These results are supported by Sepasgozar et al. (2019); Setiawan (2018) research.

Perceived reliability influence on Table 1 shows significant results. This means that the SIPKD application can convince the users that the application is very reliable and that the application can improve the users' performance. These results are supported by Sepasgozar et al. (2019); Wahyuni (2018) research. Significant results are also shown in Table 1 related to the influence of service quality. This means that the SIPKD application provides better service quality for users and the application is believed can improve the users' performance. These results are supported by Sepasgozar et al. (2019); Ribbink et al. (2004) research.

Table 1 related to the influence of self-efficacy shows significant results. This means that the SIPKD application convinces users to have better ability and that the application can improve the users' performance. These results are supported by Sepasgozar et al. (2019); Wicaksono and Mispriyanti (2019) research.

The influence of work facilitation in Table 1 shows significant results. This means that the SIPKD application can simplify the users' tasks and the application is believed can improve the users' performance. These results are supported by Sepasgozar et al. (2019); Farabi (2016).

In Table 1, the influence of cost reduction shows significant results. This means that the SIPKD application can reduce inefficient costs and the application is believed can improve the users' performance. These results are supported by Sepasgozar et al. (2019); Ambarwati and Isnugroho (2018); and Fauzia (2018) research.

The influence of energy-saving in Table 1 shows insignificant results. This means that cost-effective electricity is not the factor in-

fluencing a person's decision to use the SIPKD application. These results are supported by Sepasgozar et al.'s (2019) research.

Table 1 exhibits that the influence of time-saving shows significant results in Table 1. This means that the SIPKD application can save time and the application is believed to improve the users' performance. These results are supported by Sepasgozar et al. (2019); Ambarwati and Isnugroho's (2018) research.

#### 4 CONCLUSION

This study reveals practical implications that cost-effective electricity is not the main factor that affects an individual's interest in using information technology systems. This means that the problem of electricity saving is not the most interesting problem for users in using the internet system. Because the results will undoubtedly be different if they do it manually, this result also has implications in designing applications in the USTAM model to help to utilize the SIPKD. This electricity saving has excellent potential concerning the expense, so it becomes fascinating to study further to get significant results.

A limitation of this study was that all respondents were affected by the Covid-19 pandemic. Another limitation is the low questionnaire return rate, as the questionnaires were distributed via email.

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