

MODEL OF BEHAVIOR OF THE PALU CITIZENS IN USING ONLINE SIM REGISTRATION WEB FOR SIM A AND SIM C: TECHNOLOGY ACCEPTANCE MODEL PERSPECTIVE

Shine Pintor Siolemba Patiro¹; Hety Budiyan²;
Lasando Lumbangaol³; Diah Aryani⁴

^{1,3}: Universitas Terbuka; ²Universitas Negeri Makassar,

⁴Universitas Esa Unggul (INDONESIA)

shinepintor@ecampus.ut.ac.id

Abstract

The adopting a new technology behavior is strongly affected by environmental conditions and underlying psychological factors. The gap between education level and social level as the background of this research is very influential toward the adoption of new information technology behavior. Technology Acceptance Model (TAM) is a theory that considered capable in understanding, explaining, and predicting the adoption of an information technology behavior. Thus, this study aims to uncover the application of the TAM development model through the factors that cause perceived usefulness variable (subjective norms, images, and result demonstrability) in understanding, explaining, and predicting the intention of the people in Palu City to use the SIM On Line Web Registration for extending SIM A and SIM C. The study used a sequential exploratory design with a sample size of 300 people which diversified across the city of Palu. Data collection techniques using surveys and purposive sampling. The Social Desirability Response (SDR) test was also conducted in this study to assure the naturalness of the respondents in filling out the questionnaire. The data analysis technique uses Structural Equation Modeling (SEM) with the help of the AMOS application. The results showed that the main predictor variables in TAM affect the intention to adopt the SIM On Line Web Registration application. Perceived usefulness, behavioral intention, and image are influenced

by subjective norms. While the perception of usefulness is affected by the perceived ease of use, image, and results from demonstrability.

Keywords: TAM; SDR; SEM; subjective norms; image; result demonstrability

1 INTRODUCTION

Nowadays, information and communication technology (ICT) is developing rapidly. Based on data from Hootsuite, as of January 2021, there is 7.83 billion population of the world, according to UN data, and 4.66 billion of them have used the internet. Meanwhile, smartphone users have reached 5.22 billion users, and for social media, users have reached 4.2 billion (Fatria, 2021). Based on a survey conducted by the Association of Indonesian Internet Service Providers (APJII) in April 2019, the number of internet users in Indonesia was 171.7 million people which accounted for 64.8% of the total population. Moreover, internet users increased by 10.2% or 27.9 million people when compared to the previous year. This increase is due to rapid infrastructure development in various regions, such as the availability of fiber optic and other supporting communication infrastructure technology that supports internet activities for 540 APJII members (Wahyudiono, 2019).

According to Burhan (2020), one of the ten trends in the development of technology, communication, and information in Indonesia is the increased use of the internet or IoT in the rapidly growing industrial sector. Moreover, the significant growth, both in terms of the types of active consumers and the development of technology applications and communication technology devices, shows that there are excellent opportunities for the evenly distributed development of internet infrastructure throughout Indonesia.

Likewise, Palu, the capital city of Central Sulawesi Province, also experienced significant development in the use of ICT. One of the contributing factors is to avoid clashes between villagers that often occur in Palu. As stated by Aliana (2014) to anticipate the rise of clashes between residents in Palu, the Kabonena Sub-district

government, Ulujadi District, has arranged internet network facilities for the whole community in that area. Further, Kabonena chief of the village, Lukman Lawengah, said that the facility can also help his party in preventing clashes between residents that often occur in Palu. In addition, the public can also learn about ICT. "Internet network facilities are located at the kelurahan office and are intended for the people of Kabonena," according to Lukman Lawengah." Moreover, he also stated that the internet network was specifically intended for teenagers where this group is indicated as the trigger of the clashes. Thus, with the development of ICT, the public is expected to update their information fast (Alihana, 2015).

It has been known that people in Palu have realized the usefulness of ICT. There are several reasons why Palu citizens enjoy using internet technology, which the authors summarize from the results of the author's initial interviews with 10 people in Palu in 2020. These reasons include:

1. Following current trends.

"The majority of our society is very up to date on the developments. Whether it's in the real world or cyberspace. Especially now that the price of gadgets is very low! Almost everyone, young and old, even children, can be connected (online) via a smartphone or tablet. Everything is sophisticated and easy....". (male; 30 years old; civil servant)

2. Means to make friendship

"If we have lost contact with our old friends, we can get reconnected on social media. Just type his name, if he is actively using social media then we can find him again. We can also gather our friends using a special group as a sharing place as well as a reunion. we can also meet new friends from various areas". (adolescent; 19 years old; student)

3. Relieve stress

"For those of us who have a lot of activities, both studying and working, we often experience stress and boredom. In my opinion, social media is one of the most effective ways to release our

boredom. We can share with friends, chat, and much more. Updating social media can eliminate boredom and tiredness when we are waiting for something or when there is no work at the office. Sometimes I'm a little curious to see the activities of my friends. So, with the internet, we can share exciting experiences to relieve stress.” (female; 28 years old; private employee)

4. Network building facilities.

“Just like in the real world, we can also socialize with more people across regions and even across countries. We can follow different communities that suit our interests. For me, social media can bring me together with people who have the same interests. For people who have businesses, social media can expand their network to get customers from all over the country and even abroad.” (male; 40 years old; BUMN employee)

5. As self-identity.

“Using the internet makes us seen as up-to-date people, not ignorant. Nowadays, everything is on the internet everywhere. It's a shame if you don't know what the internet is” (female; 20 years old; student)

6. Gives its satisfaction.

“If there is the internet, many problems can be solved without having to come to the crime scene. I was once asked to help a friend to find information on boarding houses. Just click on the internet, you can immediately get the boarding house he wants.” Likewise, if you want to pay for electricity and water, all you have to do is click on it.” (female; 35 years old; housewife)

The excerpt from the interview above shows that the people of Palu have a positive attitude towards the use of ICT. Additionally, they also have positive subjective norms regarding the use of the internet network in supporting their activities. Based on the perception of usefulness, it is clear from the excerpt, that in general, the people of Palu have a good perception of the usefulness of ICT to support their daily activities. Further, other factors that contribute to their need in using ICT are images related to self-identity and satisfaction from using ICT.

The conditions of application and use of ICT in an organization are a major concern in information systems studies and practice. However, despite impressive progress in terms of hardware and software capabilities, problems related to the underutilization of the system remain. Abdullah and Ward (2016) state that low use of installed systems is a major factor in the “productivity paradox” associated with an organizational investment in information technology. Understanding and creating conditions when information systems are accepted by all members of the organization remains a major issue and priority in research related to information systems.

The Palu Police Traffic Unit (PPTU) starting on October 6, 2015, implemented an online network system for the making of driving license (SIM) and the extension of SIM (Hajiji, 2015). As stated by the Head of Registration and Identification of the PPTU, Ipda Suprojo, in Palu for this initial stage, SIM making using the online network is limited to SIM extensions first but will be applied to the making of new SIMs shortly. Thus, according to him, all data regarding SIM ownership will be synergized between districts/cities and between provinces throughout Indonesia. However, there is a slight problem in implementing online SIM services in Central Sulawesi, namely that there are Police Resort Office (Polres) who do not yet have a SIM Administration Implementing Unit. In addition, the main problem related to online SIM renewal registration is that many people are not accustomed to using electronic devices (computers) and online systems (Hajiji, 2015). He explained that there are around 300 participants who have registered for the online SIM extension, mostly from Palu. Therefore, the Palu Police will try to continue to raise public awareness regarding SIM renewal and extension using an online network system for simplification purposes in providing SIM services.

The appropriate social cognition model in understanding, explaining, and predicting this phenomenon is the *Technology Acceptance Model* (TAM) proposed by Davis (1985). This theoretical model is a development of the *Model Theory of Reasoned Action* (TRA) proposed by Fishbein and Ajzen (2010) regarding the role of

subjective attitudes and norms in explaining and predicting intentions and behavior in social psychology research. In TRA, there are three important items, namely:

1. The existence of conformity in the measurement of attitudes and behavior. In other words, the attitude that is measured is an evaluation of the behavior to be displayed, so that the attitude towards the behavior can explain and predict the behavior displayed.
2. There is a difference between belief and attitude.
3. Explain the relationship between external stimuli, in this case, the attitude object, with beliefs, attitudes, and behavior.

Furthermore, Fishbein and Ajzen (2010) explain the difference between two attitude constructs, the attitude toward the object/*attitude toward the object* (Ao) which is an individual's positive/negative evaluation of a particular object, and the attitude toward the behavior/*attitude toward the behavior* (Ab) which is an individual's positive/negative evaluation of the behavior displayed. Ajzen and Fishbein (1980) state that attitudes toward behavior (Ab) have a stronger relationship with displayed behavior than attitudes toward objects (Ao). Thus, in TAM theory, attitude towards behavior is used to explain and predict behavior. Because the output in TAM theory is to use or not to use technology in their work, so the attitude variable is the attitude towards the use of new technology.

Based on attitude studies in management information systems, Fishbein and Ajzen (2010) distinguish between beliefs that shape attitudes and attitudes themselves. They proposed that beliefs are consequences perceived by individuals as a result of the behavior displayed. In terms of using technology according to TAM theory, the beliefs that shape attitudes towards technology use consist of perceptions of ease of use and perceived usefulness of using the technology (Chauhan and Jaiswal, 2017; Davis, 1989; Hsiao and Yang, 2011).

Perceived usefulness is defined as an individual's level of belief that using a certain technological system will improve his or her performance at work (Davis et al., 1989). Perceived ease of use is defined as the individual's level of belief about the ease with which it is physically and mentally in using a particular technological system (Davis et al., 1989). The TAM model states that the effect of external variables, such as system characteristics, development processes, and training, on intention to use new technology is mediated by perceived usefulness and perceived ease of use (Venkatesh and Davis, 2000).

The last decade has shown significant progress in explaining and predicting the acceptance behavior of the use of information technology in organizations. In particular, the TAM model proposed by Davis (1989) and Davis et al (1989), has provided substantial theoretical and empirical support for this phenomenon. Many empirical studies are showing that the TAM model is consistent in explaining and predicting (about 40%) the use, intention, and behavior of using information technology better than the TRA and TPB models (Venkatesh and Davis, 2000).

However, based on the results of previous studies, the perceived usefulness in the TAM model is consistent in explaining and predicting behavioral intentions. While perceived usefulness is one of the main factors driving the intention to use new technology, it is important to understand the causal factors and the effect of changing these factors over time as experience increases in using the new technology. On the other hand, perceived ease of use is less consistent in explaining and predicting behavioral intentions based on previous studies. Venkatesh and Davis (2000) conducted a study to uncover the factors that cause perceived ease of use associated with a lack of ability to explain and predict intentions to use new technologies. However, the role of perceived usefulness in the TAM model to explain and predict intention to use new technology has always been a major concern for researchers in information systems technology. Therefore, a better understanding of the factors that cause perceived usefulness allows

organizations to design intervention programs so that users can accept the use of new information system technologies. They also showed several factors that shape attitudes towards the behavior of using new technologies, namely: subjective norms, image, job suitability, output quality, and results that can be shown.

Based on the results of initial interviews with ten residents of Palu, their perceptions of usefulness regarding the use of internet network technology are shaped by subjective norms, images, and results that can be shown. Therefore, the TAM model that will be used in this study is extended through the formation of a relationship between the influence of subjective norms, images, and results that can be shown in the perception of usefulness regarding the use of Online SIM Registration Web for SIM A and SIM C extensions which are applied in Central Sulawesi Province on October 6, 2015. Thus, this study aims to reveal the application of the extension of the TAM model through the causal factors of perceived usefulness variables (subjective norms, images, and demonstrable results) in understanding, explaining, and predicting the intentions of the people of Palu to use the Online SIM Registration Web in extending the SIM for SIM A and SIM C groups.

A theoretical review and hypothesis development

Figure 1 shows the extension of the TAM model used in this study by adding subjective norm variables and result in demonstrability which influenced the usability perception variable which in turn formed attitudes towards the use of new technology which had an impact on the intention to use new technology. Similarly, perceptions of ease-of-use shape attitudes toward the use of new technologies, which in turn explain and predict intentions to use new technologies.

Subjective norm and its influence on behavioral intention

According to Fishbein and Ajzen (2010), the subjective norm is an individual's perception regarding the approval of his/her important people to display certain behaviors. In the TRA model proposed by

Fishbein and Ajzen (2010) and the TPB model proposed by Ajzen (1991), subjective norms have a direct effect on behavioral intentions because, although, someone has a negative attitude towards the behavior to be displayed, if his/her important people (reference group) suggest him/her to behave in a certain way, then he/she is motivated to comply with the expectations of this reference group.

Previous studies revealed the influence of subjective norms on intentions to use new technology systems has yielded mixed results. For example, Blut et al (2016) show that subjective norms have an insignificant effect on behavioral intentions, which is contrary to Hwang et al (2016). Davis *et al* (1989) examined the comparison of TAM and TRA models and proposed that subjective norms had an insignificant effect compared to perceived usefulness and perceived ease of use on intentions to use new technology. However, they realize that further research is needed to reveal the social influence on intention and behavior of using new technology through subjective norms. Thus, in this study, we will reveal the influence of subjective norms on behavioral intentions to use internet technology, namely the use of the SIM Online Registration Web for the extension of SIM A and SIM C.

H1: Subjective norms have a positive effect on the intention of the people of Palu to utilize the SIM On Registration Web Line for extension of SIM A and SIM C.

Subjective norms and their effect on perceived usefulness

In the TRA (Ajzen and Fishbein, 1980) and TPB (Ajzen and Madden, 1986) models, subjective norms have a direct influence on behavioral intention as in this study. However, this study also establishes the relationship between the influence of subjective norms on the intention to utilize SIM Online Web Registration technology indirectly through perceived usefulness.

Based on the influence of subjective norms on behavioral intentions mediated by perceived usefulness, two processes are

underlying the relationship, which is internalization and identification. Identification according to Hopp (2013) and Igwe et al (2020) is a process that shows the incorporation of individual beliefs with the beliefs of the reference group regarding the behavior to be displayed. The concept of internalization here is following Baierl et al (2014) who proposed that internalization is a process where informational social influence. In other words, it is an influence because it receives information from other parties as evidence that shows a reality.

As in the context of this study, if the reference group (other people who are considered important) states that the technology is useful, then the people of Palu will have confidence in the SIM Online Registration Web technology, and subsequently, that belief will form an intention to utilize the technology. Under the type of power to French and Raven's taxonomy (1958), namely expert power, that internalization is based on that power (Baierl et al., 2014). The basis for this statement is a reference group (other people who are considered important) who approve or suggest individuals behave in a certain way, are considered to have expertise and credibility related to the behavior displayed (Baierl et al., 2014).

Based on the internalization process, subjective norms have an indirect influence on the intention to use new technology through perceived usefulness, not a direct influence on behavioral intentions based on individual adherence to their reference group (Venkatesh and Davis, 2000). The information processing model based on George and Desmidt (2018) is following the influence of the internalization process which was also proposed by Kelman and Myers (2011).

The TAM model developed in this study shows that the internalization process concerning the influence of subjective norms on behavioral intentions mediated by perceived usefulness will occur in the context of using a technology system that is voluntary or mandatory (Wang and Goh, 2017). Thus, when the perception of the people of Palu regarding the benefits of the SIM Online Registration Web is formed due to the reference group, which presents the response to persuasive social information.

H2: Subjective norms have a positive effect on the perception of the people of Palu regarding the usefulness of using the SIM Online Registration Web.

Image and social influence

Individuals often respond to normative social influences to develop and maintain a good image in front of their reference group (Kelman and Myers, 2011). Mijin et al (2019) examined the diffusion of innovation that defines the image. According to them, image is a level that shows using innovation is an increase in one's status in society. The model used in these studies shows that subjective norms have a positive effect on an image because it is important for an individual in a group or society to display a behavior that is believed to improve his or her self-image in the group or society (Lin et al., 2015; Hopp, 2013). Kelman and Myers (2011) state that the source of social influence is a process of identification that is different from compliance and internalization. Based on the taxonomy of power proposed by French and Raven (1958) that the basis of identification is referent power.

In a work/organizational environment, with a high level of interdependence among organizational members, the status of an individual increase due to the presence of power and influence through the process of social exchange, coalition formation, and resource allocation (Kelman and Myers, 2011). As stated by Laws and Rivera (2012) that an individual who displays certain behaviors and is consistent with group norms will gain recognition as a member of the group, as well as social support as a member of the group. Furthermore, this individual can also achieve his/her goals that only happen in a group action or group membership (Laws and Rivera, 2012).

High power and influence resulting from increased individual status is the basis for generating even greater productivity (Hwang et al., 2016). For example, in a work/organizational environment, a member of the organization perceives that using a new technology

system will improve his or her performance, then this will indirectly improve his/her self-image beyond the performance benefits he receives due to the use of the new technology. Thus, the identification process in this study occurs in the relationship between the influence of subjective norms on self-image, which in turn affects the perception of usefulness.

H3: Subjective norms have a positive effect on the public image of Palu in utilizing the OnLine SIM Registration Web.

H4: The public image of Palu has a positive effect on the perception of the usefulness of using the SIM Online Registration Web.

The results that can be shown and their influence on perceptions of usefulness

The effectiveness of the use of new technology can be seen in the acceptance of the community towards the technology because people feel that the existence of new technology is convenient for daily work. Moreover, this is a result of innovation through the application of new technological systems that affect people's perceptions of their usefulness (Cengiz and Bakirtas, 2020). Hence, individuals are expected to form a positive perception of the usefulness of the new technology system if its use and the positive results are real. On the other hand, if the implementation of a system is effectively able to provide results that are in line with a particular job, but it still looks vague, then system users will not understand the actual use of the system (Gangwar and Date, 2016).

Godoe and Johansen (2012) found a positive and significant correlation between the results indicated by the intention to use a new technology system. The relationship between demonstrable results and perceived usefulness is also consistent in the job characteristics model which emphasizes that knowledge of job outcomes is a key psychological underlying motivation for work (Mortenson and Vidgen, 2016).

H5: The results that can be shown have a positive effect on the perception of the people of Palu on the usefulness of using the SIM Online Registration Web.

Perceived ease of use and its effect on perceived usefulness and intention to use.

In the TAM model, Davis *et al* (1989) stated that the perceived ease of use had a direct effect on the individual's perceived usefulness of the new technology to be used and the perceived usefulness had a direct effect on the intention to use. This is because the perception of usefulness indicates the expected impact of the use of a new technology system on improving job performance, while the perception of ease of use is more directed at the process of using the new technology system (Davis, 1993). In other words, the perceived impact of increased performance is caused by the ease of using the new technology system.

Thus, the application of a new technology system that is easier to use should further increase the benefits for users of the technology. Furthermore, Davis *et al* (1989), and Venkatesh (1999) show that perceived ease of use had a direct influence on intention to use as well as an indirect effect on the intention to use through perceived usefulness.

H6: The perception of the people of Palu on the ease of using the SIM Online Registration Web has a positive effect on the perception of usability.

H7: The perception of the people of Palu on the ease of using the SIM Online Registration Web has a positive effect on the intention to use.

H8: The perception of the people of Palu on the usefulness of using the SIM Online Registration Web has a positive effect on the intention to use.

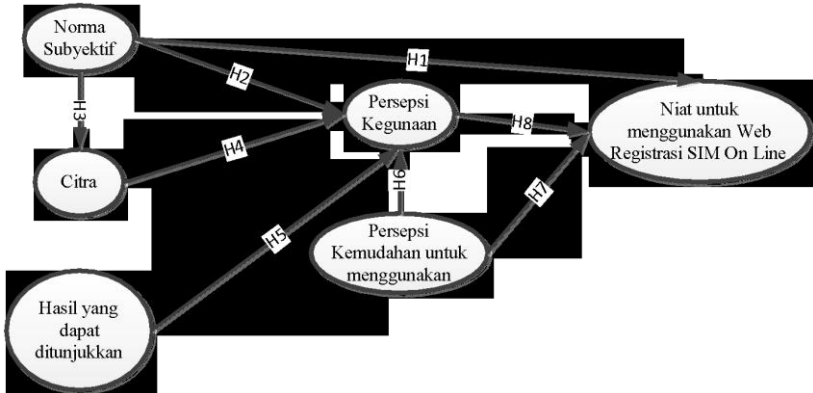


Figure 1. TAM research-development model
 Source: Davis et al (1989); Davis (1993); Venkatesh (1999)

2 METHODOLOGY

This research was conducted qualitatively and quantitatively. The qualitative phase was carried out on September 10, 2015, until September 12, 2015, the period before the implementation of the online SIM registration web. The author conducted a *Focus Group Discussion* (FGD), as a preliminary study, with 10 people consisting of 4 students from one of the universities in Palu, 3 civil servants, and 3 entrepreneurs. The selection of respondents was based on the following considerations: (1) understanding the use of internet network technology, (2) having SIM A or SIM C or both which will expire in December 2015, and (3) being willing to be involved in the research. As stated by Mak and Ip (2017) that the main emphasis of study exploratory is on finding ideas and inputs as it relates to the issue of ecological validity so that the authors choose a research background that is truly real according to the situation and conditions when the online SIM registration web will be implemented. Further, it is also intended to guarantee the generalizability of the research results to other situations and conditions similar to this research.

After conducting the FGD, the author made a transcript from the FGD recording. The transcript was made with the help of a researcher at P2EB UGM. The transcribed FGD recordings were analyzed using content analysis. Mak and Ip (2017) state that in content analysis, validity is not a significant problem. With careful operational definition and appropriate selection of indicators, the coding sheet is assumed to measure adequately. Meanwhile, Ahmed and Ting (2020) proposed that the validity test in content analysis is enough to use *content validity* or *face validity*.

In addition to testing *face validity*, *coding sheets* must also have high reliability. Ringle and Sarstedt (2016) state that the importance of reliability lies in the assurance provided that the data obtained are independent of the event, instrument, or person who measures it. In addition, this reliability test wants to see whether the coding sheet can produce the same findings when carried out by different people. There are 3 ways to test the reliability of coding sheets (Krippendorff, 2004), namely stability, reproducibility, and accuracy. Due to its simple nature, most researchers who use content analysis use the reproducibility method as in this study, where the reliability test was carried out by looking for the value of *the coefficient of reliability*, Holsti (1963) gave the following formula:

$$R = \frac{2(C_{1,2})^2(C_1 + C_2)}{C_1 + C_2 C_1 + C_2}$$

C_{1,2} = Number of categories of assessment results that were approved (considered equal) by all coders.

C₁, C₂ = Sum of all categories used by all coders.

The value of *the coefficient of reliability* generated in this stage is 0.76. The value of *intercoder reliability* is categorized as good because it is more than 0.6 (Holsti, 1963), which means that different people's interpretation of the interview results is the same.

From the results of the FGD, the authors summarized several items selected by at least 10% of the respondents (Fishbein and Middlestadt, 1995), and considered them important as the basis for compiling a questionnaire to be used in conducting *confirmatory factor analysis*. These items include:

1. If the online SIM Registration Web is implemented then I will use it when extending the SIM.
2. If the online SIM Registration Web is implemented then I plan to use it when extending the SIM.
3. If an online SIM Registration Web is implemented then I want to use it when extending SIM.
4. If the online SIM Registration Web is implemented then I am willing to use it when extending the SIM.
5. With the SIM Registration Web online, my work in the office will not be disturbed.
6. Web SIM registration online will save my time in activities.
7. With the online SIM Registration Web, it is easy for me to extend my SIM.
8. I think the online SIM Registration Web is easy to use.
9. In my opinion, the online SIM Registration Web can be accessed anywhere.
10. I'm sure my friends suggest using the SIM Registration Web online when extending the SIM.
11. I'm sure my friends also use SIM Registration Web online when extending SIM.
12. If I use the SIM online Registration Web, I don't look like a tech-savvy person.
13. In my opinion, the use of Web SIM registration online is prestigious.
14. It's easy for me to explain the SIM renewal process to other people if I use the SIM Registration Web online.
15. I feel there are benefits if you use the SIM online Registration Web.

Based on these items, the authors compiled a questionnaire to be used in conducting *Confirmatory Factor Analysis* (CFA) with a total of 150 respondents. CFA was carried out using the SPSS 21 program with the following results (see Table 1):

Table 1. Confirmatory Factor Analysis

Variable	Item	Value factor loading
1	<ul style="list-style-type: none"> If the online SIM Registration Web is applied then I will use it when extending the SIM. 	0.76
	<ul style="list-style-type: none"> If the online SIM Registration Web is implemented then I plan to use it when extending the SIM. 	0.47
	<ul style="list-style-type: none"> If the online SIM Registration Web is implemented then I want to use it when extending the SIM. 	0.89
	<ul style="list-style-type: none"> If the online SIM Registration Web is implemented then I am willing to use it when extending the SIM. 	0.44
2	<ul style="list-style-type: none"> With the online SIM Registration Web, my work in the office will not be disturbed. 	0.77
	<ul style="list-style-type: none"> Web SIM registration online will save my time in activities. 	0.85
3	<ul style="list-style-type: none"> With the SIM Registration Web online, it is easy for me to extend my SIM. 	0.39
	<ul style="list-style-type: none"> I think the online SIM Registration Web is easy to use. 	0.81
	<ul style="list-style-type: none"> I think the online SIM Registration Web can be accessed anywhere. 	0.73
4	<ul style="list-style-type: none"> I'm sure my friends recommend using the online SIM Registration Web when extending the SIM. 	0.76

Variable	Item	Value factor loading
	<ul style="list-style-type: none"> I'm sure my friends also use the SIM Registration Web online when extending their SIM. 	0.83
5	<ul style="list-style-type: none"> If I use the SIM Registration Web online, I don't look like a tech-savvy person. 	0.74
	<ul style="list-style-type: none"> I think the use of the online SIM Registration Web is prestigious. 	0.71
6	<p>2 It is easy for me to explain the SIM renewal process to other people if using the online SIM Registration Web.</p>	0.92
	<ul style="list-style-type: none"> I feel there are benefits if using the SIM Registration Web online. 	0.90

Based on the results of Table 1, it can be seen that item 2 and item 4 in variable 1 and item 1 in variable 3 have a loading factor value below 0.6, so the authors decided to exclude these items. Then, we test the construct validity back (discriminant validity and validity of convergence) uses the same 150 respondents, with the following results (see Table 2):

Table 2. Results of the validity and reliability

Variable	Item	Values Loading factor	AVE	CR	α
1	<ul style="list-style-type: none"> If the Web SIM online registration is applied, I will use it when extending the SIM. 	0.66	0.522	0.684	0.766
	<ul style="list-style-type: none"> If the online SIM Registration Web is implemented then I want to use it when extending the SIM. 	0.78			
2	<ul style="list-style-type: none"> With the SIM Registration Web online, my work in the office will not be disturbed. 	0.76	0.570	0.726	0.865
	<ul style="list-style-type: none"> The SIM Registration site online will save me time in the move. 	0.75			
3	<ul style="list-style-type: none"> I think the online SIM Registration Web is easy to use. 	0.91	0.759	0.862	0.771
	<ul style="list-style-type: none"> I think the online SIM Registration Web can be accessed anywhere. 	0.83			
4	<ul style="list-style-type: none"> I'm sure my friends recommend using the SIM Registration Web online when extending the SIM. 	0.86	0.636	0.884	0.976

Variable	Item	Values Loading factor	AVE	CR	α
	<ul style="list-style-type: none"> I'm sure my friends also use a SIM Registration site online when extending a license. 	0.73			
5	<ul style="list-style-type: none"> If I use the SIM Registration Web online, I don't look like a tech-savvy person. 	0.94	0.856	0.922	0.739
	<ul style="list-style-type: none"> According to my use, the SIM Registration site online is of greater prestige. 	0.91			
6	<ul style="list-style-type: none"> It is easy for me to explain the SIM renewal process to other people if using the online SIM Registration Web. 	0.72	0.579	0.733	0.822
	<ul style="list-style-type: none"> I feel there are benefits when using the SIM Registration Web online. 	0.80			

The results of the discriminant validity test in Table 2 show that the items or indicators used to represent the construct to be measured with a factor loading value above 0.6. As stated by Hair *et al* (2014) that the loading factor value above 0.6 for each indicator representing the construct to be measured has good discriminant validity.

The AVE value which indicates the validity of the convergence is obtained by calculation with the formula:

$$AVE = \frac{\sum_{n=1}^i (\lambda_i^2)}{n}$$

n = number of measurement indicators; λ_i = *factor loading* (Hair et al., 2014)

The results of calculation of the value AVE produced more than 0.5, thus, the three constructs have a good convergent validity (Hair et al., 2014; Kock, 2019).

The value of construct reliability generated in this study was obtained through the formula:

n = number of measurement indicators; λ_i = *factor loading* (Hair et al., 2014)

Table 2 also shows that the value of *Cronbach alpha* and *composite reliability* of each construct exceeds 0.7, thus the measure used in this study is *reliable* (Hair et al., 2014; Kock, 2019). In this study, the method of reliability test used is a *composite of reliability*, which is better to estimate the internal consistency of a construct (Hair et al., 2014; Ringle and Sarstedt, 2016)

Development of a scale of measurement in research using scales of measurement used by previous researchers, such as indicators for variables of perceived usefulness, perceived ease of use, and behavioral intentions were adapted from Davis (1989) and Davis et al (1989). Subjective norm variable indicators were adapted from Taylor and Todd (1995). Indicators of self-image variables and results that can be shown are adapted from Moore and Benbasat (1991). Based on the results in Table 2 then: variable 1 is the intention to use the SIM Online registration web (2 indicators); variable 2 is perceived usefulness (2 indicators); variable 3 is the perceived ease of use (2 indicators); variable 4 is a subjective norm (2 indicators); variable 5 is self-image (2 indicators), and variable 6 is the result that can be shown (2 indicators).

Socially Desirable Response

The *Socially Desirable Response* (SDR) test is conducted using a *non-paired sample*, for each indicator of the 6 constructs measured. In doing so, we entrusted each of the 30 questionnaires in the South Palu District for the questionnaire with direct questions and in the West Palu District (Pondok Indah Simple Restaurant) for the questionnaire with indirect questions. This test was performed using non-parametric statistics using SPSS 16. For *non-paired samples*, the test used was Mann *Whitney*. The test results show that the p-value obtained is more than 0.05 which concluded that the two samples (*non paired*) come from a population that has the same average (*mean*) or expectations. In other words, the average respondents' answers from both samples are the same. For more details see Table 3.

Table 3. Test Results Socially Desirable Response

Constructs	Indicators Measurement	Value p
intention to use	I1	0.831
	I2	0,363
perception of usefulness	PU1	0.797
	PU2	0.309
Perceived ease of use	PoU1	0.599
	PoU2	0.088
Norma subjectively	SN1	0.357
	SN2	0.850
Citra	img1	0.230
	img2	0,400
results can be shown	RD1	0.611
	RD2	0.788

3 RESULTS

Characteristics of Respondents

Respondents of this study consist of 300 people. All of these respondents have SIM A and SIM C with a validity period that will expire in December 2015. Of the 300 people, 67.5% were male and 32.5% were female; 64.2% married and 35.8% unmarried; 20.8% aged 30 years and under, 33.3% aged 31 to 45 years, and 45.8% aged 45 years and over; 8.33% are students, 25% work as civil servants, 39.2% work as employees in private companies, 26.7% work as employees in State-Owned Enterprises, and 0.83% work elsewhere; 8.33% were high school graduates, 50% were undergraduates, and 41.7% were postgraduates; 64.2% of the respondents have SIM C and 35.8% have SIM A; 67% of them earn IDR 2,400,000 – IDR 4,000,000 and 33% more than IDR 4,000,000.

Structural Model Test Results

The sample size used in this study is 300 respondents obtained through a survey using a purposive withdrawal technique. There are no clear directions for determining the appropriate sample size for using SEM. For example, Rakotoa Simbola and Bili (2018) state that a sample size of 100 - 200 is a sufficient number to use SEM. With a sample of 300 people, this number follows the considerations above. Data analysis in this study used Structural Equation Modeling (SEM) with the help of IBM SPSS AMOS 23 software. The selection of SEM estimation techniques for this study was based on the consideration that the data contained outliers and were not normal. Thus, the Maximum Likelihood (ML) estimation technique was determined to be used. This is because it is very suitable for the assumption of data normality that is not met (Tabachnick and Fidell, 2019; Kock, 2019; Ringle and Sarstedt, 2016; Alam et al., 2019; Weijters and Baumgartner, 2019)

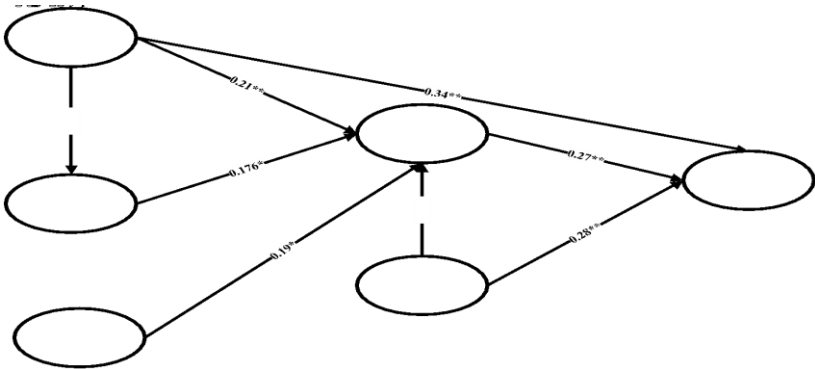


Figure 2. Structural model test results

Remarks : * significant at $p < 0.05$; ** significant at $p < 0.001$

Table 4. The Goodness of fit v model

Type goodness of fit model	Index goodness of fit model	Recommended value	Result	Information
Absolute fit measures	Chi-square statistic (χ^2 or CMIN)	Small	5.801	Good
	P	≥ 0.05	0.604	Good
	GFI	≥ 0.90	0.976	Good
	RMSEA	≤ 0.08	0.050	Good
Incremental fit measures	Normed ² (CMIN/DF)	$2 \leq \text{Normed}^2 \leq 5$	2.771	Good
	CFI	≥ 0.94	0.951	Good
Parsimonious fit measures	AGFI	≥ 0.90	0.983	Good

Table 5. Estimated Structural Parameters

Path Hypothesis	Path coefficient	t-value	Conclusion
H1	0.340	3.100**	Supported
H2	0.211	2.200**	Supported
H3	0.156	2.002*	Not Supported
H4	0.176	*	Supported
H5	20130.190 2.186	*	Supported
H6	0.220	2.329**	Supported
H7	0.280	2.901*	Supported
H8	0.270	2.333*	Supported

Note: * significant at $p < 0.05$; ** significant at $p < 0.001$

The results of this study indicate that the extended TAM model, used in this study, can explain and predict the intention of the Palu citizens to use the Online SIM Registration Web implemented by the Central Sulawesi Provincial Government. TAM was developed by adapting the Theory of Reasoned Action (TRA) to explain the causal relationship between the user's internal beliefs (usability and ease of use), attitudes, intentions, and usage behavior. Although, in the last 20 years TAM has successfully emerged as a well-established model capable of explaining and predicting user acceptance of the technology (Venkatesh and Davis, 2000), several studies have attempted to validate the developed TAM model with all its original constructs such as this study.

This study uses an extended TAM model by combining three additional variables, namely subjective norms, self-image, and demonstrable results. In general, the two main variables in the TAM model, perceived usefulness and perceived ease of use can explain and predict the intention of the people of Palu to use the online SIM registration web which will be implemented by the Central Sulawesi provincial government. Overall, the variance in the intention of the people of Palu to use the online SIM registration web can be explained by predictor variables of 48% and the rest is explained by other factors outside the model.

The first hypothesis in this study is supported. As the results presented in Table 5, the Critical Ratio (t-statistic) value is above 1.96, implying that the more positive the subjective norms possessed by the people of Palu regarding the use of the Online SIM Registration Web for the extension of SIM A and SIM C, the more it will affect their intention to use them. The results of this study further emphasize the influence of subjective norms on behavioral intentions. As stated by Fishbein and Ajzen (2010) that the direct effect of subjective norms on behavioral intentions is that people will display a behavior, even though he/she does not prefer the behavior or its consequences as a result of his/her belief in one or more people whom they consider important who suggest/agrees on those certain behaviors, and is sufficiently motivated to comply (Fishbein and Ajzen, 2010).

TAM studies that have successfully demonstrated the direct effect of subjective norms on behavioral intentions have yielded mixed results. For example, research conducted by Patiro et al (2016), Patiro and Budiyanto (2016), and Patiro and Sihombing (2014) found a significant effect of subjective norms on behavioral intentions. Cengiz and Bakirtas (2020) also state that some psychological studies suggest that subjective norms are important determinants of perceived usefulness and behavioral intentions. As stated earlier, TRA identified subjective norms and attitudes as determinants of behavioral intentions (Davis et al., 1989), but the original TAM model did not include subjective norms as a variable.

The use of information technology can stem from an individual's desire to perform such actions, which implies that user perceptions may influence the decision to participate or not (Godoe & Johansen, 2012). Many studies have been conducted and show that subjective norms positively influence individual behavior related to technology acceptance and use (Mortenson & Vidgen, 2016). Following Venkatesh and Davis (2000) who stated that subjective norms were included in the model as an effort to increase understanding of user adoption behavior and acceptance of new information systems and technologies. The results of this study indicate that the people of Palu

intend to use the online SIM registration web to extend SIM A and C if the people closest to them advise them to use it.

The second hypothesis in this study is supported. As the results show. in Table 5, that the Critical Ratio (t-statistic) value is above 1.96. This means that the more positive the subjective norms regarding the use of the online SIM registration web application for the extension of SIM A and SIM C, the people of Palu will feel a positive perception about the usefulness of the application.

The direct relationship between subjective norms and behavioral intentions in TRA and TPB is based on the principle of compliance. The TAM model in this study includes two additional theoretical mechanisms that subjective norms can influence intentions indirectly through perceived usefulness. The two mechanisms are internalization and identification as proposed by Venkatesh and Davis (2000). Internalization refers to the process when an individual feels that important people think he or she should accept and use the system. Additionally, he incorporates the beliefs of the important person into his belief structure. Internalization is equivalent to that referred to by Deutsch and Gerard (1955) as quoted by Sharma et al (2016), informational social influence (as opposed to normative), which is defined as “the influence of receiving information from others as evidence of the existence of reality. In the context of this current study, if a supervisor, co-worker, colleague, friend, or relative suggests that the online SIM registration web system is very useful in extending SIM A and SIM C, then someone might believe that the system is really useful, and ultimately form an intention to use it.

In the case of internalization, subjective norms have an indirect effect on intentions through perceived usefulness, as compared to a direct adherence effect on intentions. Salancik and Pfeffer (1978) examined the social information processing model (cited by Venkatesh and Davis (2000)), where the results are consistent with the resulting internalization effect in this study. The TAM model developed in this study explains the concept of internalization. According to Hsiao and Yang (2011), internalization is not a form of

compliance. In addition, internalization will appear in the context of acceptance and use of systems that are voluntary or mandatory, when the use of the system is carried out by what is mandated or is mandatory, the user's perception of the usability will increase in response to persuasive social information. Thus, as in this study, when the online SIM registration web is perceived to be of real benefit, then the information conveyed by the web user to relatives, friends, co-workers, colleagues, and superiors will be well internalized which in turn will form the intention to want to participate and use it.

The third hypothesis is also supported in this study. The results of the support for this hypothesis can be seen in Table 5 which is indicated by the Critical ratio (t-statistic) value that exceeds 1.96. Individuals often respond to social normative influences to build or maintain their image held in reference groups (Hsiao and Yang, 2011). Moore and Benbasat (1991) cited by Venkatesh and Davish (2000) define an image as "the extent to which the use of innovation is considered to improve a person's image which has an impact on his status in a social system.

The TAM model developed in this study states that subjective norms will affect This is because, if an individual believes that he or she should perform the behavior (eg, using the system) as suggested by his reference group, then he will then do so and that will tend to improve his position in the group to which he belongs (Partala and Saari, 2015).

Based on the taxonomic perspective of power proposed by French and Raven (1959) as cited by Venkatesh and Davis (2000), the basis for identifying a person's image is based on the strength of a reference group. In a typical work environment, with a high degree of interdependence high among members of society in carrying out its duties, the increase in status in the group is the basis of power and influence through processes such as social exchange, coalition formation, and resource allocation (Abbasi et al., 2015). As stated by Faqih et al (2015) by performing behavior that is consistent with group norms, an individual will achieve a special status and social support

received from his group so that it has a positive impact on his self-image. The background of this research is the application of an online SIM registration web system to extend SIM A and SIM C. Therefore, like it or not, the people of Palu City are required to adopt the system, although it is not a necessity. This is because the people of Palu City maintain the image they have in community groups that they are people who tend to be open to new technological systems. Thus, his subjective norms will affect his self-image when faced with the acceptance and use of a new technology system, which in this case is an online SIM registration web.

The fourth hypothesis is supported by the results shown in Table 5. According to Deutsch and Gerard (1955), informational social influence can be defined as the influence received when a person accepts information obtained from others as evidence of the fact that happened. The informational social influence will be accepted if it is considered as an instrument for finding solutions to some problems faced by individuals, or because it supports or adds to what individuals already believe about some prominent aspects of their environment (Burnkrant and Cousineau, 1975).

When an individual feels that there is still insufficient information, an ambiguous situation, or an immediate demand to perform an action or decision, it will make people replace information that seems to be considered more competent than others through direct proof of their own (Cohen and Golden, 1972). Lee and Hong (2016) show that when an individual makes a purchase decision, he/she tends to receive informational social influence if he thinks that information from others (for example, product reviews) will help him achieve the goal of reducing buying costs.

Increased power and influence resulting in higher status will be the common basis for greater productivity gains (Sharma et al., 2020). Thus, an individual learns that using the system will lead to an increase in his or her performance (which is the definition of perceived usefulness) which is indirectly due to an improved image, on top of all the performance benefits that are directly attributed to the use of the

new technology system (Venkatesh and Davis, 2000). As in the background of this study, the image observed by people of Palu as a consequence of perceived subjective norms will shape their perception that using an online SIM registration web when extending a SIM will provide many benefits. The benefits he will receive are the information he receives from his reference group when he will decide to behave or not. This will affect his self-image as a representation of the reference group related to the acceptance or use of the new system.

The fifth hypothesis in this study is also well supported. The results perceived by Palu citizens regarding the use of online SIM registration web when extending a SIM have further increased their perception of the usefulness of the new system and technology. The results of this study are in line with Moore and Benbasat (1991), Agarwal and Prasad (1999), and Zhang et al (2010). Results demonstrability is defined as the extent to which the results obtained from using new systems and technologies can be seen and communicated (Moore & Benbasat, 1991). Further, this variable is crucial when adopting an innovation (Agarwal & Prasad, 1999). According to Moore and Benbasat (1991) and Agarwal and Prasad (1999), there is a significant correlation between behavioral intentions to adopt and the results that can be demonstrated. Zhang et al (2010) examined mobile health applications, stated that the results that can be shown are considered real and observable because they can express and share with others their pleasant experiences while using certain mobile health applications.

This study shows that when the people of Palu have a pleasant experience in using the online SIM registration web application to extend their SIM, they will deliver this information to their closest people. Therefore, supporting Venkatesh and Davis (2000) who state that the results that can be demonstrated, are tangible aspects of the results when the individual uses a new technological innovation and will directly shape and affect the perceived usefulness, which implies that individuals can be expected to form more positive perceptions of

the usefulness of a system if the covariance between use and positive outcomes is easy to see. On the other hand, if a new system and technology produce work that is relevant and effective by the results desired by users, but is not visible in reality, then system users will not likely understand how useful the system is (Gow et al., 2019). Empirically, Calisir et al (2014) also found a close and significant relationship between perceived usefulness of use and proven results. The relationship between demonstrable results and perceived usefulness is also consistent with the job characteristics model, which emphasizes knowledge of the actual results of work activities as a psychological state that underlies work motivation.

The sixth hypothesis is also well supported in this study. These results can be seen in Table 5 which is indicated by the Critical Ratio (t statistic) value above 1.96. The results of this study indicate that the more positive the perception of the people of Palu in using the online SIM registration web application, the perception of the people of Palu regarding the usefulness of the application is also more positive.

The TAM model developed in this study adopts the TAM model proposed by Davis et al (1989) by linking perceived ease of use to perceived usefulness variables, because the easier a system is to use, the more it will increase the perceived job performance (Venkatesh and Davis, 2000; Dwivedi et al. 2016). There is plenty of empirical evidence accumulated over a decade which shows that perceived ease of use will have a positive and significant effect on the intention to use, either directly or indirectly through its effect on perceived usefulness (Davis et al. 1989; Venkatesh, 1999; Venkatesh and Davis, 2000). For example, the TAM model developed by Venkatesh and Davis (1996) considers that ease of use is the psychological basis for a person's self-efficacy towards a new technological system that is adjusted to the objective usefulness that is felt through direct behavioral experience in using the system. As a result of this study, Palu citizens who find it easy to use the online SIM registration web application automatically immediately feel the benefits that will be received when they use the application.

The TAM model developed by Davis et al (1989) integrates perceived ease of use of technology and perceived usefulness of technology as two main constructs. The perception of usability in this study shows the extent to which the people of Palu believe that using an online SIM registration web application will improve their performance. The existence of an online SIM registration web application should provide various benefits for its users, especially the people of Palu, such as general convenience, simplification of payments compared to other forms of payment, all of which may support a positive attitude towards use and a higher intention to use the application when extending driver's license.

The perception of the ease of using the online SIM registration web application shows the perception of the people of Palu about the effort and time on using the service and the extent to which the technology can be understood. Previous studies have consistently acknowledged that perceived ease of use has a direct effect on perceived usefulness and attitudes (Chauhan, 2015; Yousafzai et al., 2007). A study using TAM also revealed that there is a significant positive relationship between perceived ease of use and perceived usefulness (Van der Heijden, 2003; Yang, 2012). Thus, as the results of this study, the ease of using the online SIM registration web application system when extending a SIM can affect the perception of usability and attitudes of users.

Hypothesis seven is also supported. The results of this study indicate that the higher the positive perception of the people of Palu regarding the ease of using the online SIM registration web application, the more they will intend to use it when extending their SIM.

The theory of reasoned action (TRA) proposed by Ajzen and Fishbein (1980) states that attitudes have an important role in explaining and predicting the intention to engage in the behavior. The theory of planned behavior (TPB) and the technology acceptance model (TAM) are each separate derivatives of TRA but are considered as their development. In particular, the TPB extends the TRA to

include a new determinant of behavioral intention, namely perceived behavioral control (Taylor and Todd, 1995).

Perceived behavioral control according to Schifter and Ajzen (1985) and Ajzen and Madden (1986) describes the extent to which people perceive they have control over the behavior they display. The logic of perceived behavioral control refers to the concept of self-efficacy proposed by Bandura (1977) (cited by Fishbein and Ajzen (2010)). According to Bandura (1977) self-efficacy means that individuals are more likely to engage in behaviors they believe they can control compared to behaviors they believe are less controllable (cited by Fishbein and Ajzen (2010)).

The TAM model was developed at the same time as the TPB development. The TAM model is based on the concept of TRA, which proposes a set of determinants of behavioral intentions, especially for the behavior of adopting systems and information technology. These determinants include perceived ease of use, which refers to the degree to which a person believes that using a particular system will be free from difficult effort (Venkatesh and Davis, 2000). The effort is a limited resource that a person can allocate to various activities for which he is responsible (Fishbein and Ajzen, 2010). The results of this study indicate applications that are considered easier to use will be more likely to be accepted by potential users. Moreover, the results also show when the online SIM registration web application was launched by the Palu Police, the Palu citizens perceived that the application was accessible and user-friendly when used to extend a SIM. The application is expected to provide convenience for the people of Palu when extending a SIM.

Finally, the eighth hypothesis is also well supported. The more positive the perception of the people of Palu City regarding the usefulness of the online SIM registration web application, the higher the intention to want to use the application.

Perceived usefulness is defined as the extent to which a person believes that using a particular system will improve his/her job performance (Venkatesh and Davis, 2000). This refers to the definition

of the word useful, i.e. capable of being used profitably (Davis, 1989; Venkatesh and Davis, 2000). In an organizational context, people are generally forced to produce good performance with salary increases, promotions, bonuses, and other rewards (Robbins and Judge, 2013). A system that has high perceived usefulness is a system that is believed by users to produce a positive relationship between use and performance (Venkatesh and Davis, 2000).

The results of this study are in line with Davis et al (1989), Lin and Lu (2000), Moon and Kim (2001), and Taylor and Todd (1995) which successfully demonstrated that perceived usefulness was able to explain and predict individual behavioral intentions in the behavior of adoption of new information systems and technologies. The higher the perceived usefulness of the new information technology system, the higher the intention to use it. Further, the perceived usefulness is the subjective probability that using technology will improve the way users complete a given task. Based on theories in social psychology, such as the TRA (Ajzen and Fishbein, 1980; Fishbein and Ajzen, 1975) and the TPB (Schifter and Ajzen, 1985; Ajzen and Madden, 1986), the TAM has been validated as a robust conceptual framework (Davis, 1989; Davis et al., 1989).

Davis et al. (1989) stated that perceived usefulness refers to consumers' perceptions of the outcomes of past experiences. The experience of the people of Palu in the past when interacting with the internet will create information about the usefulness of the internet. Based on this, when the online SIM registration web application was launched by the Palu Police as a means of assistance for the community to extend a SIM, the people of Palu have a positive perception of the usefulness of the application because it was considered to increase their comfort in doing so. With the formation of positive perceptions about the benefits of the online SIM registration web application, the intention of the people of Palu to use the application is increasing.

4 CONCLUSIONS

The TAM is a very popular model for understanding, explaining, and predicting the use of new information technology systems. To date, there have been many impressive studies on the application of the TAM model. Although several studies have confirmed the ability of the TAM model to explain and predict new information systems and technologies, there is still some skepticism among researchers regarding the application and theoretical accuracy of this model. Consequently, the authors are interested in concluding that research on TAM may have reached a saturation level, so that future research will focus on developing new models that will take advantage of the strengths of the TAM model while improving on its weaknesses.

In general, the extension of the TAM model in this study has successfully explained and predicted the behavior of people who adopt a new information technology system. As the background of the study is the behavior of the people of Palu in using the SIM registration web application online. Furthermore, the results of this study show that the eight hypotheses proposed are well supported, indicating that the TAM model used in this study has a good explanatory ability to the behavior of the people of Palu related to the behavior of adopting a new information technology system, namely the Online SIM registration.

Behavioral intentions can be explained and predicted well by the two main predictor variables, namely perceived usefulness and perceived ease of use. Perceived usefulness can be explained by perceived ease of use. Several additional variables which in this case are considered as antecedents of perceived usefulness, namely: subjective norms, images, and results that can be shown can explain these variables well. Subjective norms can explain and predict behavioral intentions very well which further emphasizes its role as an antecedent of intention as stated in the TRA and TPB models.

Managerial implications

The results of this study can be used as a basis for internet technology service providers in identifying and understanding the antecedent factors of prospective users' intentions in adopting the new

internet system and technology. To increase the intention of potential users of the technology services offered, service providers must focus on the usefulness and ease of use of the system. Service providers do not need to reproduce redundant features but preferably features that are user-friendly so that users can feel more useful and easier when using them. Further, service providers must consider reference group factors that can influence potential users' intentions to adopt the new technology system. Hence, the resulting technological system must be able to be accessed and used by various levels of society so that the system can be well received.

Limitations and suggestions

This study only measures up to the behavioral intention. Thus, the actual behavior of the people of Palu has not been seen in adopting the online SIM registration web application. Henceforth, it is hoped that the research conducted can measure up to the stage of actual behavior.

This research is cross-sectional to determine the causal path of several variables being measured. Future research is expected to be able to be carried out longitudinally so that it can be carried out until the measurement of actual behavior. In addition, future research should consider experimental or longitudinal studies so that better conclusions regarding causality can be drawn.

This study only covers the people of Palu in Central Sulawesi Province. In the future, it is hoped that the research carried out will be able to cover all districts/cities in Central Sulawesi Province and even throughout Indonesia so that generalization of research results can be carried out.

REFERENCES

- [1] Abbasi, M. S., Tarhini, A., Elyas, T., & Shah, F. (2015). Impact Of Individualism And Collectivism Over The Individual's Technology Acceptance Behaviour: A Multi Group Analysis Between Pakistan And Turkey. *Journal Of Enterprise Information Management*, 28(6), 747–768.
- [2] Agarwal, R. And Prasad, J. (1997). The Role Of Innovation Characteristics And Perceived Voluntariness In The Acceptance Of Information Technologies. *Decision Sciences*, 28(3): 557-582.
- [3] Ajzen, I. (1991). The Theory Of Planned Behavior. *Organizational Behavior And Human Decision Processes*, 50(2), 179–211
- [4] Ajzen, I., & Fishbein, M. (1980). *Understanding Attitudes And Predicting Social Behavior*. Englewood-Cliffs, Nj: Prentice-Hall.
- [5] Ajzen, I., & Madden, T. J. (1986). Prediction Of Goal-Directed Behavior: Attitudes, Inten-Tions, And Perceived Behavioral Control. *Journal Of Experimental Social Psychology*, 22, 453-474.
- [6] Ahmed, S. And Ting, D. H. (2020). Shopping Cues: Conceptualization, Scale Development, And Validation. *International Journal Of Market Research*, 62(1), 95–112
- [7] Alam, T. F., Sultana, N., And Rayhan, M. I. (2019). Structural Equation Modeling: An Application
- [8] Of Broadband Penetration And Gdp Growth In Asia. *Journal Of Economic Structures*, 8(17), 1-11
- [9] Alihana, F. (2015), "Antisipasi Bentrok, Lurah Siapkan Fasilitas Internet, "Metro Sulawesi.Com, Tersedia Di: [Http://Www.Metrosulawesi.Com/Article/Antisipasi-Bentrok-Lurah-Siapkan-Fasilitas-Internet](http://Www.Metrosulawesi.Com/Article/Antisipasi-Bentrok-Lurah-Siapkan-Fasilitas-Internet), Diakses Pada Tanggal 31 Mei 2017.
- [10] Baierl, R., Grichnik, D., Spörrle, M., & Welpel, I. M. (2014). Antecedents Of Social Entrepreneurial Intentions: The Role Of An Individual's General Social Appraisal. *Journal Of Social Entrepreneurship*, 5(2), 123–145.
- [11] Blut, M., Wang, C. & Schoefer, K. (2016) Factors Influencing The Acceptance Of Self-Service Technologies: A Meta-Analysis. *Journal Of Service Research*, 19, 4, Pp..396–416.

- [12] Burhan, F. A. (2020). 10 Tren Teknologi 2020, Kecerdasan Buatan Dan 5g Berkembang Pesat. *Kata Data*, Tersedia Di: <https://katadata.co.id/Agustiyanti/Digital/5e9a4c3a63f7e/10-Tren-Teknologi-2020-Kecerdasan-Buatan-Dan-5g-Berkembang-Pesat>, Diakses Pada Tanggal 4 Mei 2021.
- [13] Burnkrant, R.E. And Cousineau, A. (1975). Informational And Normative Social Influence In Buyer Behavior. *Journal Of Consumer Research*, 2(3): 206–215.
- [14] Calisir, F., Gumussoy, C., Bayraktaroglu, A., & Karaali, D. (2014). Predicting The Intention To Use A Web-Based Learning System: Perceived Content Quality, Anxiety, Perceived System Quality, Image, And The Technology Acceptance Model. *Human Factors And Ergonomics In Manufacturing & Service Industries*, 24(5), 515–531.
- [15] Cengiz, E. And Bakirtas, H. (2020). Technology Acceptance Model 3 In Understanding Employee's Cloud Computing Technology. *Global Business Review*, 1–20
- [16] Chauhan, S. (2015). Acceptance Of Mobile Money By Poor Citizens Of India: Integrating Trust Into The Technology Acceptance Model. *Info*, 17(3): 58–68
- [17] Chauhan, S., & Jaiswal, M. (2017). A Meta-Analysis Of E-Health Applications Acceptance: Moderating Impact Of User Types And E-Health Application Types. *Journal Of Enterprise Information Management*, 30(2), 295–319.
- [18] Cohen, J. B. And Golden, E. (1972). Informational Social Influence And Product Evaluation. *Journal Of Applied Psychology*, 56: 54–59.
- [19] Davis, F. D. (1985). A Technology Acceptance Model For Empirically Testing New End-User Information Systems: Theory And Results. Unpublished Doctoral Dissertation, Mit Sloan School Of Management, Cambridge, Ma.
- [20] Davis, F. D. (1989). Perceived Usefulness, Perceived Ease Of Use, And User Acceptance Of Information Technology. *Mis Quarterly*, 13(3), 319–340

- [21] Davis, F. D. (1993). User Acceptance Of Computer Technology: System Characteristics, User Perceptions. *International Journal Of. Man-Machine Studies*, 38 (3), 475-87.
- [22] Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User Acceptance Of Computer Technology:
- [23] A Comparison Of Two Theoretical Models. *Management Science*, 35(8), 982–1003.
- [24] Deutsch, M., And Gerard, H. B. (1955). A Study Of Normative And Informational Social Influences Upon Individual Judgment. *Journal Of Abnormal And Social Psychology*. 51: 629–636.
- [25] Dwivedi, Y., Shareef, M., Simintiras, A., Lal, B., & Weerakkody, V. (2016). A Generalised Adoption Model For Services: A Cross-Country Comparison Of Mobile Health (M-Health). *Government Information Quarterly*, 33(1), 174–187.
- [26] Faqih, K. M., & Jaradat, M. I. R. M. (2015). Assessing The Moderating Effect Of Gender Differences And Individualismcollectivism At Individual-Level On The Adoption Of Mobile Commerce Technology: Tam3 Perspective. *Journal Of Retailing And Consumer Services*, 22, 37–52.
- [27] Fatria, J. (2021) Pengguna Internet Di Dunia Capai 4.66 Miliar. *Kalbaronline*, Tersedia Di: <https://www.kalbaronline.com/2021/02/04/pengguna-internet-di-dunia-capai-4-66-miliar/>, Diakses Pada Tanggal 4 Mei 2021.
- [28] Fishbein, M. And S. Middlestadt (1995), “Non Cognitive Effects On Attitude Formation And Change: Fact Or Artifact? “*Journal Of Consumer Psychology*, Vol. 4, No. 2, Pp. 181-202.
- [29] Fishbein, M. And Ajzen, I. (2010). Predicting And Changing Behavior: The Reasoned Action Approach. New York, Ny: Psychology Press Taylor And Francis Group Llc
- [30] Gangwar, H., & Date, H. (2016). Critical Factors Of Cloud Computing Adoption In Organizations: An Empirical Study. *Global Business Review*, 17(4), 886–904.

- [31] Godoe, P., & Johansen, T. (2012). Understanding Adoption Of New Technologies: Technology Readiness And Technology Acceptance As An Integrated Concept. *Journal Of European Psychology Students*, 3(1), 38–52.
- [32] Gow, C. X., Wong, S. C., And Lim, C. S. (2019). Effect Of Output Quality And Result Demonstrability On Generation Y's Behavioural Intention In Adopting Mobile Health Applications. *Asia-Pacific Journal Of Management Research And Innovation*, 15(3): 111–121.
- [33] Hair, J. F., W. C. Black, B. J. Babin, And R. E. Anderson (2014), *Multivariate Data Analysis*, 7th Ed. Essex, England: Pearson Education, Ltd.
- [34] Hajiji, M (2015),” Satlantas Palu Terapkan Perpanjangn Sim Secara Online, “Antara Sulteng.Com, Tersedia Di: [Http://Www.Antarasulteng.Com/Berita/21524/Satlantas-Palu-Terapkan-Perpanjangn-Sim-Secara-Online](http://www.antarasulteng.com/Berita/21524/Satlantas-Palu-Terapkan-Perpanjangn-Sim-Secara-Online), Diakses Pada Tanggal 29 Mei 2017
- [35] Holsti, O.R. (1963), “Content Analysis,” In Robinson, J.A. Ed., *The Quantitative Analysis Of Content: A Handbook With Application For The Study Of International Crisis*, Nortwestern: Nortwestern University Press, Pp. 596-692.
- [36] Hopp, T. M. (2013). Subjective Norms As A Driver Of Mass Communication Students' Intentions To Adopt New Media Production Technologies. *Journalism & Mass Communication Educator*, 68(4): 348–364.
- [37] Hsiao, C. H., & Yang, C. (2011). The Intellectual Development Of The Technology Acceptance
- [38] Model: A Co-Citation Analysis. *International Journal Of Information Management*, 31(2), 128–136
- [39] Hwang, Y., Al-Arabiati, M., And Shin, D-H. (2016). Understanding Technology Acceptance
- [40] In A Mandatory Environment: A Literature Review. *Information Development*, 32(4): 1266–1283

- [41] Kelman, S., & Myers, J. (2011). Successfully Achieving Ambitious Goals In Government: An Empirical Analysis. *American Review Of Public Administration*, 41, 235-262.
- [42] Kock, N. (2019). Factor-Based Structural Equation Modeling With Warppls. *Australasian Marketing Journal*, 27, 57–63
- [43] Krippendorff, K. (2004). *Content Analysis An Introduction To Its Methodology*. 2nd Edition, Thousand Oaks, California: Sage Publications, Inc
- [44] Laws, V. L. And Rivera, L. M. (2012) The Role Of Self-Image Concerns In Discrepancies Between Implicit And Explicit Self-Esteem. *Personal Social Psychology Bulletin* 38(11): 1453–1466.
- [45] Lee, J. And Hong, I. B. (2016). Predicting Positive User Responses To Social Media Advertising: The Roles Of Emotional Appeal, Informativeness, And Creativity. *International Journal Of Information Management*, 36: 360–373
- [46] Lin, C. C. J., & Lu, H. (2000). Towards An Understanding Of The Behavioural Intention
- [47] To Use A Web Site. *International Journal Of Information Management*, 20(3), 197–208.
- [48] Lin, T. T. C., Younbo, J., And Sim, C. (2015). Towards An Understanding Of Intention To Use Mobile Videos: Impression Management, Perceived Facilitation, And Social Norms. *Mobile Media & Communication*, 3(1) 106–124
- [49] Mak, M. K. Y. And Ip, W. H. (2017). An Exploratory Study Of Investment Behaviour Of Investors. *International Journal Of Engineering Business Management*, 9: 1–12
- [50] Mijjin, N., Jang, H., Choi, B., And Khongorzul, G. (2019). Attitude Toward The Use Of Electronic Medical Record Systems: Exploring Moderating Effects Of Self-Image. *Information Development*, 35(1): 67–79
- [51] Moon, J. W., & Kim, Y. G. (2001). Extending The Tam For A World-Wide-Web Context. *Information And Management*, 38(4), 217–230.

- [52] Moore, G. C., And Benbasat, I. (1991). Development Of An Instrument To Measure The Perceptions Of Adopting An Information Technology Innovation. *Information Systems Research*, 2(3): 192–222.
- [53] Mortenson, M. J., & Vidgen, R. (2016). A Computational Literature Review Of The Technology Acceptance Model. *International Journal Of Information Management*, 36(6), 1248–1259.
- [54] Partala, T., & Saari, T. (2015). Understanding The Most Influential User Experiences In Successful And Unsuccessful Technology Adoptions. *Computers In Human Behavior*, 53, 381–395.
- [55] Rakotoasimbola, E. And Blili, S. (2019). Measures Of Fit Impacts: Application To The Causal Model Of Consumer Involvement. *International Journal Of Market Research*, 61(1), 77–92
- [56] Ringle, C. M. And Sarstedt, M. (2016). Gain More Insight From Your PLS-Sem Results: The Importance-Performance Map Analysis. *Industrial Management & Data Systems*, 116(9), 1865–1886
- [57] Robbins, S. P. And Judge, T. A. (2013). *Organizational Behavior*. 15th Edition, Upper Saddle River, New Jersey: Pearson Education, Inc
- [58] Schifter, D. E. And Ajzen, I. (1985). Intention, Perceived Control, And Weight Loss: An Application Of The Theory Of Planned Behavior. *Journal Of Personality And Social Psychology*, 49(3), 843–851.
- [59] Sharma, S. K., Al-Badi, A. H., Govindaluri, S. M., & Al-Kharusi, M. H. (2016). Predicting Motivators Of Cloud Computing Adoption: A Developing Country Perspective. *Computers In Human Behavior*, 62, 61–69.
- [60] Sharma, M., Gupta, R., & Acharya, P. (2020). Prioritizing The Critical Factors Of Cloud Computing Adoption Using Multi-Criteria Decision-Making Techniques. *Global Business Review*, 21(1), 142–161
- [61] Tabachnick, B. G. And Fidell, L. S. (2019). *Using Multivariate Statistics*. 7th Edition, Usa: Pearson Education, Inc Or Its Affiliates

- [62] Taylor, S. And Todd, P. (1995). Decomposition And Crossover Effects In The Theory Of Planned Behavior: A Study Of Consumer Adoption Intentions. *International Journal Of Research In Marketing*, 12(2): 137–155
- [63] Van Der Heijden, H. (2003). Factors Influencing The Usage Of Websites: The Case Of A Generic Portal In The Netherlands. *Information And Management*. 40(6): 541–549
- [64] Venkatesh, V. (1999). Creation Of Favorable User Perceptions: Exploring The Role Of Intrinsic Motivation. *Mis Quarterly*. 23(2): 239–260.
- [65] Venkatesh, V. And Davis, F. D. (1996). A Model Of The Antecedents Of Perceived Ease Of Use: Development And Test. *Decision Science*. 27(3): 451–481.
- [66] Venkatesh, V., & Davis, F. D. (2000). A Theoretical Extension Of The Technology Acceptance
- [67] Model: Four Longitudinal Field Studies. *Management Science*, 46(2), 186–204.
- [68] Wahyudiono (2019). Implikasi Penggunaan Internet Terhadap Partisipasi Sosial Di Jawa Timur. *Jurnal Komunika*, 8(2): 63-68
- [69] Wang, X. And Goh, D. H-L. (2017). Video Game Acceptance: A Meta-Analysis Of The Extended Technology Acceptance Model. *Cyberpsychology, Behavior, And Social Networking*, 20(11): 662-671
- [70] Weijters, B. And Baumgartner, H. (2019). Analyzing Policy Capturing Data Using Structural Equation Modeling For Within-Subject Experiments (Semwise). *Organizational Research Methods*, 22(3), 623-648
- [71] Yang, K. (2012). Consumer Technology Traits In Determining Mobile Shopping Adoption: An Application Of The Extended Theory Of Planned Behavior. *Journal Of Retailing And Consumer Services*. 19(5): 484–491

- [72] Yousafzai, S.Y.; Foxall, G.R.; And Pallister, J.G. (2007).
Technology Acceptance: A Meta-Analysis Of The Tam: Part 2.
Journal Of Modelling In Management. 2(3): 281–304
- [73] Zhang, H., Cocosila, M., & Archer, N. (2010). Factors Of Adoption
Of Mobile Information Technology By Homecare Nurses.
Computers, Informatics, Nursing (Cin), 28(1), 49–56.