Analysis of Factors Affecting User Acceptance of The Ministry of Defense Information and Documentation Management Officer (PPID) Website

Nabilla Eka Swadati and Sfenrianto

Information System Management, Binus Graduate Program, Master of Information System Management, Bina Nusantara University, Jakarta, Indonesia

nabilla.swadati@binus.ac.id, sfenrianto@binus.edu

Abstract. This study aims to discover the factors influencing user acceptance of the Indonesian Ministry of Defense Management of Information and Documentation Officers (PPID) website services and to recommend strategies for increasing user acceptance of the website. User acceptance of public information systems is measured and modelled using the Technology Acceptance Model (TAM), with the following constructs: Perceived Ease of Use, Perceived Usefulness, Attitude toward Using, Behavior Intention to Use, and Actual System Use. We contributed by adding the construct of External Variables, namely Website Quality, Information Quality, and Service Quality. This was done following the result of a survey with 155 respondents who are users of the PPID website, consisting both the general public and the officials from the Ministry of Defense. This most important finding of this study concerns the H4 test, which had a t-statistic value of 15.489 greater than the t-table = 1.96 with significance level of 5%, indicating that Service Quality has a positive effect on the Perceived Ease of Use. Using this result, we could recommend that the PPID website needs to always be ready to provide quality information service, so that users will utilize the website to get the information needed, if they feel the ease in using the website service. Our study also highlights other key variables of the relationship between quality of service in government and the PPID website.

Keywords: technology acceptance model, user acceptance, defence, website

1. Introduction

1.1. Background and Purpose of the Study

Information systems are becoming increasingly integrated with organizational processes, bringing more productivity and better control to those processes. Simply automating activities using technology is not enough, businesses need to make effective use of information. Using technology to manage and improve processes in companies and government to achieve a common end goal (Bourgeois, David. 2014).

A government information system is a public information system that must be analyzed from several perspectives regarding users, use, data content, technical, organizational, and legal aspects, in order to improve and optimize relations between government institutions, as well as the relationships between government, business, and society (Wiryana, et al. 2010).

Government websites have become an important channel for public access to public information and services to improve government organizations. These websites can respond quickly to public needs, helping public organizations provide highly effective services. Advances in web technology have brought significant transformations in the way governments provide their services to the public.

One example of a public information system is the Information Management and Documentation Officer (thereafter simply referred to as PPID) website of the Indonesian Ministry of Defense. PPID services are provided by the Ministry of Defense, with the main objective of being effective and efficient, as well as being able to present public information to the public in an accurate, fast, and timely manner. With this site, it will be easier for people to access information related to national defense.

The specific research questions are as follows:

Research Question 1: What are the factors influencing public acceptance of the Ministry of Defense PPID website services?

Research Question 2: How to increase user acceptance of the Ministry of Defense PPID website?

1.2. Research Scope and Method

The authors select the PPID website (https://ppid.kemhan.go.id/) as the object of this research as the website has a lot to be analyzed and to be improved on, especially in terms of features and services related to input from users. In Fig. 1. it can be seen that the content of the home page of the PPID website of the Ministry of Defense does not serve the purpose of the website. The website does not directly explain the types of information that will be made available on a regular basis or information about PPID in general; nor does it provide the types of information that can be requested. This leads to confused users who do not know what they can use the PPID website for. The authors are also given a direct access to collaborate with

the head of the PPID section Ministry of Defense, which is a rare opportunity, given how defense-related matter are often kept secret. This enables the author to gain a better understanding of the purpose of the website.

Fig. 1. Display of the ministry of defense management of information and documentation officers (PPID) website

Based on https://www.statshow.com/, ppid.kemhan.go.id has a global ranking of #168,831, placing itself among the 500,000 most popular websites worldwide. The ppid.kemhan.go.id rating has decreased by -20% over the last 3 months. It reaches around 84,810 users and delivers around 186,600 page views every month. Their estimated monthly income is $541.20. We estimate the value of ppid.kemhan.go.id at around $6,584.60. The domain ppid.kemhan.go.id uses the Indonesian suffix and the server is located in Indonesia with the IP number 139.255.244.170.

Fig. 2. shows the types of information submitted through the PPID Ministry of Defense webmail in June 2022: Promotion/Advertising (43%), Internship Applications (18%), Invitations (11%), Offers & Requests for Cooperation (6%), News Information (8%), Requests for Information (10%), and Suggestions & Feedback (4%). Users submit more promotions/advertising messages rather than information requests, through the PPID Ministry of Defense webmail. Even though based on this data, the messages from the users have less to do with information on defense, the Ministry of Defense as a public agency is still obliged to provide and/or publish public information that is under its authority, to the requesters of public information, which makes up a small percentage of the messages. This is in addition to information that is exempted in accordance with the provisions.

The authors would like to measure the user acceptance of these public information systems, using the Technology Acceptance Model (TAM). The TAM model is based on the Theory of Reasoned Action (TRA) model proposed by Ajzen and Fishbein in 1980. This model will be further explained in Section 2.2.
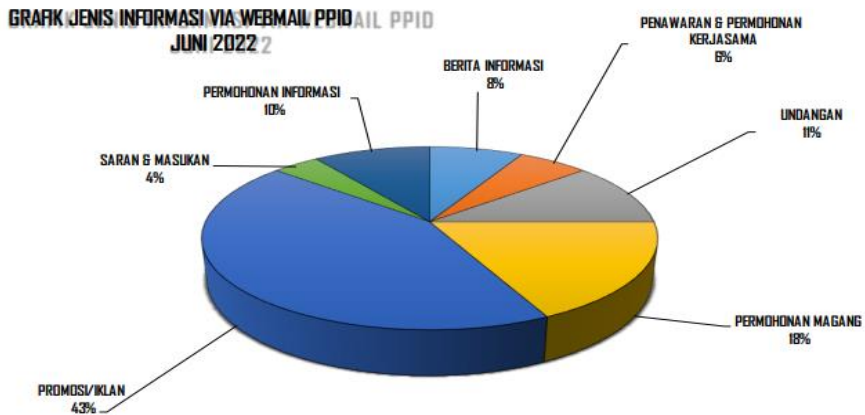
Fig. 2. Graph of information types submitted through ppid ministry of defense website june 2022

2. Literature Review

2.1. Government Information System

Government Information Systems are technologies that have been used as service providers between government agencies and the public, businesses, employees, and others. Organizations and public bodies publish static information on the Internet to interactive web communications and electronic transactions as one integrated, virtual government service. The government's way to use the most innovative information and communication technology is web-based. However, there are also mobile-based applications to give the public easier access to government services, improve service quality, and provide greater opportunities to participate in democratic institutions and processes (Fang, Z. 2002).

Technology in government has been used for decades as part of computing and network systems, increasing the productivity of government workers. Technology can enable governments to interact with citizens and other stakeholders electronically. Regarding governmental issues, the first thing in exploring public service information is to pay attention to the increasing use of the internet and other information technologies in government operations (Belanger, F., & Carter, L. 2012).

2.2. Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) is a derivative of the Theory of Reasoned Action which explains the psychological variables of attitudes and behavior toward acceptance of information technology. TAM works by testing perceptions, attitudes, and intentions before and after implementation. TAM consistently explains a substantial proportion of the variance of around 40% in usage intention and behavior, compared to the Theory of Reasoned Action and Theory of Planned

Behavior (TPB) (Abu et al., 2014). TAM is considered the most influential theory and is commonly used to describe the individual acceptance of information systems. This model is adapted from Ajzen and Fishbein's Theory of Reasoned Action, in 1980 and originally proposed by Davis in 1986, and assumes that the acceptance of an individual's information system is determined by two main variables including Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) (Lee et al., 2003).
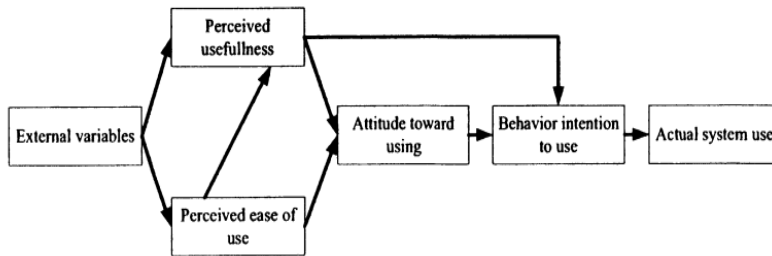

Fig. 3. Classic TAM Structure and Variables (Li et al., 2008).

2.3. Relationship between Website Quality and Information Quality

The PPID section of the Ministry of Defense benefits by using a website, as it can provide the public with direct access to information related to defense. Therefore, information is a fundamental part of the website, and the quality of information is considered as means for people to be well-informed of defense information and apply them when necessary. Quality is an attribute of a product/service, which shows how well the product meets the needs of the public. The term perceived quality reflects the judgments and evaluations made by the public about the quality of products/services based on public needs. It is thus similar to the attitude of use. Researchers have suggested that the fundamental information quality dimensions include accuracy, relevance, accuracy, completeness, security, format, accessibility, timeliness, consistency, coherence, comparability, and understanding. Studies have found that the quality of the website is positively related to the quality of information (Artiono, Pupon, 2016).

H1: Website Quality has a positive influence on Information Quality.

2.4. Relationship between Website Quality and Service Quality

Public satisfaction with a website can be inferred from responses or comments related to quality or a better structure. Not only that website quality can have a big impact on the number of visitors, but it can also lead to public satisfaction. Companies should have a high-quality website as it can positively affect the quality of service on the number of users. Website quality in terms of the quality of services provided to the public includes design, content, entertainment, usability, reliability, interactivity, security, and privacy (Wang et al., 2012).

H2: Website Quality has a positive influence on Service Quality.

2.5. Relationship between Information Quality and Perceived Usefulness

Information quality refers to the content of the information results, and the values associated with the measured characteristics. These values include up-to-date quality, accuracy, and quality of information content. Most users of information systems evaluate the systems subjectively, and they should feel that using information systems can provide efficient and effective assistance, which is part of user satisfaction. Information quality can therefore have a considerable influence on user satisfaction to the extent that users believe that the use of information systems will help to do work and have a positive impact on improving their performance (S. Kim et al., 2019).

H3: Information Quality has a positive influence on Perceived Usefulness.

2.6. Relationship between Service Quality and Perceived Ease of Use

Service quality is a service assessment that contributes to user satisfaction. Experience in interacting with or accessing services will play an important role in ensuring the level of quality. Assessing the level of service quality and ease of use, a high perception of the quality of PPID services is important as this will increase their usage. The ease of use can significantly affect user satisfaction. The quality of service and ease of use may be due to having a good website, and when the service is provided directly by the government (Hilmi, Mohd, Shahrier Pawanchik, 2012).

H4: Service Quality has a positive influence on Perceived Ease of Use.

2.7. Relationship between Perceived Ease of Use and Perceived Usefulness

The perceived usefulness variable aims to measure the extent to which a person perceives that using a particular system will improve his or her performance, while the perceived ease of use variable refers to the extent to which a person perceives that using the specified system will reduce the effort for the development of user activities in it. In determining technology acceptance and perceived ease of use of the system, pilot results have shown a positive trend toward the acceptance of the proposed technology, in terms of perceived usefulness (López Maldonado & Valdés Godínes, 2020).

H5: Perceived Ease of Use has a positive influence on Perceived Usefulness.

2.8. Relationship between Perceived Ease of Use and Attitude Toward Using

TAM demonstrates that a person's perception will determine their attitude towards using information technology. This model illustrates that acceptance of information technology is influenced by two perceptions, namely ease of use and usability. The existence of new technologies can affect user attitudes, as it can be a way to improve one's performance by using information technology. This shows that the

ease of use of online systems can have a positive and significant effect on attitudes toward using the system (Rahmat, 2019).

H6: Perceived ease of use has a positive influence on Attitude Toward Using.

2.9. Relationship between Perceived Usefulness and Attitude Toward Using

Perceived usefulness is described as a person's tendency to use an application and believe that this perception will help him do a better job. Usability variables consist of working faster, simplifying work, being useful, and increasing productivity. Meanwhile, the effectiveness variable consists of increasing effectiveness and increasing job performance. Perceived usefulness has a significant effect on attitudes toward the use of an application or website (Indarsin & Ali, 2017).

H7: Perceived Usefulness has a positive influence on Attitude toward using.

2.10. Relationship between Perceived Usefulness and Behavior Intention to Use

Perceived usefulness relates to the belief that technology is helpful in the performance of a given task. Perceived usefulness is a determinant of intention to use the technology, which in turn determines actual use. Technology has been applied to many unique domains within government, and knowledge of the predictive power of perceived usefulness on behavioral intentions, both within and cross-domains. These results are significant, indicating a heterogeneous population among all studies (Dohan, 2013).

H8: Perceived Usefulness has a positive influence on Behavior Intention to Use.

2.11. Relationship between Attitude Toward Using and Behavior Intention to Use

Attitudes and behavioral intentions are the extents to which technology meets various user needs. Behavioral intentions stimulate actual system use. TAM is concerned with short-term beliefs and attitudes before and after the acceptance of new technology. TAM was applied to examine the relationship between attitudes and behavioral intentions. This implies that practitioners should be aware that continued intention to use technology depends not only on attitudes towards use but also on perceived usefulness, the results show that there is a significant positive relationship between attitudes towards behavioral intentions to develop the system (Jalil et al., 2019).

H9: Attitude toward using has a positive influence on Behavior Intention to Use.

2.12. Relationship between Behavior Intention to Use and Actual System Use

The TAM model has shown behavioral intentions to significantly influence actual behavior. Measures of usage intention and actual usage of how often (frequency), the total hours (duration), and objective usage records (actual counts) of the system

were recorded. Intention to use can then be used to predict actual resource usage. These findings imply that intentions may be lost or remain stable over time. Therefore, measuring the actual intention and behavior at different times during the implementation process may result in different intention-behavior relationships. Previous results suggest that the intention to use resources has a positive effect on the actual use of resources (Tao, 2009).

H10: Behavior Intention to Use has a positive influence on Actual System Use.

3. Research Model

3.1. Proposed Model

Based on the background and factors that we have outlined in Section 2, the process of creating the TAM basic theoretical model is derived from the Classical TAM variable by Li et al. (2008). They explained that the constructs obtained included External Variables, Perceived Ease of Use, Perceived Usefulness, Attitude Toward Using, Behavior Intention to Use, and Actual System Use. We add several new constructs on External Variables to cater to our use case. These include Website Quality, Information Quality, and Service Quality.

We add Website Quality following Lilburnelal proposal of a quality compliance framework (QCF) that includes quality measurements, quality characteristics, quality sub-characteristics, and measured indicators (Anusha, 2014). Information Quality refers to the accuracy and efficiency of a system that produces semantic information, referring to the success of a system in delivering meaning and effectiveness of information impact its recipient (S. Barnes & Vidgen, 2000). Furthermore, Service Quality is defined as a public assessment of the overall excellence of a product or service (Dapas et al., 2019). Thus, the constructs that we have developed in testing the variables of the TAM Model for the Management of Information and Documentation Officers (PPID) of the Ministry of Defense is Website-based, and they can be seen in Figure 3 as follows:
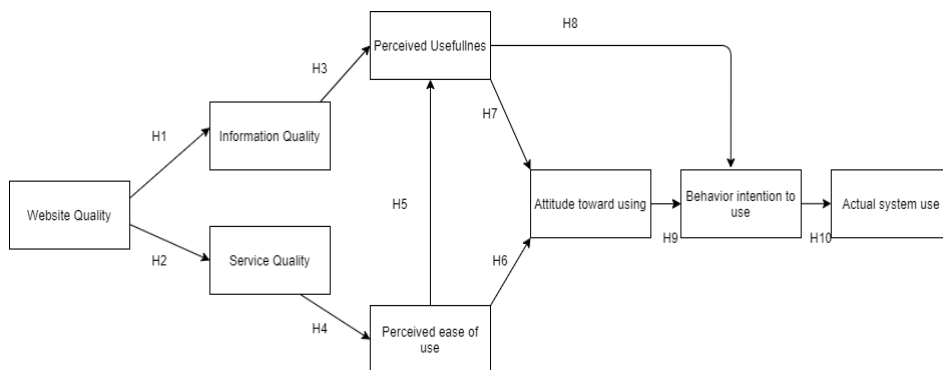

Fig. 4: Our Research model, the modified TAM model

3.2. Data Collection

In this study, we conduct a survey through an online questionnaire using Google Forms. The distribution of the questionnaire was carried out by sharing via Facebook, Telegram, and WhatsApp Groups i.e., the most popular social media platforms in Indonesia. The questionnaire had 155 respondents, who have used the PPID Ministry of Defense website. All of these respondents reside on Java, Indonesia. We collect demographic data of the respondents: gender, age, last education, occupation, and city of residence.

Based on gender, the respondents are dominated by men with 95 users (61.3%), and the rest are 60 female users (38.7%). It can then be concluded that the PPID Ministry of Defense website has been used by both male and female users, and hence does not require users to be of a certain gender criteria. Age-wise, majority of the users are <25 years, 70 people (45.2%), with the rest being 26-35 years (44.5%), 36-45 years (7.1%) and > 45 years (3.2%), and thus this website has been used by users of any age. Based on their latest education, most of the users, 99 people (63.9%), completed their undergraduate degree (S1/D4 in Indonesian education system). The rest of the respondents have vocational degree (D3) (17.4%), high school graduate (SMA/SMK) (9%), and postgraduates (S2) (9.7%). Hence, the website users' educational background ranging from high school to master's degree.

Based on occupation, most of the respondents are private employees, 84 people (54.2%) with the rest having civil servant jobs (14.8%), students (11%), self-employed (6.5%), and housewives (3.9%), and other occupations (9%). We could say that the website is used by users from various jobs, and it does not require users with certain job criteria in its use. Based on the city of residence, the users mostly reside in the capital city of Indonesia, Jakarta (31.6%). The rest of the users are spread around the cities in the greater area of Jakarta: Bekasi (28.4%), Bogor (9%), Depok (10.3%), Tangerang (9%), and other cities (10.8%). Even though the Indonesian government is centered in Jakarta, the PPID Ministry of Defense website has been used by users from different cities in Indonesia. However, we restrict our survey respondents to inhabitants of the Java Island.

3.3. Validity and Reliability Testing

The research model proposed by the author consists of 8 variables and 22 indicators. We perform our analysis using the SmartPLS 3.0 software application. The data file format must be '.csv' when uploading the questionnaire responses, in order to be recognized as an indicator of latent variables. To assess convergent validity, the average variance extracted (AVE) was measured. It is recommended that the AVE should be > 0.5 (Fornell & Larcker, 1981; Amaro et al., 2016). The measurement model is assessed by examining the reliability of each factor and the convergent validity of each factor. Any factor less than 0.5 must be removed and the model must be run again. This iteration process must be carried out until all the factors

considered in the model have a loading factor > 0.5 (Chin, 1998; Rahman et al., 2014).

We use Cronbach's Alpha to assess reliability. If there is no consistent variance, the value can range from 0.00 to 1.00. Meanwhile, if all variances are consistent then it is possible for the value to be 1 (Brown, 2002). The value of alpha or composite reliability must be greater than 0.7 although a value of 0.6 is still acceptable in exploratory studies (Hair et al, 2008 in hartono, 2011; Yang et al., 2017).

We also use R square to measure the variance in the dependent variable. The interpretation of the value of R square is the same as the interpretation of R square linear regression. Chin (1998) provides criteria for interpreting the value of R square, consisting of three classes, namely: R2 values of 0.67, 0.33, and 0.19 as strong, moderate, and weak. Meanwhile, the criteria for the value of Q-Square (Cha, J. 1994) if the relationship in the model has predictive relevance, then Q > 0 means that the model has good predictive relevance. Meanwhile, the lack of predictive relevance is indicated by Q < 0. The process of testing the hypothesis is determined by the significance of 0.05. Ho: p-value > and Ha: p-values. The t-table value for 5% significance is 1.96, where if the statistical t value is greater than the t-table value, then the X variable has an influence on Y variable.

4. Results and Analysis

4.1. Results of Website Quality (WQ) research statement

We devise three statements related to website quality (Table 1). Regarding the first statement, "the quality of the PPID website makes it easy for me to find information", and the respondents' results show that those who answered strongly disagree (STS) were 1 respondent or 0.8%, disagreed (TS) as many as 1 respondent's or 0.8%, neutral (N) as many as 15 respondents or 11.5%, agree (S) as many as 50 respondents or 38.5%, and strongly agree (SS) as many as 63 respondents or equal to 48.5%. For WQ2, "The PPID website has a fast response time for me", those who answered strongly disagree (STS) were 2 respondents or 1.5%, disagreed (TS) were 5 respondents or 3.8%, neutral (N) by 21 respondents (16.2%), agree (S) as many as 40 respondents (30.8%), and strongly agree (SS) as many as 62 respondents (47.7%). For WQ3, "The PPID website has a comfortable and friendly design and navigation", 2 respondents answered strongly disagree (STS) or 1.5%, disagreed (TS) with 6 respondents or 4.6 %, neutral (N) with 16 respondents or 12.3%, agreed (S) with 50 respondents or 38.5%, and strongly agreed (SS) with 56 respondents or 43.1%.

Table 1. Website Quality Statements

Code	Statement	Score				
		STS	TS	N	S	SS
WQ1	The quality of the PPID website makes it easy for me to find information	1 (0.8%)	1 (0.8%)	15 (11.5%)	50 (38.5%)	63 (48.5%)
WQ2	The PPID website has a fast response time for me.	2 (1.5%)	5 (3.8%)	21 (16.2%)	40 (30.8%)	62 (47.7%)
WQ3	The PPID website has a comfortable and friendly design and navigation.	2 (1.5%)	6 (4.6%)	16 (12.3%)	50 (38.5%)	56 (43.1%)

4.2. Results of Information Quality (IQ) research statement

We formulate four statements in our questionnaire regarding Information Quality. Based on Table 2, the information quality statements answered according to respondents are as follows. For "The quality of information on the PPID website is clearly defined and explained for me", the results of respondents indicate that those who answered strongly disagree (STS) as many as 6 respondents or 4.6%, disagree (TS) as many as 8 respondents or 6.2%, neutral (N) as many as 18 respondents or 13.8%, agree (S) as many as 46 respondents or 35.4%, and strongly agree (SS) as many as 52 respondents or 40%.

Meanwhile, for "The quality of information on the PPID website seems worth it to me", the number of respondents who answered strongly disagree (STS) is 1 respondent, or 0.8%, disagreed (TS) 3 respondents, or 2.3%, neutral (N) 18 respondents or 13.8%, agree (S) as many as 55 respondents or 42.3%, and strongly agree (SS) as many as 53 respondents or 40.8%.

"The quality of information on the PPID website is current and up-to-date for me", the results of respondents show that those who answered strongly disagree (STS) 14 respondents, or 10.8%, disagreed (TS) 9 respondents or 6.9%, neutral (N) was 20 respondents or 15.4%, agree (S) 38 respondents or 29.2%, and strongly agree (SS) 49 respondents or 37.7%.

"The quality of information on the PPID website is useful for me", the results of respondents show that those who answered strongly disagree (STS) were 4 respondents or 3.1%, disagreed (TS) were 5 respondents or 3.8%, neutral (N) were 22 respondents or 16.9%, agree (S) as many as 52 respondents or 40%, and strongly agree (SS) as many as 47 respondents or 36.2%.

Table 2. Information Quality (IQ) Statements

Code	Statement	Score				
		STS	TS	N	S	SS
IQ1	The quality of information on the PPID website is clearly defined and explained for me.	6 (4.6%)	8 (6.2%)	18 (13.8%)	46 (35.4%)	52 (40%)
IQ2	The quality of the information on the PPID website seems worth it to me	1 (0.8%)	3 (2.3%)	18 (13.8%)	55 (42.3%)	53 (40.8%)
IQ3	The quality of the information on the PPID website is current and up-to-date for me.	14 (10.8%)	9 (6.9%)	20 (15.4%)	38 (29.2%)	49 (37.7%)
IQ4	The quality of the information on the PPID website is useful to me.	4 (3.1%)	5 (3.8%)	22 (16.9%)	52 (40%)	47 (36.2%)

4.3. Results of Service Quality (SQ) research statement

We designed a couple of research statements to measure Service Quality. Table 3 shows a summary of the respondents' answers regarding service quality. For the first statement, "The PPID website is always available to provide information services," those who answered strongly disagree (STS) are as many as 6 respondents or 4.6%, disagree (TS) as many as 10 respondents or 7.7%, neutral (N) as many as 17 respondents or 13.1%, agree (S) as many as 52 respondents or 40%, and strongly agree (SS) as many as 45 respondents or 34.6%. For the second statement, "The overall appearance of the PPID website makes it easy for me to use", those who answered strongly disagree (STS) are 1 respondent, or 0.8%, disagreed (TS) were 4 respondents, or 3.1%, neutral (N) as many as 11 respondents or 8.5%, agree (S) as many as 60 respondents or 46.2%, and strongly agree (SS) as many as 54 respondents or 41.5%.

Table 3: Service quality statements

Code	Statement	Score				
		STS	TS	N	S	SS
SQ1	The PPID website is always available to provide information services.	6 (4.6%)	10 (7.7%)	17 (13.1%)	52 (40%)	45 (34.6%)
SQ2	The overall appearance of the PPID website makes it is easy for me to use.	1 (0.8%)	4 (3.1%)	11 (8.5%)	60 (46.2%)	54 (41.5%)

4.4. Results of Perceived Usefulness research statements

We created four statements regarding Perceived Usefulness. The respondents' results regarding these statements can be seen on Table 4. "The PPID website increases the effectiveness of my work", the respondents' results show that those who answered strongly disagree (STS) were 2 respondents or 1.5%, disagreed (TS) were 8 respondents or equal to 6.2%, neutral (N) as many as 26 respondents or 20%, agree (S) as many as 54 respondents or 41.5%, and strongly agree (SS) as many as 40 respondents or 30.8%. For "The PPID website makes my work easier" the respondents' results show that those who answered strongly disagree (STS) were 1 respondent or 0.8%, disagreed (TS) were 7 respondents or 5.4%, neutral (N) was 31 respondents or 23.8 %, agree (S) are 51 respondents or 39.2%, and strongly agree (SS) are 40 respondents or 30.8%. On "The PPID website increases my productivity" the respondents' results show that those who answered strongly disagree (STS) were 3 respondents or 2.3%, disagreed (TS) were 7 respondents or 5.4%, neutral (N) were 30 respondents or 23.1 %, agree (S) as many as 49 respondents or 37.7%, and strongly agree (SS) as many as 41 respondents or 31.5%. The PPID website improves my work performance, the results of respondents indicate that 2 respondents strongly disagree (STS) or 1.5%, disagree (TS) 12 respondents, or 9.2%, neutral (N) 26 respondents, or 20%, agree (S) as many as 48 respondents or 36.9%, and strongly agree (SS) as many as 42 respondents or 32.3%.

Table 4: Perceived usefulness statements

Code	Statement	Score				
		STS	TS	N	S	SS
PU1	The PPID website increases the effectiveness of my work.	2 (1.5%)	8 (6.2%)	26 (20%)	54 (41.5%)	40 (30.8%)
PU2	The PPID website makes my job easier.	1 (0.8%)	7 (5.4%)	31 (23.8%)	51 (39.2%)	40 (30.8%)
PU3	The PPID website increases my productivity.	3 (2.3%)	7 (5.4%)	30 (23.1%)	49 (37.7%)	41 (31.5%)
PU4	PPID website improves my work performance.	2 (1.5%)	12 (9.2%)	26 (20%)	48 (36.9%)	42 (32.3%)

4.5. Results of Perceived Ease of Use research statement

We designed three statements to gauge the perceived ease of use. Table 5 shows the respondents' answers. For the first statement, "The PPID website provides a good experience for me because the system is easy to understand" the respondents' results show that those who answered strongly disagree (STS) are as many as 2 respondents or 1.5%, disagree (TS) as many as 4 respondents or 3.1%, neutral (N) as many as 21 respondents or 16.2%, agree (S) as many as 59 respondents or 45.4%,

and strongly agree (SS) as many as 44 respondents or 33.8%. For "The PPID website provides a good experience for me because the system is easy to operate" the results of respondents show that 1 respondent strongly disagrees (STS) or 0.8%, disagrees (TS) 2 respondents or 1.5%, neutral (N) 23 respondents or 17.7%, agree (S) as many as 59 respondents or 45.4%, and strongly agree (SS) as many as 45 respondents or 34.6%. Lastly, "the PPID website provides a good experience for me because the system is more flexible", the results of respondents indicate that 1 respondent strongly disagrees (STS) or 0.8%, disagrees (TS) 3 respondents or 2.3%, neutral (N) 22 respondents or 16.9%, agree (S) as many as 61 respondents or 46.9%, and strongly agree (SS) as many as 43 respondents or 33.1%.

Table 5: Perceived ease of use statements

Code	Statement	Score				
		STS	TS	N	S	SS
PEOU1	The PPID website provides a good experience for me because the system is easy to understand.	2 (1.5%)	4 (3.1%)	21 (16.2%)	59 (45.4%)	44 (33.8%)
PEOU2	The PPID website provides a good experience for me because the system is easy to operate.	1 (0.8%)	2 (1.5%)	23 (17.7%)	59 (45.4%)	45 (34.6%)
PEOU3	The PPID website provides a good experience for me because the system is more flexible.	1 (0.8%)	3 (2.3%)	22 (16.9%)	61 (46.9%)	43 (33.1%)

4.6. Results of Attitude toward using Research Statement

We used two statements to help us measure Attitude toward Using. Table 6 shows the respondents' answers on statements regarding Attitude Toward. The first statement, "the PPID website is important for me in daily life", respondents' results show that those who answered strongly disagree (STS) as many as 8 respondents, or 6.2%, disagree (TS) as many as 11 respondents or 8.5%, neutral (N) by 31 respondents or 23.8%, agreeing (S) by 46 respondents or 35.4%, and strongly agreeing (SS) by 34 respondents or 26.2%. "The information on the PPID website is not boring for me", the results of the respondents show that those who answered strongly disagree (STS) are 6 respondents or 4.6%, disagreed (TS) with 7 respondents or 5.4%, neutral (N) 29 respondents or 22.3%, agree (S) as many as 50 respondents or 38.5%, and strongly agree (SS) as many as 38 respondents or 29.2%.

Table 6: Attitude toward using statements

Code	Statement	Score				
		STS	TS	N	S	SS
ATU1	The PPID website is important to me in daily life.	8 (6.2%)	11 (8.5%)	31 (23.8%)	46 (35.4%)	34 (26.2%)
ATU2	The information on the PPID website is not boring for me.	6 (4.6%)	7 (5.4%)	29 (22.3%)	50 (38.5%)	38 (29.2%)

4.7. Results of Behavior Intention to use Research Statement

We made use of two statements to measure Behavior Intention to Use. Table 7 summarizes the respondents' answers of these statements. For the statement "I will be using the PPID website a lot in the future", the results show that those who answered strongly disagree (STS) were 4 respondents or 3.1%, disagreed (TS) were 8 respondents or 6.2%, neutral (N) by 25 respondents or 19.2%, agreeing (S) by 50 respondents or 38.5%, and strongly agreeing (SS) by 43 respondents or 33.1%. For the second statement on "I often use the PPID website to find out or get information", those who answered strongly disagree (STS) were 4 respondents or 3.1%, disagreed (TS) were 13 respondents or 10%, neutral (N) was 31 respondents or 23.8%, agree (S) 37 respondents or 28.5%, and strongly agree (SS) 45 respondents or 34.6%.

Table 7: Behavior Intention to use statements

Code	Statement	Score				
		STS	TS	N	S	SS
BIU1	I will be using the PPID website a lot in the future.	4 (3.1%)	8 (6.2%)	25 (19.2%)	50 (38.5%)	43 (33.1%)
BIU2	I often use the PPID website to find out or get information.	4 (3.1%)	13 (10%)	31 (23.8%)	37 (28.5%)	45 (34.6%)

4.8. Results of Actual System use Research Statement

We measure Actual System Use with the help of two statements. Table 8 summarizes the respondents' answers of these statements. The statement "I open the PPID website almost every day", those who answered strongly disagreed (STS) are as many as 17 respondents, or 13.1%, disagreed (TS) as many as 10 respondents or 7.7%, neutral (N) as many as 36 respondents or 27.7%, agree (S) as many as 36 respondents or 27.7%, and strongly agree (SS) as many as 31 respondents or 23.8%.

Meanwhile, for the second statement on "I understand how to use the PPID website", the respondents' results show that those who answered strongly disagree (STS) were 1 respondent or 0.8%, disagreed (TS) were 10 respondents or 7.7%,

neutral (N) were 17 respondents or equal to 13.1%, agree (S) as many as 54 respondents or 41.5%, and strongly agree (SS) as many as 48 respondents or 36.9%.

Table 8: Actual system use statements

Code	Statement	Score				
		STS	TS	N	S	SS
U1	I open the PPID website almost every day.	17 (13.1%)	10 (7.7%)	36 (27.7%)	36 (27.7%)	31 (23.8%)
U2	I understand how to use the PPID website.	1 (0.8%)	10 (7.7%)	17 (13.1%)	54 (41.5%)	48 (36.9%)

4.9. Analysis of Results

Table 9: Hypothesis test result

Hypothesis	Path	Original Sample (O)	Sample Mean (M)	*T-Statistic*	P-*Values*
H1	WQ → IQ	0,631	0,637	9,623	0,000
H2	WQ → SQ	0,694	0,695	12,660	0,000
H3	IQ → PU	0,210	0,214	2,159	0,031
H4	SQ → PU	0,774	0,775	15,489	0,000
H5	PEOU → PU	0,605	0,601	6,150	0,000
H6	PEOU → ATU	0,306	0,304	2,750	0,006
H7	PU → ATU	0,535	0,542	5,698	0,000
H8	PU → BIU	0,250	0,250	1,525	0,127
H9	ATU → BIU	0,468	0,472	3,468	0,001
H10	BIU → U	0,599	0,608	8,950	0,000

In this section, we provide our theoretical analysis of the results as well as the practical implications that follow. Table 9 provides the statistical significance test result.

4.9.1. Theoretical Implications

H1. The *t-Statistic* value is 9.623 which has a value greater than t-table = 1.96, which means that Website Quality has an effect on Information Quality. Meanwhile, the P-value is 0.000, which is smaller than the error rate = 0.05, which means that the influence of Website Quality on Information Quality is significant. The coefficient value shows a positive number, 0.631, which means that Website Quality has a positive effect on Information Quality. Therefore, the decision is that H1 is accepted and H0 is rejected, so it can be concluded that Website Quality has a significant positive effect on Information Quality in the Technology Acceptance Model (TAM) for user acceptance of PPID Ministry of Defense website. These results support previous research that there is a significant positive effect between Website Quality on Information Quality (Artiono, Pupon, 2016).

H2. The *t-Statistic* value is 12.660 which has a value greater than t-table = 1.96 which means that Website Quality has an effect on Service Quality. Meanwhile, the P-values are 0.000, which has a value smaller than the error rate = 0.05, which means that the influence of Website Quality on Service Quality is significant. The coefficient value shows a positive number, 0.694, which means that Website Quality has a positive effect on Service Quality. Therefore, the decision is that H2 is accepted and H0 is rejected, so it can be concluded that Website Quality has a significant positive effect on Service Quality on the Technology Acceptance Model (TAM) for user acceptance of PPID Ministry of Defense website. These results support previous research that there is a significant positive effect between Website Quality on Service Quality (Wang et al., 2012).

H3. The t-*Statistic* value is 2.159, which has a value greater than t-table = 1.96, which means that Information Quality has an effect on Perceived Usefulness. Meanwhile, the P-values are 0.031, which has a value smaller than the error rate = 0.05, which means that the influence of Information Quality on Perceived Usefulness is significant. The coefficient value shows a positive number, 0.210, which means that Information Quality has a positive effect on Perceived Usefulness. Therefore, the decision is that H3 is accepted and H0 is rejected, so it can be concluded that Information Quality has a significant positive effect on the Perceived Usefulness of the Technology Acceptance Model (TAM) for user acceptance of the Ministry of Defense PPID website. These results support previous research that there is a significant positive effect between Information Quality on Perceived Usefulness (Wang et al., 2012).

H4. The t-*Statistic* value is 15,489 which has a value greater than t-table = 1.96, which means that Service Quality affects the Perceived Ease of Use. Meanwhile, the P-values are 0.000, which has a value smaller than the error rate = 0.05, which means that the effect of Service Quality on Perceived Ease of Use is significant. The coefficient value shows a positive number, 0.774, which means that Service Quality has a positive effect on the Perceived Ease of Use. Therefore, the decision is that H4 is accepted and H0 is rejected, so it can be concluded that the better the services provided by the PPID Ministry of defense website because Service Quality has a significant positive effect on the Perceived Ease of Use of the Technology Acceptance Model (TAM) for user acceptance of the PPID website. These results support previous research that there is a significant positive effect between Service Quality on Perceived Ease of Use (Hilmi, Mohd, Shahrier Pawanchik, 2012).

H5. The t-*Statistic* value is 6.150 which has a value greater than t-table = 1.96 which means that Perceived Ease of Use has an effect on Perceived Usefulness. Meanwhile, the P-values are 0.000 which has a value smaller than the error rate = 0.05, which means that the effect of Perceived Ease of Use on Perceived Usefulness is significant. The coefficient value shows a positive number, 0.605, which means Perceived Ease of Use has a positive effect on Perceived Usefulness. Therefore, the

decision is that H5 is accepted and H0 is rejected, so it can be concluded that Perceived Ease of Use has a significant positive effect on the Perceived Usefulness of the Technology Acceptance Model (TAM) for user acceptance of the PPID website. These results support previous research that there is a significant positive effect between Perceived Ease of Use on Perceived Usefulness (López Maldonado & Valdés Godínes, 2020).

H6. The t-*Statistic* value is 2.750, which has a value greater than t-table = 1.96, which means that Perceived Ease of Use has an effect on Attitude Toward Using. Meanwhile, the P-values are 0.006, which has a value smaller than the error rate = 0.05, which means that the effect of Perceived Ease of Use on Attitude Toward Using is significant. The coefficient value shows a positive number, 0.306, which means Perceived Ease of Use has a positive effect on Attitude Toward Using. Therefore, the decision is that H6 is accepted and H0 is rejected, so it can be concluded that Perceived Ease of Use has a significant positive effect on Attitude Toward Using on the Technology Acceptance Model (TAM) for user acceptance of the PPID website. These results support previous research that there is a significant positive effect between Perceived Ease of Use on Attitude Toward Using (Rahmat, 2019).

H7. The t-*Statistic* is 5.698 which has a value greater than t-table = 1.96 which means Perceived Usefulness has an effect on Attitude Toward Using. Meanwhile, the P-values are 0.000 which has a value smaller than the error rate = 0.05, which means that the effect of Perceived Usefulness on Attitude Toward Using is significant. The coefficient value shows a positive number, 0.535, which means Perceived Usefulness has a positive effect on Attitude Toward Using. Therefore, the decision is that H7 is accepted and H0 is rejected, so it can be concluded that Perceived Usefulness has a significant positive effect on Attitude Toward Using the Technology Acceptance Model (TAM) for user acceptance of the Ministry of Defense PPID website. These results support previous research that there is a significant positive effect between Perceived Usefulness on Attitude Toward Using (Indarsin & Ali, 2017).

H8. The t-*Statistic* value is 1.525 which has a value smaller than t-table = 1.96 which means Perceived Usefulness has no effect on Behavior Intention to Use. Meanwhile, the P-values are 0.127, which has a value greater than the error rate = 0.05, which means that the effect of Perceived Usefulness on Behavior Intention to Use is not significant. The coefficient value shows a positive number of 0.250 which means Perceived Usefulness has a positive effect on Behavior Intention to Use. Therefore, the decision is that H8 is rejected and H0 is accepted, so it can be concluded that Perceived Usefulness does not have a significant positive effect on Behavior Intention to Use on the Technology Acceptance Model (TAM) for user acceptance of the Ministry of Defense PPID website. This result is contrary to

research (Dohan, 2013) that there is a significant positive effect between Perceived Usefulness on Behavior Intention to Use.

H9. The t-*Statistic* value is 3,468 which has a value greater than t-table = 1.96 which means Attitude Toward Using has an effect on Behavior Intention to Use. Meanwhile, the P-values are 0.001 which has a value smaller than the error rate = 0.05, which means that the effect of Attitude Toward Using on Behavior Intention to Use is significant. The coefficient value shows a positive number, 0.468, which means Attitude Toward Using has a positive effect on Behavior Intention to Use. Therefore, the decision is that H9 is accepted and H0 is rejected, so it can be concluded that Attitude Toward Using has a significant positive effect on Behavior Intention to Use on the Technology Acceptance Model (TAM) for website user acceptance of the PPID website. These results support previous research that there is a significant positive effect between Attitude Toward Using on Behavior Intention to Use (Jalil et al., 2019).

H10. The t-*Statistic* value is 8.950, which has a value greater than t-table = 1.96, which means that Behavior Intention to Use has an effect on Actual System Use. Meanwhile, the P-values are 0.000, which has a value smaller than the error rate = 0.05, which means that the effect of Behavior Intention to Use on Actual System Use is significant. The coefficient value shows a positive number, 0.599, which means Behavior Intention to Use has a positive effect on Actual System Use. Therefore, the decision is that H10 is accepted and H0 is rejected, so it can be concluded that Behavior Intention to Use has a significant positive effect on Actual System Use on the Technology Acceptance Model (TAM) model for the PPID website user acceptance. These results support previous research that there is a significant positive effect between Behavior Intention to Use on Actual System Use (Tao, 2009).

4.9.2.   Practical Implication

In this part, we provide the possible practical applications of our results. Based on table 9. the variable with the largest T-statistical value is Service Quality. With the highest T-statistic value, Service Quality is the most important factor that influences Perceived Ease of Use the most, as indicated by the acceptance of H4. It can be implied that the PPID website need to always be available to provide quality information services so that users will use the website to get the information needed, if they feel the ease of the overall appearance of using the PPID website service.

The Website Quality variable is influenced by two variables, namely Information Quality, which is indicated by the acceptance of H1, and Service Quality, which is indicated by the acceptance of H2. It can be implied that the PPID website needs to be designed to be easy to find information, has a fast response time, and has a comfortable design and navigation so that there is no face-to-face interaction between the user and the government body, but the first interaction can

be made through the website homepage. The quality of the website affecting the relevant information must be managed properly because users visit the website to find relevant information about defense, and when user wants to submit defense information using the national registration number (NIK), security also plays an important part in user satisfaction. The quality of a website plays an important role in attracting new users and to retain existing users. If users feel that the website they visit has quality details and clear information, users will have higher confidence in the quality of service on the PPID website.

The Information Quality variable is influenced by Perceived Usefulness; this indicated by the acceptance of H3. From our survey, tt can be implied that the PPID website has clear information, appropriate information, updated information, and useful information so that users can evaluate the quality of information on the PPID website, this is because the defense information system is limited regarding defense information to the public, and based on qualitative answers from the survey, several users state that the information request process takes a long time. Hence, we recommend the information in the systems to be updated in order to produce up-to-date information. This will enable each piece of information to be provided to users in a timely manner, and also for those who want to submit information in terms of perceived usefulness.

The construct Perceived Ease of Use isinfluenced by two variables, namely Perceived Usefulness which is indicated by the acceptance of H5, and Attitude Toward Using which is indicated by the acceptance of H6. We found that the PPID website has a system that is easy to understand, the system is easy to operate, and the system is flexible so that the perceived ease of use is considered a factor in assessing the perceived usefulness and attitude toward usage in receiving and using the Ministry of Defense PPID website. Ease of use plays an important role in the adoption of the PPID website, when the system is designed to be simple and easy to use, users feel that the PPID website can be useful and are more interested in using the PPID website technology as learning information about defense for perceived usefulness. With regards to the attitude towards use, users can be more prepared to use the PPID website in their daily lives and tend to have a more positive perception of the PPID website because they have a great opportunity to accept technology in the learning process.

Regarding the Perceived Usefulness variable, we theorized that it could be influenced by two variables, namely Attitude Toward Using which is indicated by the acceptance of H7, and Behavior Intention to Use, however this was annulled due to rejection of H8. It can be implied that the Ministry of Defense PPID website can increase the effectiveness of work or tasks, facilitate work or tasks, increase productivity, and improve job or task performance so that there is perceived usefulness of using the Ministry of Defense PPID website to submit information about defense products. As no reference is made to a particular category of defense

of goods or services, the influence of attitude on use determines the user's decision to submit information or not simply rely on the PPID Ministry of Defense website. In terms of usability perception, the user's intention to submit is also rarely used because the process of submitting is too lengthy, and hence users only want subjective information through the services on the PPID Ministry of Defense website. Thus, the PPID Ministry of Defense can update its website with clear and interesting categories of types of information so that users who use it can know what type of information will be submitted according to the submitted process or not.

The Attitude Toward Using variable is influenced by Behavior Intention to Use, and this is indicated by the acceptance of H9. It can be implied that the PPID website is an important website for users in their everyday life and the information on the PPID website is not boring for the users. Therefore, to improve on the attitudes towards use, the PPID website may want to provide information related to historical content of defense fighters in Indonesia and customize information for the public, so that the information can be less boring for the users.

The Behavior Intention to Use variable itself is influenced by Actual System Use, and this is indicated by the receipt of H10. Our results imply that the PPID website users have Behavior intentions to use the system in the future. This intention to use the system to obtain information may indicate that users are willing to use technology by spending the duration of their time understanding how to use technology.

6. Conclusion

This study aims to determine what factors influence the acceptance of PPID website users of the Ministry of Defense, as we have observed that the number of users who visit the PPID website is very little. Therefore, we conduct this research using the TAM theory and contribute with the addition of external variables that adds to the success of the model. The final research model proposed by the authors consists of 8 variables and 22 indicators, which has been tested with partial least squares - structural equation modeling (PLS-SEM), and the testing is carried out with inner and outer models using the SmartPLS software. To obtain our data, we conduct a survey with 155 respondents, and the results indicate that the use of the Ministry of Defense PPID website is influenced by various reasons related to Website Quality, Information Quality, Service Quality, Perceived ease of the user, Perceived Usefulness, Attitude toward using, Behavior intention to use, and Actual system use.

The conclusions that can be drawn from this study are as follows.

Hypothesis 1 on Website Quality having a positive effect on Information Quality, is accepted; Hypothesis 2 on Website Quality having a positive effect on Service Quality, is accepted; Hypothesis 3 on Information Quality having a positive effect on Perceived Usefulness, is accepted; Hypothesis 4 on Service Quality having

a positive effect on Perceived Ease of Use, is accepted; Hypothesis 5 on Perceived Ease of Use having a positive effect on Perceived Usefulness, is accepted; Hypothesis 6 Perceived Ease of Use having a positive effect on Attitude Toward Using the results is accepted; Hypothesis 7 on Perceived Usefulness having a positive effect on Attitude Toward Using, is accepted. Hypothesis 8 on Perceived Usefulness having a positive effect on Behavior Intention to Use, is rejected, Hypothesis 9 on Attitude Toward Using having a positive effect on Behavior Intention to Use, is accepted, and Hypothesis 10 Behavior Intention to Use having a positive effect on Actual System Use the result is accepted. We hope that these variables could then be taken into consideration by the relevant authorities to improve on user acceptance of the PPID website of the Ministry of Defense.

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