

The Effect Of User Readiness Acceptance Of Sijagger V2 Using Technology Readiness Acceptance Model (Tram) (CASE Research: KPPBC TMP A Tangerang)

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Abstract.

The digitization of the government system began with the declaration of the Electronic-Based Government System (SPBE) by President Jokowi in August 2018. The Directorate General of Customs and Excise (DGCE) implemented SPBE by building a Customs Excise Information System and Automation (CEISA) as its main service application, followed by the establishment of other applications other independent applications in the respective regional DGCE Work Units. The breakdown of the CEISA system in July 2021 caused a sizable national loss. To implement the SPBE and anticipate the occurrence of the same damage, KPPBC TMP A Tangerang built several independent applications to support customs and excise services, including Applications in the Tangerang network (SiJagger), Tangerang Customs Email (BeTa), Customs and Excise Service Email (PKC), Treasury Email, and Tangerang Certificate of Origin (SKA) Counter Email. To simplify the number of existing standalone applications, the SiJagger V2 application was created at KPPBC TMP A Tangerang as a replacement so that only one application is sufficient. This research aims to determine the Technology Readiness Index (TRI) of SiJagger V2 users, analyze the Technology Readiness Acceptance Model (TRAM) factors of these users for the SiJagger V2 application itself and to find out what needs to be improved to increase the readiness of the SiJagger V2 users. The data in this research were extracted using a quantitative method with data collection methods in the form of online questionnaires to 134 company respondents using SiJagger V2 in the supervision area of KPPBC TMP A Tangerang. Structural Equation Model (SEM) use as data analysis technique with SmartPLS program. The results from statistical test showed that the TRI index of SiJagger V2 users is included in the Low Technology Readiness category. The results showed that the TRI variables that affected the acceptance of the SiJagger V2 application at KPPBC TMP A Tangerang included the Optimism (OPT) and Innovativeness (INN) variables which had a significant positive effect, while the Discomfort (DIS) and Insecurity (INS) variables had a significant negative effect. Variables of TRAM that affect acceptance of SiJagger V2 application at KPPBC TMP A Tangerang include the variables Perceived ease of use (PEU), Perceived usefulness (PU), and Behavioral intention (BI) which have a significant positive effect, which is explained as follows: (1) OPT has positive significant effect on PEU, (2) OPT has positive significant effect on PU, (3) INN has positive significant effect on PEU, (4) INN has positive significant effect on PU, (5) DIS has negative significant effect on PEU, (6) DIS has negative significant effect on PU, (7) INS has negative significant effect on PEU, (8) INS has negative significant effect on PU, (9) PEU has positive significant effect on PU, (10) PEU has positive significant effect on BI, (11) PU has positive significant effect on BI. Results of this research are expected to be used as an evaluation of SiJagger V2 KPPBC TMP A Tangerang to be better so that SiJagger V2 users get customs and excise services faster and respond better, have a better experience in accessing information so that they are satisfied with the services provided by KPPBC TMP A Tangerang and increasing state revenue in the field of customs and excise.

Keywords: KPPBC TMP A Tangerang, technology readiness and technology acceptance.

I. INTRODUCTION

President Jokowi delivered a state address before the DPR and DPD in the framework of the 73rd Anniversary of the Declaration of Independence of the Republic of Indonesia at the Parliament Building, Jakarta, Thursday 16 August 2018, "The Industrial Revolution 4.0 has started to change the face of human civilization. We need to be able to talk about Artificial Intelligence, the Internet of Things, and various advances" (<https://www.cnbcindonesia.com>). President Joko Widodo on October 5 2018 asked all ministries, agencies and Local Governments to strengthen commitment and improve implementation Electronic Based Government System as stated in the Regulation President number 95 of 2018 concerning SPBE. Indonesia's success in developing and implementing SPBE has been successful achieved the 77th rank in the United Nations (UN) E-Government Survey 2022. Indonesia managed to climb 11 places from 88th place in 2020, even though in 2018 Indonesia is ranked 107th (<https://menpan.go.id/>). One of the government offices that implement SPBE is the Supervision and Monitoring Office Customs and Excise Services Type Middle Customs A Tangerang (KPPBC TMP A Tangerang), which is the Work Unit Office of the Directorate

General of Customs and Excise (DGCE), Ministry of Finance. KPPBC TMP A Tangerang uses SPBE to optimize state revenue in the customs and excise sector. Optimization carried out by KPPBC TMP A Tangerang in 2021 has succeeded in becoming a national champion in achievement Key Performance Indicators (IKU) Percentage of Compliance of Bonded Zone Entrepreneurs best from 104 KPPBC in Indonesia, which is 95.57% (DGCE Performance Report, 2021).

Problems with the database managed by the Ministry of Finance Pusintek affect lots of applications that become errors cannot be accessed, one of which is the application Customs Excise Information System and Automation (CEISA), namely service-related applications customs and excise duties used by Customs service users. The application includes import, export, manifest, and service user portal, so temporarily during interference occurs, the service is used manually (<https://www.beacukai.go.id>). Another significant impact due to disruption to CEISA is the losses incurred from the progressive cost of stacking containers at the port, where the cost is on the first day up to the fifth up 300%, then the sixth day and the next up 600%. Progressive fees this arises on the sixth day and thereafter reaches above IDR 1,000,000.00 per container per day for ordinary containers without refrigeration, while for containers with machines cooling, the costs incurred reach two times as much (<https://www.cnbcindonesia.com>). Anticipatory steps taken by DJBC Head Office for similar problems in the past forward to reduce the impacts and losses mentioned above, DJBC Head Office encourages making independent applications in each service office so that services can still be received even if a similar force majeure event occurs in the future. It is that encouraging KPPBC TMP A Tangerang to run several applications to support services customs and excise, including Applications in the Tangerang network (SiJagger), Email Tangerang Customs and Excise (BeTa), Customs and Excise Service Email (PKC), Email Treasury, and Email Counter for Certificate of Origin (SKA) Tangerang. But too many application often confuses KPPBC TMP A Tangerang customers as application user. This is the background behind the birth of applications in the network Tangerang version 2 (SiJagger V2) in July 2022. Now enough with SiJagger V2 which is used by service users (<https://bctangerang.beacukai.go.id/>).

II. BASIC THEORY AND FRAMEWORK

1.1 Strategy Management, Digital Transformation Strategy and Social Marketing Concept

Suaedi (2019), stated that strategic management is about realizing and projecting the future of the organization, so that the strategies implemented by the organization can give ideas about the future and produce any necessary actions to realize this idea. Taufiqurokhman (2016), explains that strategic management is a the art and science of formulating, implementing and evaluating (evaluation) of strategic decisions between functions within an organization to achieve its goals in the future. KPPBC TMP A Tangerang implemented the strategy of applying SiJagger V2 in control area to anticipate the reoccurrence of force majeure events at the base data from the Ministry of Finance's Pusintek which manages the CEISA system to facilitate services customs and excise in Indonesia. Butt, et al., (2018) stated one of the most challenging for organization is the integration of digital technology use, and there is no organization or sector immune from effects of digital transformation. Bharadwaj et al, in Wang, et al., (2020) stated that digital strategy companies use to capture new opportunities in the digital economy era, with embed digital technology into all organizational operations, including production, marketing and other activities. It can be concluded that the transformation strategy digital is a change in organizational systems to become completely integrated so that they can survive in digital era and create new opportunities for organizations to become more advanced and stay up to date. Marketing is a company process of engaging customers, building relationships strong customers, and create customer value to get value from customers (Kotler and Armstrong in Prasetio, A. et al., 2020).

The American Marketing Association offers a definition of marketing as a function organization and set of processes for communicating, creating, and delivering value for customers and to manage customer relationships for organization and stakeholders benefit (Kotler, et al. in Ariyanti, M., et al., 2016). Consumer behavior is an individual or group activity and process they use in selecting, using, securing, and disposing of experiences, ideas, services or products to meet needs (Chaffey in Prasetio, A. et al., 2020). According to Malau (2017), services are activities that do not have a physical body, cannot be palpable and invisible to the

eye, given by one party to another. There are four the characteristics of services, namely: 1) Intangibility, 2) Diverse or varied, 3) Not can be separated, and 4) Does not require storage (Prasetio, A. et al., 2022). Social marketing is a systematic application of marketing along with other concepts and techniques, aimed at achieving certain behaviors for social good. Term "social marketing" is a conundrum for many, considering these two words have contradictory characteristics. This is because the word "marketing" is common identified with activities to make money, while the word "social" is defined as selfless activity. Therefore, such a form of marketing is what known as social marketing. So, the meaning of "social" here means broader than literal meaning which has economic meaning (Ariyanti, M. et al., 2017). KPPBC TMP A Tangerang implements social marketing in its business processes namely Revenue Collection, Community protection, Trade facilitation, and Industrial assistance, in order to improve the welfare of society.

1.2 Technology Readiness Index (TRI)

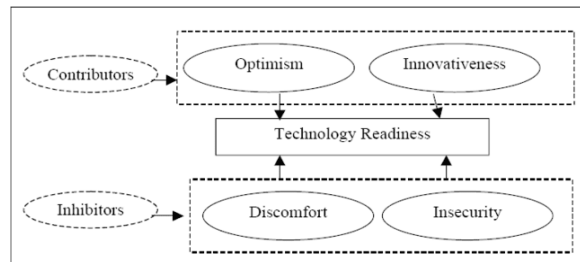


Fig 1. TRI Model

Defined technology readiness by Parasuraman, A. and Colby in Yu-Wei and Chen (2021) that one's perception towards technology has a positive side and a negative side which is divided into four dimensions as follows: optimism (optimism), innovation (innovativeness), discomfort, and insecurity. 4 Dimensions of the TRI according to Panday and Rachmat (2019), have their own definition, which will be explained as following:

1. Optimism can be defined as a confidence and positive view of technology and as resulting flexibility, increased control and efficiency by technology. In general, this character dimension describes positive feelings towards technology.

2. Innovativeness can be defined as the desire to be the party that first time using a technology and idea leader. In general, this character dimension measures the extent to which individuals view themselves as the forefront.

3. Discomfort can be defined as a lack of control over technology and feelings of burden caused by the use of technology. In general This character dimension measures the user's fears and worries when using technology.

4. Insecurity can be defined as doubts about the ability of the technology to work properly and disbelief of technology. In general, this character dimension focuses on the concerns the person may have users in conducting transactions based on technology.

1.3 Technology Acceptance Model (TAM)

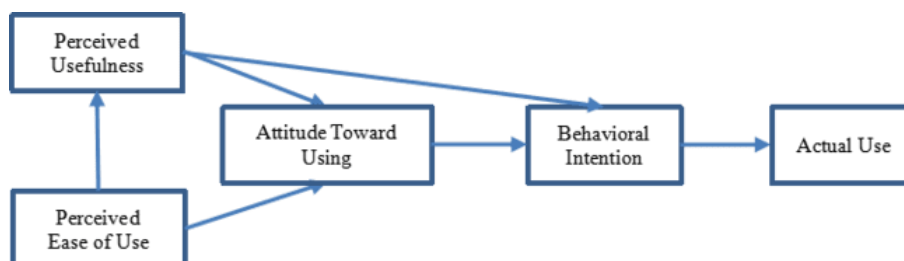


Fig 2. TAM Model

TAM is an acceptance of information technology from a person's interest in using technology to achieve certain goals. Theory of Reasoned Action (TRA) adopted by TAM states that technology use is influenced by behavioral interest based on user trust ie perceived ease of use and perceived usefulness. In general, interest and behavior are heavily influenced by perceived usefulness and perceived ease of use, with perceived usefulness considered as the main factor in determining behavior, as proposed by Davis in

Purnama M.I. (2019). The five main variables in the TAM method that have not been modified are: attitude towards using, behavioral intention, perceived ease of use, actual use and perceived usefulness. But later (attitude towards using) was expelled because of his weak role in mediate the relationship of intention to use and the beliefs of spoken users, as proposed by Venkatesh and Davis in Purnama M.I. (2019). Attitude Toward Using, interpreted as an evaluation from users about curiosity in using technology. Behavioral intention is behavioral tendencies to remain apply a technology. According to Davis in Yu-Wei and Chen (2021), someone who believe that the system is not difficult to use will feel happy to use the system and proven to improve productivity. Based on this definition, can be interpreted that anyone who uses IT can increase their work performance.

1.4 Technology Readiness Acceptance Model (TRAM)

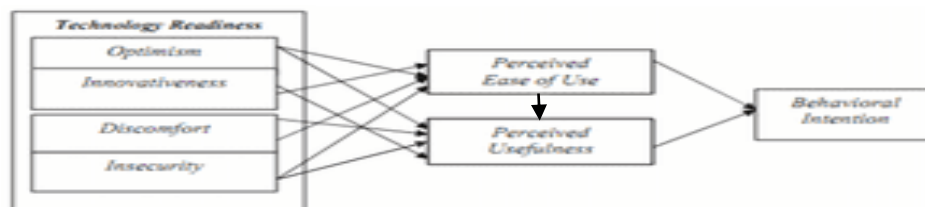


Fig 3. TRAM Model

Combination of Technology Acceptance Model methods and Technology Readiness Index called TRAM, put forward by Lin, et al., in Purnama M.I. (2019). The most recent contribution to combine dimensions from TRI general personality with specific dimensions of TAM in the first attempt to integrate the two methods namely TRI and TAM. According to Davis in Yu-Wei and Chen (2021), intention to use is the factors of a person's interest in using the system technology information on the organization that influenced by perceived ease of use and perceived usefulness and can be found using TRAM. Optimism, innovation, benefits and convenience using technology becomes a factor that is considered higher (contributor), meanwhile insecurity and discomfort become inhibitory factors. Dimensions Personality can influence how people interact with technology and their use which can be explained using the TRAM method according to Davis in Yu-Wei and Chen (2021). In the TRAM model proposed by Walczuch in Purnama M.I. (2019), TRAM have seven variables, namely innovativeness, optimism, insecurity, discomfort, Perceived usefulness, perceived ease of use and behavioral intention.

1.5 Research Hypothesis and Framework

Optimism use of technology becomes a factor that is considered higher (contributor) and causing effect on dimensions Personality (perceived ease of use) which can influence how people interact with technology and their use according to Davis in Yu-Wei and Chen (2021). Mahendra Adhi Nugroho, Muhammad Andryzal Fajar (2017). So hypothesis formulates by researcher as below:

H 1: Optimism has positive significant effect on perceived ease of use in using SiJagger V2 at KPPBC TMP A Tangerang

Optimism use of technology becomes a factor that is considered higher (contributor) and causing effect on dimensions personality (perceived usefulness) which can influence how people interact with technology and their use, according to Davis in Yu-Wei and Chen (2021). Mahendra Adhi Nugroho, Muhammad Andryzal Fajar (2017). So hypothesis formulates by researcher as below:

H 2: Optimism has positive significant effect on perceived usefulness using SiJagger V2 at KPPBC TMP A Tangerang

Innovation of technology becomes a factor that is considered higher (contributor) and causing effect on dimensions personality (perceived ease of use) which can influence how people interact with technology and their use, according to Davis in Yu-Wei and Chen (2021). Mahendra Adhi Nugroho, Muhammad Andryzal Fajar (2017). So hypothesis formulates by researcher as below:

H 3: Innovativeness has positive significant effect on perceived ease of use in using SiJagger V2 at KPPBC TMP A Tangerang

Innovation of technology becomes a factor that is considered higher (contributor) and causing effect on dimensions personality (perceived usefulness) which can influence how people interact with technology and their use, according to Davis in Yu-Wei and Chen (2021). Mahendra Adhi Nugroho, Muhammad Andryzal Fajar (2017). So hypothesis formulates by researcher as below:

H 4: Innovativeness has positive significant effect on perceived usefulness in using SiJagger V2 at KPPBC TMP A Tangerang

Discomfort become inhibitory factors and causing effect on dimensions personality (perceived ease of use) can influence how people interact with technology and their use, according to Davis in Yu-Wei and Chen (2021). Mahendra Adhi Nugroho, Muhammad Andryzal Fajar (2017). So hypothesis formulates by researcher as below:

H 5: Discomfort has negative significant effect on perceived ease of use in using SiJagger V2 at KPPBC TMP A Tangerang

Discomfort become inhibitory factors and causing effect on dimensions personality (perceived usefulness) can influence how people interact with technology and their use, according to Davis in Yu-Wei and Chen (2021). Mahendra Adhi Nugroho, Muhammad Andryzal Fajar (2017). So hypothesis formulates by researcher as below:

H 6: Discomfort has negative significant effect on perceived usefulness in using SiJagger V2 at KPPBC TMP A Tangerang

Insecurity become inhibitory factors and causing effect on dimensions personality (perceived ease of use) can influence how people interact with technology and their use, according to Davis in Yu-Wei and Chen (2021). Mahendra Adhi Nugroho, Muhammad Andryzal Fajar (2017). So hypothesis formulates by researcher as below:

H 7: Insecurity has negative significant effect on perceived ease of use in using SiJagger V2 at KPPBC TMP A Tangerang

Insecurity become inhibitory factors and causing effect on dimensions personality (perceived usefulness) can influence how people interact with technology and their use, according to Davis in Yu-Wei and Chen (2021). Mahendra Adhi Nugroho, Muhammad Andryzal Fajar (2017). So hypothesis formulates by researcher as below:

H 8: Insecurity has negative significant effect on perceived usefulness in using SiJagger V2 at KPPBC TMP A Tangerang

Dimensions Personality (perceived ease of use and perceived usefulness) can influence how people interact with technology and their use, according to Davis in Yu-Wei and Chen (2021). Mahendra Adhi Nugroho, Muhammad Andryzal Fajar (2017). So hypothesis formulates by researcher as below:

H 9: Perceived ease of use has a significant positive effect on perceived usefulness in using SiJagger V2 at KPPBC TMP A Tangerang

Dimensions Personality (perceived ease of use) can influence how people interact with technology and their use (behavioral intention), according to Davis in Yu-Wei and Chen (2021). Mahendra Adhi Nugroho, Muhammad Andryzal Fajar (2017). So hypothesis formulates by researcher as below:

H 10: Perceived ease of use has positive significant effect on behavioral intention in using SiJagger V2 at KPPBC TMP A Tangerang

Dimensions Personality (perceived usefulness) can influence how people interact with technology and their use (behavioral intention), according to Davis in Yu-Wei and Chen (2021). Mahendra Adhi Nugroho, Muhammad Andryzal Fajar (2017). So hypothesis formulates by researcher as below:

H 11: Perceived usefulness has positive significant effect on behavioral intention in using SiJagger V2 at KPPBC TMP A Tangerang

Research model developed from previous research results and hypotheses as described below.

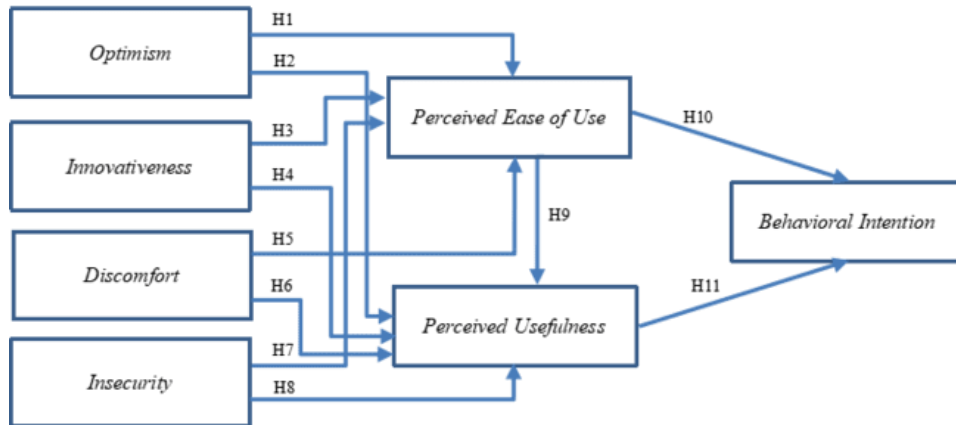


Fig 4. Framework

III. METHODS

1.6 Research Object and Analysis

This research population consist of SiJagger V2 user in KPPBC TMP A Tangerang that representative of 134 company. Data sampling in this research was carried out using probability sampling using random sampling method which was distributed randomly throughout the population (N) of 134 companies, with the sample () to be taken calculated using formula from Slovin with an error rate (e) of 5%. Slovin formula: Source (Altares, 2003) can be seen in the following equation:

$$n = \frac{N}{1+N.e^2} ;$$

$$n = N / (1 + (N \times e^2))$$

$$n = 134 / (1 + (134 \times 0,052))$$

$$n = 134 / 1,335$$

$$n = 100,3745 = 100 \text{ sample}$$

A minimum of 100 sample respondents used in this research were obtained by probability sampling using random sampling method which was distributed throughout the entire population of 134 companies using SiJagger V2 at KPPBC TMP A Tangerang. The 100 samples are employees who handle export-import documents through SiJagger V2, from companies receiving customs facilities that are in the supervision area of KPPBC TMP A Tangerang.

1.7 Variable Operational

In this research, using variables operational defined as follows:

Table 1. Variable Operational

No.	Variable	Operational Definition	Code	Indicator	Scale
1.	Optimism (OPT)	View attitude positive to technology and believe that technology will increase work performance. (Parasuraman, A., Colby, 2014)	OPT1	Technology gives people more control over their daily lives.	Likert 4
2.			OPT2	Products and services that use the newest technologies are much more convenient to use.	Likert 4
3.			OPT3	Technology makes you more efficient in your occupation.	Likert 4
4.			OPT4	You like the idea of doing business via computers because you are not limited to regular business hours.	Likert 4
5.	Innovativeness (INN)	Positive outlook towards technology and being at the forefront of trying out new technological innovations. (Parasuraman, A., Colby, 2014)	INN1	Other people come to you for advice on new technologies.	Likert 4
6.			INN2	In general, you are among the first in your circle of friends to acquire new technology when it appears.	Likert 4
7.			INN3	You can usually figure out new high-tech products and services without help from others.	Likert 4
8.			INN4	You keep up with the latest technological developments in your areas of interest.	Likert 4

No.	Variable	Operational Definition	Code	Indicator	Scale
9.	Discomfort (DIS)	Negative attitude toward technology and from its lack mastery of new technology. (Parasuraman, A., Colby, 2014)	DIS1	There should be caution in replacing important people tasks with technology because new technology can breakdown or get disconnected.	Likert 4 Reverse Value
10.			DIS2	Technical support lines are not helpful because they don't explain things in terms you understand.	Likert 4 Reverse Value
11.			DIS3	It is embarrassing when you have trouble with a high-tech gadget while people are watching.	Likert 4 Reverse Value
12.			DIS4	There is no such thing as a manual for a high-tech product or service that's written in plain language.	Likert 4 Reverse Value
13.	Insecurity (INS)	The attitude of a negative view of technology in the form of doubts about the safety of new technology. (Parasuraman, A., Colby, 2014)	INS1	Any business transaction you do electronically should be confirmed later with something in writing.	Likert 4 Reverse Value
14.			INS2	You worry that information you send over the Internet will be seen by other people.	Likert 4 Reverse Value
15.			INS3	The human touch is very important when doing business with a company.	Likert 4 Reverse Value
16.			INS4	You do not feel confident doing business with a place that can only be reached online.	Likert 4 Reverse Value
17.	Perceived Usefulness (PU)	Perceived/ perception where a person believes that using technology is felt to be beneficial in improving his performance. (Nugroho, M. A., Fajar, A. M.,2017)	PU1	Online web-based system makes checking of the job faster.	Likert 4
18.			PU2	Using online web-based system makes my job performance better.	Likert 4
19.			PU3	Using online web-based system increases my job productivity.	Likert 4
20.			PU4	Using online web-based system increases my job effectivity.	Likert 4
21.			PU5	Using online web-based system makes me easier in managing my job.	Likert 4
22.			PU6	In general, I feel that using Online web-based system is useful.	Likert 4
23.	Perceived Ease of Use (PEU)	Perceived/ perception where is someone believe that Using technology can make your job easier. (Nugroho, M. A., Fajar, A. M.,2017)	PEU1	It easy to learn how to operate / use online web-based system.	Likert 4
24.			PEU2	It easy to operate / use online web-based system to do my job.	Likert 4
25.			PEU3	In general, online web-based system is clear and easy to understand.	Likert 4
26.			PEU4	It is difficult to operate / use online web-based system.	Likert 4
27.			PEU5	It is easy to remember how to operate / use online web-based system.	Likert 4
28.			PEU6	In general, online web-based system is easy to use.	Likert 4
29.	Behavioral Intention (BI)	Intention/ interest someone to Use technology. (Nugroho, M. A., Fajar, A. M.,2017)	BI1	In the future, I will use online web-based system regularly to help job process.	Likert 4
30.			BI2	I will use online web-based system more often to support job process in the future.	Likert 4

1.8 Model Analysis and Test Techniques

Sugiyono (2017), explain activity after collecting data from all respondents or other data sources are doing data analysis. The data analysis method using is Partial Least Square (PLS) Structural Equation Modeling (SEM) type (SEM-PLS). SEM-PLS type is a predictive approach to conducting exploratory and confirmatory research (Hair, et al., 2017). There are 2 analyzes that will be carried out in this research, namely an analysis of the level of readiness for using SiJagger V2 using the Technology Readiness Index

(TRI) method. This analysis aims to find the value of TRI which will later be represented to the level of influence of readiness on TRI. The second analysis is about effect of user readiness on acceptance of SiJagger V2 which will be carried out through 2 stages, evaluating by measurement and structural model.

Evaluation measurement model are using following criteria:

1. Validity Test, has a Pearson correlation value (r count) which is the basic value to be compared with the r table, which will be categorized as follows:
 - a. The instrument is declared valid, if r count value $>$ r table value
 - b. The instrument is declared invalid, if r count value $<$ r table value

The r table value is determine by number degrees of freedom (DOF). DOF are obtained from the number of sample respondents (N) minus by the number of independent variables (k).

2. Reliability Test, was carried out using Cronbach Alpha test, Reliability is considered satisfactory enough if ≥ 0.6 which has good reliability.

Meanwhile, to evaluate the structural model using the bootstrapping method, several criteria are used as follows:

- a. Path coefficient (β), describes the strength relationship between the variables. The path coefficient is tested with a threshold value above 0.1 to state that the path in question has an influence on the model.
- b. T-statistic, has a critical value of 1.96. If the value is $<$ 1.96 then the value can be said to be insignificant, whereas if the value is $>$ 1.96 then the value is said to be significant.
- c. Original Sample, used to determine the positive or negative relationship of a variable.

IV. RESULT AND DISCUSSION

This research use questionnaire for the primary data to discover the effect of user readiness acceptance of SiJagger V2 using technology readiness acceptance model (TRAM). The google form questionnaire was distributed via whatsapp group of SiJagger V2 user. The total respondents collected was 111 from the target were 100 respondents. Characteristics of the respondents consist of last education, work experience, position in work, also gender, age, and how long using SiJagger V2. Respondents also filtered using screening questions on the questionnaire with the criteria for respondents company work in control area of KPPBC TMP A Tangerang and are working with SiJagger V2.

1.9 Measurement (Outer) Model

Outer model being tested for each variable, namely BI, DIS, INN, INS, OPT, PEU and PU using construct validity with convergent validity, discriminant validity, fornell larcker criterion, HTMT approach validity testing, reliability test, R square test, mediaton test, Q square test, and model fit test.

Table 2. Convergent Validity

Variable	Behavioral Intention (BI)	Discomfort (DIS)	Innovativeness (INN)	Insecurity (INS)	Optimism (OPT)	Perceived Ease of Use (PEU)	Perceived Usefulness (PU)
BI1	0,995						
BI2	0,995						
DIS1		0,932					
DIS2		0,970					
DIS3		0,967					
DIS4		0,981					
INN1			0,976				
INN2			0,984				
INN3			0,963				
INN4			0,944				
INS1				0,970			
INS2				0,978			
INS3				0,936			
INS4				0,960			

Variable	<i>Behavioral Intention (BI)</i>	<i>Discomfort (DIS)</i>	<i>Innovativeness (INN)</i>	<i>Insecurity (INS)</i>	<i>Optimism (OPT)</i>	<i>Perceived Ease of Use (PEU)</i>	<i>Perceived Usefulness (PU)</i>
<i>OPT1</i>					0,993		
<i>OPT2</i>					0,986		
<i>OPT3</i>					0,978		
<i>OPT4</i>					0,988		
<i>PEU1</i>						0,992	
<i>PEU2</i>						0,981	
<i>PEU3</i>						0,992	
<i>PEU4</i>						0,859	
<i>PEU5</i>						0,987	
<i>PEU6</i>						0,983	
<i>PU1</i>							0,980
<i>PU2</i>							0,984
<i>PU3</i>							0,966
<i>PU4</i>							0,994
<i>PU5</i>							0,994
<i>PU6</i>							0,989

The results of convergent validity testing on each variable showed in table 2 has good value of convergent validity because Loading factor value for each variable has result > 0.5, which means that each variable can reflect construct.

Table 3. Discriminant Validity

Variable	<i>Average Variance Extracted (AVE)</i>
<i>Behavioral Intention (BI)</i>	0,989
<i>Discomfort (DIS)</i>	0,927
<i>Innovativeness (INN)</i>	0,935
<i>Insecurity (INS)</i>	0,924
<i>Optimism (OPT)</i>	0,973
<i>Perceived Ease of Use (PEU)</i>	0,935
<i>Perceived Usefulness (PU)</i>	0,970

The AVE value on each variable has valid results on table 3, because each variable has AVE value > 0.5.

Table 4. Fornell Larcker Criterion

Variable	<i>Behavioral Intention (BI)</i>	<i>Discomfort (DIS)</i>	<i>Innovativeness (INN)</i>	<i>Insecurity (INS)</i>	<i>Optimism (OPT)</i>	<i>Perceived Ease of Use (PEU)</i>	<i>Perceived Usefulness (PU)</i>
<i>Behavioral Intention (BI)</i>	(0,995)						
<i>Discomfort (DIS)</i>	-0,516	(0,963)					
<i>Innovativeness (INN)</i>	0,497	-0,175	(0,967)				
<i>Insecurity (INS)</i>	-0,668	-0,468	-0,483	(0,961)			
<i>Optimism (OPT)</i>	0,352	-0,140	0,239	-0,277	(0,986)		
<i>Perceived Ease of Use (PEU)</i>	0,748	-0,417	0,400	-0,511	0,321	(0,967)	
<i>Perceived Usefulness (PU)</i>	0,817	-0,498	0,515	-0,610	0,402	0,683	(0,985)

All variable values showed in table 4 have good discriminant validity because each variable construct measured has a higher Average variance extracted (AVE)root value when compared to the other.

Table 5. HTMT Approach Validity Testing

Variable	<i>Behavioral Intention (BI)</i>	<i>Discomfort (DIS)</i>	<i>Innovativeness (INN)</i>	<i>Insecurity (INS)</i>	<i>Optimism (OPT)</i>	<i>Perceived Ease of Use (PEU)</i>	<i>Perceived Usefulness (PU)</i>
<i>Behavioral Intention (BI)</i>							
<i>Discomfort (DIS)</i>	0,523						
<i>Innovativeness (INN)</i>	0,505	0,182					
<i>Insecurity (INS)</i>	0,680	0,481	0,498				
<i>Optimism (OPT)</i>	0,355	0,141	0,242	0,281			
<i>Perceived Ease of Use (PEU)</i>	0,755	0,426	0,409	0,522	0,322		
<i>Perceived Usefulness (PU)</i>	0,824	0,502	0,522	0,619	0,405	0,688	

All HTMT approach value for each variable showed on table 5 has a value of < 0.9 , which means that each indicator of the variable being measured can be said valid.

Table 6. Reliability Test

Variable	Cronbach's Alpha ($>0,7$)	Composite Reliability ($>0,7$)	Conclusion
<i>Behavioral Intention (BI)</i>	0,989	0,995	Reliable
<i>Discomfort (DIS)</i>	0,974	0,981	Reliable
<i>Innovativeness (INN)</i>	0,977	0,983	Reliable
<i>Insecurity (INS)</i>	0,973	0,980	Reliable
<i>Optimism (OPT)</i>	0,991	0,993	Reliable
<i>Perceived Ease of Use (PEU)</i>	0,986	0,988	Reliable
<i>Perceived Usefulness (PU)</i>	0,994	0,995	Reliable

All value of variable showed on table 6 are consistent in measuring and Cronbach's alpha value >0.7 then composite reliability value >0.7 , so that it can be said to be reliable.

4.2 Structural (Inner) Model

Table 7. R Square Test Results

Variable	R Square (R^2)
<i>Behavioral Intention (BI)</i>	0,735
<i>Perceived Ease of Use (PEU)</i>	0,364
<i>Perceived Usefulness (PU)</i>	0,634

Table 7 shows that the R^2 value of BI is 0.735, which means PU is able to explain or influence BI by 73.5%. The R^2 value of PEU is 0.364, that means INS, DIS, INN, OPT are able to explain or influence PEU of 36.4%. The R^2 value of PU is 0.634, which means INS, DIS, INN, OPT, PEU are able to explain or influence PU of 63.4%.

Table 8. Mediation Test Results

Variable	<i>Behavioral Intention (BI)</i>	<i>Discomfort (DIS)</i>	<i>Innovativeness (INN)</i>	<i>Insecurity (INS)</i>	<i>Optimism (OPT)</i>
<i>Discomfort (DIS) -> Perceived Ease of Use (PEU) -> Behavioral Intention (BI)</i>	-0,085	-0,083	0,044	1,947	0,052
<i>Innovativeness (INN) -> Perceived Ease of Use (PEU) -> Behavioral Intention (BI)</i>	0,069	0,067	0,039	1,735	0,083
<i>Insecurity (INS) -> Perceived Ease of Use (PEU) -> Behavioral Intention (BI)</i>	-0,092	-0,097	0,054	1,713	0,087
<i>Optimism (OPT) -> Perceived Ease of Use (PEU) -> Behavioral Intention (BI)</i>	0,06	0,058	0,028	2,158	0,031
<i>Discomfort (DIS) -> Perceived Ease of Use (PEU) -> Perceived Usefulness (PU)</i>	-0,089	-0,086	0,045	1,993	0,047
<i>Innovativeness (INN) -> Perceived Ease of Use (PEU) -> Perceived Usefulness (PU)</i>	0,072	0,07	0,042	1,73	0,084
<i>Insecurity (INS) -> Perceived Ease of Use (PEU) -> Perceived Usefulness (PU)</i>	-0,097	-0,095	0,047	2,049	0,041
<i>Optimism (OPT) -> Perceived Ease of Use (PEU) -> Perceived Usefulness (PU)</i>	0,064	0,06	0,031	2,078	0,038
<i>Discomfort (DIS) -> Perceived Usefulness (PU) -> Behavioral Intention (BI)</i>	0,114	0,116	0,044	2,578	0,005
<i>Innovativeness (INN) -> Perceived Usefulness (PU) -> Behavioral Intention (BI)</i>	0,118	0,116	0,042	2,800	0,003
<i>Insecurity (INS) -> Perceived Usefulness (PU) -> Behavioral Intention (BI)</i>	0,106	0,108	0,051	2,056	0,020
<i>Optimism (OPT) -> Perceived Usefulness (PU) -> Behavioral Intention (BI)</i>	0,088	0,087	0,028	3,128	0,001
<i>Perceived Ease of Use (PEU) -> Perceived Usefulness (PU) -> Behavioral Intention (BI)</i>	0,215	0,208	0,059	3,620	0,000

Table 8 the results of the mediation test. The effect of PEU significantly mediates the relationship between OPT and BI, with value of $P = 0.031 < 0.05$ and value of $T\text{-Statistics} = 2.158 > 1.96$.

PEU significantly mediates the relationship between DIS, INS, and OPT on PU, with each value of $P < 0.05$ and each value of $T\text{-Statistics} > 1.96$.

PU significantly mediates the relationship between INS, DIS, INN, OPT, PEU to BI, with all value of $P < 0.05$.

Table 9. Q Square Test Results

Variable	$Q^2 (=1-SSE/SSO)$
<i>Behavioral Intention (BI)</i>	0,715
<i>Perceived Ease of Use (PEU)</i>	0,330
<i>Perceived Usefulness (PU)</i>	0,609

All endogenous variables showed on table 9, the value of $Q\text{ Square} > 0$ that means have predictive relevance. so, this model can be used with assumptions same condition and measurement.

Table 10. Model Fit Test Results

Method	<i>Estimated Model</i>
SRMR	0,040

The value of fit model in table 10 showed that the value of SRMR (standardized root mean residual) is considered good, because the value is < 0.1 , so this research model is feasible research model and appropriate to use.

Hypothesis Test Results

Table 11. Hypothesis Test Results and Significance

Variable	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistics (O/STDEV)	P Values	Hypothesis
H1 = Optimism (OPT) -> Perceived Ease of Use (PEU)	0,170	0,165	0,070	2,415	0,016	Accepted
H2 = Optimism (OPT) -> Perceived Usefulness (PU)	0,154	0,152	0,044	3,492	0,001	Accepted
H3 = Innovativeness (INN) -> Perceived Ease of Use (PEU)	0,192	0,187	0,093	2,061	0,040	Accepted
H4 = Innovativeness (INN) -> Perceived Usefulness (PU)	0,205	0,204	0,055	3,712	0,000	Accepted
H5 = Discomfort (DIS) -> Perceived Ease of Use (PEU)	-0,238	-0,231	0,102	2,340	0,020	Accepted
H6 = Discomfort (DIS) -> Perceived Usefulness (PU)	-0,198	-0,195	0,064	3,115	0,002	Accepted
H7 = Insecurity (INS) -> Perceived Ease of Use (PEU)	-0,260	-0,261	0,119	2,188	0,029	Accepted
H8 = Insecurity (INS) -> Perceived Usefulness (PU)	-0,184	-0,187	0,073	2,535	0,012	Accepted
H9 = Perceived Ease of Use (PEU) -> Perceived Usefulness (PU)	0,375	0,364	0,083	4,501	0,000	Accepted
H10 = Perceived Ease of Use (PEU) -> Behavioral Intention (BI)	0,356	0,360	0,092	3,855	0,000	Accepted
H11 = Perceived Usefulness (PU) -> Behavioral Intention (BI)	0,574	0,573	0,090	6,397	0,000	Accepted

The following are explanations regarding two test results for each hypothesis showed in table 11:

1. OPT has positive significant effect on PEU, with original sample value = 0.170, and value of P = 0.016 < 0.05 , and T-Statistics value = 2.415 > 1.96 (H1 Accepted).
2. OPT has positive significant effect on PU, with original sample value = 0.154, and value of P = 0.001 < 0.05 , and T-Statistics value = 3.492 > 1.96 (H2 Accepted).
3. INN has positive significant effect on PEU, with original sample value = 0.192, and value of P = 0.040 < 0.05 , and T-Statistics value = 2.061 > 1.96 (H3 Accepted).
4. INN has positive significant effect on PU, with original sample value = 0.205, and value of P = 0.000 < 0.05 , and T-Statistics value = 3.712 > 1.96 (H4 Accepted).
5. DIS has negative significant effect on PEU, with original sample value = -0.238, and value of P = 0.020 < 0.05 , and T-Statistics value = 2.340 $> 1, 96$ (H5 Accepted).
6. DIS has negative significant effect on PU, with original sample value = -0.198, and value of P = 0.002 < 0.05 , and T-Statistics value = 3.115 > 1.96 (H6 Accepted).
7. INS has negative significant effect on PEU, with original sample value = -0.260, and value of P = 0.029 < 0.05 , and T-Statistics value = 2.188 > 1.96 (H7 Accepted).
8. INS has negative significant effect on PU, with original sample value = -0.184, and value of P = 0.012 < 0.05 , and T-Statistics value = 2.535 > 1.96 (H8 Accepted).
9. PEU has positive significant effect on PU, with original sample value = 0.375, and value of P = 0.000 < 0.05 , and T-Statistics value = 4.501 $> 1, 96$ (H9 Accepted).
10. PEU has positive significant effect on BI, with original sample value = 0.356, and value of P = 0.000 < 0.05 , and T-Statistics value = 3.855 > 1.96 (H10 Accepted).
11. PU has positive significant effect on BI, with original sample value = 0.574, and value of P = 0.000 < 0.05 , and T-Statistics value = 6.397 > 1.96 (H11 Accepted).

Discussion

6.1 Discussion of Application User Readiness Index in the Tangerang Network Version 2 (SiJagger V2) Based on Measurement Results using the TRI Method

From the results of technology readiness index (TRI) value of SiJagger V2 users obtained at 2.77, SiJagger V2 KPPBC TMP A Tangerang users categorized in the Low Technology Readiness, which means that the readiness of users for SiJagger V2 technology is still relatively low (Parasuraman, 2000). Previous research conducted by Chang and Chen (2021) supported it, which stated that someone with low technology readiness tends to be hesitant and skeptical about new technologies. Previous research conducted by Rajbhandari, et al (2022) also supports this, which states that the industry is less aware of activities that promote new technology and requires government intervention in the form of policies and regulations along with socialization for implementing new technology adoption so that the level of readiness for this new technology increases. . These results are also supported in research by Parasuraman (2000) which explains that TRI can be used to assess a person's readiness to use technology, in this case it means that SiJagger V2 users are in the Low Technology Readiness category requiring increased skills in using SiJagger V2 so that their technological readiness increases.

6.2 Discussion of User Readiness Factors Have Positive Significant Influence on SiJagger V2 Service Acceptance Using the TRAM Method

From the results of testing the user readiness factor of TRAM (technology readiness and acceptance model consists of variables Innovativeness (INN), Optimism (OPT), Insecurity (INS), Discomfort (DIS), Perceived Usefulness (PU) and Perceived Ease of Use (PEU), the following is a discussion of each variable model generated:

1. There is positive significant influence of OPT variable to PEU variable, so the first hypothesis (H1) in this research is accepted. This means that optimism when using SiJagger V2 has a positive effect on perceptions of ease of use for SiJagger V2 users at KPPBC TMP A Tangerang. Optimism is a view of technology from positive side and belief provides flexibility, increase in control, and efficiency in life (Parasuraman, 2000). Research by Chang and Chen (2021) supported this H1, showed if OPT has positive significant effect on PEU. In this research, SiJagger V2 users who are optimistic about using SiJagger V2 at KPPBC TMP A Tangerang experience many conveniences both in using the SiJagger V2 itself and in their daily work thanks to this technology.

2. There is positive significant effect of OPT variable to PU variable, so the second hypothesis (H2) in this research is accepted. This means that optimism when using SiJagger V2 has a positive effect on perceptions of usability for SiJagger V2 users at KPPBC TMP A Tangerang. Optimism is a view of technology from positive side and belief provides flexibility, increase in control, and efficiency in life (Parasuraman, 2000). Research by Chang and Chen (2021) supported this H2, showed if OPT has positive significant effect on PU. This is also supported by the explanation from Walzuch, et al in Nugroho, M.A., and Fajar, A.M. (2017) that optimistic people perceive technology as something more useful to use because they not too worried about the possibility of bad results that will occur. In this case, the optimism felt by SiJagger V2 users is that they experience many benefits such as daily work being completed more quickly and effectively thanks to this technology.

3. There is positive significant influence of INN variable to PEU variable, so the third hypothesis (H3) in this research is accepted. This means innovation when using SiJagger V2 has positive effect on perceived ease of use for SiJagger V2 users at KPPBC TMP A Tangerang. Innovativeness is tendency to become pioneer in technology and thought leader (Parasuraman, 2000). Research by Chang and Chen (2021) supported this H3, showed that INN has a positive and significant effect on PEU. In this case, innovations felt by SiJagger V2 users such as knowledge and ability to update with the latest technology can help mastering SiJagger V2 to speed up the work completion.

4. There is positive significant influence INN variable to PU, so the fourth hypothesis (H4) in this research is accepted. This means that innovation when using SiJagger V2 has a positive effect on perceptions of usability for SiJagger V2 users at KPPBC TMP A Tangerang. Innovativeness is tendency to become pioneer in technology and thought leader (Parasuraman, 2000). Research by Chang and Chen (2021)

supported this H4, showed that INN has positive significant effect on PU. In this case, the innovations felt by SiJagger V2 users such as knowledge and ability to keep up with the latest technological developments can help speed up the completion of work for SiJagger V2 users.

5. There is negative significant effect of DIS variable to PEU variable, so the fifth hypothesis (H5) in this research is accepted. This means that DIS when using SiJagger V2 has negative effect on PEU for SiJagger V2 users at KPPBC TMP A Tangerang. Discomfort is a lack to control technology and feelings overwhelmed by it (Parasuraman, 2000). Research by Chang and Chen (2021) supported this H5, showed that DIS has negative significant effect on PEU. In this case, the inconvenience felt by SiJagger V2 users such as lack to control SiJagger V2 and felt controlled by technology can be corrected through informative education and simple training about using SiJagger V2 so can be used more easily.

6. There is negative significant effect of DIS variable to PU, so the sixth hypothesis (H6) in this research is accepted. This means that DIS when using SiJagger V2 has negative effect on PEU for SiJagger V2 users at KPPBC TMP A Tangerang. Discomfort is a lack to control technology and feelings overwhelmed by it (Parasuraman, 2000). Research by Chang and Chen (2021) supported this H6, showed that DIS has negative significant effect on PU. In this case, the inconvenience felt by SiJagger V2 users such as difficulties in using SiJagger V2 can be corrected through socialization and training in using SiJagger V2 so that they can make better use of it.

7. There is negative significant effect of INS to PEU, so the seventh hypothesis (H7) in this research is accepted. This means that INS when using SiJagger V2 has negative effect on PEU for SiJagger V2 users at KPPBC TMP A Tangerang. Insecurity is a distrust of technology, which comes from suspicion of the ability of the technology to properly work and fears of potential dangerous consequences (Parasuraman, 2000). Research by Chang and Chen (2021) supported this H7, showed that INS has negative significant effect on PEU. In this case, the insecurity that SiJagger V2 users feel is like a lack of trust in the security of SiJagger V2 so they don't dare to take risks to use it and therefore find it difficult to use the technology.

8. There is negative significant effect of INS to PU, so the eighth hypothesis (H8) in this research is accepted. This means that INS when using SiJagger V2 negatively affects PU for SiJagger V2 users at KPPBC TMP A Tangerang. Insecurity is a distrust of technology, which comes from suspicion of the ability of the technology to properly work and fears of potential dangerous consequences (Parasuraman, 2000). Research by Chang and Chen (2021) supported this H7, showed that INS has negative significant effect on PEU. In this case, the insecurity of SiJagger V2 users feel is like a lack of trust in the security of SiJagger V2 so they don't dare to take risks to use it and therefore they don't feel the benefits of this technology, this requires socialization and training on the use of these users so that their trust in the technology returns.

6.3 Discussion of User Acceptance Factors Have Significant Positive Influence on Interest in Using SiJagger V2 Services Using the TRAM Method

From the results of testing the user acceptance factor which consists of the influence between the variables Perceived Ease of Use (PEU), Perceived Usefulness (PU) and Behavioral Intention (BI), the following is a discussion of each variable model produced:

1. There is positive significant influence of PEU variable to PU variable, so the ninth hypothesis (H9) in this research is accepted. Perceived Ease of Use new technology is something that is felt to the extent that people believe that if you use the system, you don't need to bother because you feel the benefits of the technology (Kuo, et al in Nugroho, M.A., and Fajar, A.M., 2017). Research by Chang and Chen (2021) supported this H9, showed that PEU has positive significant effect on PU. In this case, the ease of use felt by SiJagger V2 users can be felt by the benefits and increase interest in use and productivity by using SiJagger V2.

2. There is positive significant influence of PEU variable to BI variable, so the tenth hypothesis (H10) in this research is accepted. Perceived Ease of Use and usefulness of a new technology, if someone has felt it, it will strengthen the intention to use the technology (Davis in Nugroho, M.A., and Fajar, A.M., 2017). Research by Chang and Chen (2021) supported this H10, showed that PEU has positive significant effect on BI. In this case, the ease of use felt by SiJagger V2 users is able to increase the user's interest in using it so as to increase their productivity.

3. There is positive significant influence of PU to BI variable, so the eleventh hypothesis (H11) in this research is accepted. Perceived Usefulness or the perception of the benefits of using and convenience of a new technology, if someone has felt it, it will strengthen the intention to use the technology (Davis in Nugroho, M. A., and Fajar, A. M., 2017). Research by Chang and Chen (2021) supported H11, showed that PU has positive significant effect on BI. In this case, the benefits of using the SiJagger V2 users are able to increase the user's interest in using it because of the increase in productivity that is felt by using the SiJagger V2.

6.4 Discussion of Things that Need to be Improved to Increase the Readiness of SiJagger V2 Users

From the research results obtained and input from respondents using SiJagger V2, several things need to be improved to increase the readiness of SiJagger V2 users. Improvements are needed in terms of tool or technology resources. This is as revealed by Parasuraman (2000), technology-driven transformation services, is likely to occur more rapidly in the future, as today's technology is rapidly increasing in speed, capacity, connectivity, functionality, and ease of use, while innovation The potential for breakthroughs is still nascent. This is supported by previous research conducted by Prasetyo, A., Adelia, N. (2016), Aggarwal in Ariyanti, M., et al. (2019), and Rajbhandari, et al (2022) which show that in order for the implementation of new technology to work well, system facilities are always being improved and existing obstacles are removed.

Therefore, in order to increase the readiness of SiJagger V2 users, improvements are needed in terms of tool or technology resources. Improvements are also needed in terms of human resources, both SiJagger V2 users and operators, including: increasing connection speed and application loading, speed and accuracy of officer responses. checking documents uploaded by users, increasing the size of files that can be uploaded, updating existing security and features, adding service features that don't yet exist, applications can be connected to the Ceisa 4.0 module, including the name of the officer who is handling documents, outreach and retraining periodically on how to use SiJagger V2. The effect of the readiness and acceptance of SiJagger V2 can be seen from SiJagger V2 users getting customs and excise services faster and with better response, good experience in accessing information so that they are satisfied with the services provided by KPPBC TMP A Tangerang and increasing state revenue in the field of customs and excise duty from the SiJagger V2 user.

V. CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusion

The conclusions of this research from the results of analysis and discussions in the previous section are:

1. There are several model variables in TRI that have the most influence on the acceptance of the SiJagger V2 application at KPPBC TMP A Tangerang, including the OPT and INN variables give positive significant effect, while DIS and INS variables give negative significant effect.
2. There are several variable models in TRAM that most influence the acceptance of the SiJagger V2 application at KPPBC TMP A Tangerang, including the variables PEU, PU, and BI give positive significant effect.
3. The effect of readiness and acceptance of SiJagger V2 can be seen from SiJagger V2 users getting customs and excise services faster and with a better response, better experience in accessing information so that they are satisfied with the services provided by KPPBC TMP A Tangerang and increasing state revenue from customs and excise sector from SiJagger V2 users.

6.2 Recommendations

7.2.1 Academic Aspect

From the analysis and conclusions that have been discussed, the following are academic suggestions that the authors propose for further research:

1. Further research is needed such as the application interface interrelationship variable, the background of the user's character and the characteristics of the technology studied whether it affects the acceptance of the application used.

2. Further research is needed on other standalone applications similar to SiJagger V2 which are also used in Customs and Excise Offices.

7.2.2 Practical Aspect

From the analysis and conclusions that have been discussed, the following are practical suggestions that the authors propose to improve SiJagger V2:

1. By knowing the Technology Readiness condition of the target market studied, in this research SiJagger V2 users who are in the Low Readiness category, follow-up can be made for KPPBC TMP A Tangerang customers according to these conditions. In this case, socialization and training on the use of SiJagger V2 can be carried out along with simulations of how to handle problems that are often experienced by users when using SiJagger V2 to their users.

2. Improving SiJagger V2 in terms of tool or technology resources also requires improvement in terms of human resources, both SiJagger V2 users and operators, including: increasing connection speed and application loading, speed and accuracy of response by officers who check documents uploaded by users, increasing the size of files that can be uploaded, updating security and existing features, adding service features that don't yet exist, applications that can be connected to the Ceisa 4.0 module, including the name of the officer who is handling documents, socialization and periodic retraining on how to use SiJagger V2 .

3. Conduct prior testing of the recommendations to be implemented so that these recommendations can be implemented properly. Then carried out monitoring and evaluation of the recommendations that have been made in order to optimize the implementation of improvements.

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