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Technology Readiness and Technology Acceptance of Employees of Bekasi Kota Police Office in Using Information Systems For Society Service

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ABSTRACT : This study aims to determine and analyze the readiness and acceptance of technology in Polres Metro Bekasi City employees in using information system services. This type of research is quantitative. The sampling technique used is saturated sampling in which the number of questionnaires are 106 respondents. Data collection techniques by distributing questionnaires. The respondents of this study were all employees of Polres Metro Bekasi Kota. The analytical method used is a statistical analysis method, namely Path Analysis on the Technology Readiness Acceptance Model (TRAM). The results of testing the data using the validity and reliability tests show that the data obtained is valid and reliable. Of the 11 hypotheses in the TRAM, five hypotheses are supported by research results while 6 hypotheses are not supported. Based on the proof of the hypothesis, in this study sample, the TRAM (Technology Readiness Acceptance Model) model was not fully implemented in the sample studied. Behavior intention that occurs is due to its relationship with perceived usefulness; where perceived usefulness is related to optimism and innovativeness. Perception of ease of use is related to Optimism and Insecurity; however, the perceived easy of use is not positively related to the perceived usefulness and behavioral intention.

KEYWORDS : *Information System Services, TRAM, technology readiness, technology acceptance.*

I.INTRODUCTION

Information technology has developed very rapidly both in terms of hardware and software. Information technology is a living part of almost all human activities, such as business activities, services, trade, marketing and even education. With this technology, more and more information is received and faster. In terms of services, information technology is one of the main supports for providing excellent and quality service, so that what is desired is achieved as service quality. With quality service it will give satisfaction to the service user. Some services to the public that use the information system are the Police Office which provides services including the issuance of Police Record Certificates (SKCK), Driving Licenses (SIM), Crowd Permits, Motor Vehicle Registration Certificates (STNK), Self-Report Certificates (SKLD), Certificate of Report Loss (SKTLK), Recommendation Letter for Observation Service Business Permit, Police Report Receipt Letter (STTPLP), Notification Letter on the Progress of Investigation Results (SPPHP), Notification Receipt Letter (STTP), Police Report (LP) .[1]. To be able to provide these quality services, because it uses information technology, it will depend on the ability of the executor of service activities, which depends on how ready the implementer is in using information technology and how much the executor can accept information technology.
Technology readiness is a concept developed by Parasuraman known as the Technology Readiness Index (TRI). In this concept, a person's technological readiness consists of a person's ability and perception of technology. There are four person's perceptions of technology, namely: Optimism, Innovativeness, Insecurity and Discomfort. Technological readiness has been carried out by many studies on various types of technology [2], [3], [4],[5], and the results of these studies state that the technological readiness of a group of people and using technology is not the same, that is, it varies in levels of optimism, innovativeness, insecurity and discomfort. So that it can almost certainly be said that technology readiness is unique to the use of a technology for a group of users. Thus the technology readiness index varies, depending on the user. Users here can be service providers from technology (users) or from consumers as technology users.

Technology acceptance was developed by Davis, consisting of two elements, namely perceived ease of using technology and perceived usefulness of technology. Perceived ease of use of defined technology can affect perceived useful of technology. Research on technology acceptance has also been carried out by many researchers from various countries [6],[7], [8] and [9].

The acceptance of technology by a person or group of people also varies in terms of their acceptance index. Furthermore, the TRI concept is combined with the TAM concept, so that it becomes an integrated concept into the Technology Readiness Acceptance Model concept.In this study, the TRAM concept will be applied to implementers of information technology users at police service institutions.

From the observations of researchers, the Metro Bekasi City Police officers look enthusiastic in using the information system (optimistic); in terms of innovation they always want to find out new things how to run the system easily and correctly. Metro Bekasi City Police officers feel very insecure if data is private in nature shared by other people or with their fellow friends. Bekasi city metro police officers will feel uncomfortable if there are things that significantly disturb them, such as the work environment. In the perception of usability where the Bekasi Metro Police officers really believe that using an information system can improve their performance. In the perception of ease of use, Bekasi Metro Police officers can implement and understand existing information systems easily, but there are still those who do not understand these information systems. In terms of behavioral intentions of Metro Bekasi Police officers, employees must use software in order to speed up and provide more accurate data processing than manually and all events can be traced more easily. The various conveniences or benefits obtained from this information technology, do not mean that the technology can be easily implemented, which in fact, there are many obstacles that occur in the application of information technology, which are caused by aspects of user behavior, which means that the technology user factor holds important role in the successful implementation of information technology.

Based on the problems that have been formulated, this study aims to find out that:

1. Optimism has a positive effect on perceived usefulness.
2. Optimism has a positive effect on perceived ease of use.
3. The nature of innovativeness has a positive effect on perceived usefulness.
4. The nature of innovativeness has a positive effect on perceived ease of use.
5. Insecurity has a negative effect on perceived usefulness.
6. Insecurity has a negative effect on perceived ease of use.
7. Discomfort has no effect on perceived usefulness.
8. Discomfort has a negative effect on perceived ease of use.
9. The perceived ease of use has a positive effect on perceived usefulness.
10. The perceived usefulness has a positive effect on behavioral intentions.
11. The perceived ease of use has a positive effect on behavioral intention.

II.REVIEW OF LITERATURE

Technology Readine[1]s and Technology Acceptance basically wants to see the relationship between technology usage behavior. This study also expands on previous research by investigating the impact of technology readiness and technology acceptance on police officers in using IT in public service. Technology readiness is a person's possibility to use and appreciate new technology, while technology acceptance describes a person'[1]ossibility to accept new technology in their workplace.

Technology Readiness, first introduced in the field of marketing, is how consumers interact with technology-based products. Because consumers' knowledge of new technologies is limited, w[1]h may be due to a general lack of information about new technologies, information about new technologies is incomplete, not even reaching consumers. From the information obtained by consumers, consumers react whether they are okay. ready to accept new technology in the sense that every consumer can use the new technology, and whether they can accept the existence of new technology in terms of ease of use and be[1]its of the new technology.

Basically, a person's skill in using a computer, according to Parasuraman, can be influenced by 4 character dimensio[2], namely Optimism, Innovativeness, Discomfort, and Insecurity.

- Optimism is defined as “a positive view of technology and a belief that offers people increased control, flexibility, and efficiency in their lives”[10]. It generally captures positive feelings about technology.
- Innovativeness is defined as “a tendency to be a technology pioneer and thought leader”[10]. This dimension generally measures to what degree individuals perceive themselves as the forefront.
- Discomfort is defined as “a perceived lack of control over technology and a feeling of being overwhelmed by it”[10]. This dimension generally measures the fear and concerns people experience when confronted with technology.
- Insecurity is defined as “distrust of technology and skepticism about its ability to work properly” [10]. This dimension focuses on concerns people may have in the face of technology-based transactions.

Optimism and Innovative are the drivers of technology readiness (TR). A high score on this dimension will improve overall technology readiness. Inconvenience and Insecurity, on the other hand, are a hindrance to technology readiness. A high score on this dimension will reduce overall technology readiness [11]. All suggest that the four dimensions are independent, each making a unique contribution to individual technological readiness [10].

In the discussion of technology readiness in the field of operational management, show that TRI theory can be applied out of the field marketing. In operation management, the persons who use and applied IT are as human capital and must have personal capacity in the field of IT when working use IT system. Operational management can't run properly if the IT person not capable in term have low technology readiness and low of technology acceptance.

III.RESEARCH METHOD

This type of research is causal survey quantitative research, namely systematic scientific research on parts and phenomena and their relationships. This study used a modified TRAM model questionnaire according to the circumstances of the research object. This research process was carried out in April 2022 until it was completed. This research is located at Polres Metro Bekasi Kota Jl. Pramuka No. 79, RT. 001/RW. 002, Marga Jaya, Kec.Bekasi Sel., Bekasi City, West Java 17141. The sample used in this study was the total population or employees of Polres Metro Bekasi Kota, namely 106 people.

The TRAM model in this research show in Figure 1.

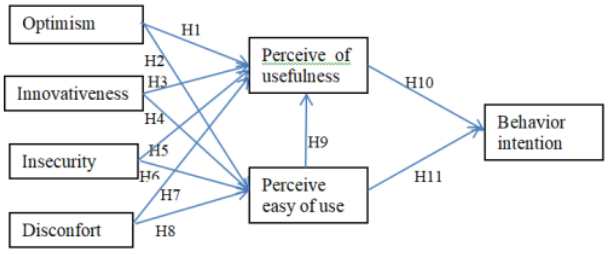

Figure 1 Research frame

Hypotheses

Hypothesis 1. Optimism has a positive relationship with perceived usefulness.
Hypothesis 2. Optimism is positively related to perceived ease of use.
Hypothesis 3. Innovativeness is positively related to perceived usefulness.
Hypothesis 4. Innovativeness is positively related to perceived ease of use.
Hypothesis 5. Insecurity is negatively related to perceived usefulness.
Hypothesis 6. Insecurity is negatively related to perceived ease of use.
Hypothesis 7. Discomfort is not significantly related to perceived usefulness.
Hypothesis 8. Discomfort is negatively related to perceived ease of use.
Hypothesis 9. Perceived ease of use is positively related to perceived usefulness.
Hypothesis 10. Perceived usefulness is positively related to Behavior intention
Hypothesis 11. Perceived ease of use is positively related to Behavior intention.
Hypothesis 10. Perceived usefullness is positively related to Behavior intention.
Hypothesis 11. Perceived ease of use is positively related to Behavior intention

IV.RESULT AND DISCUSSIONS

After the questionnaires were collected, and the data tabulated, then the validity and reliability of the data were calculated before the data was processed using path analysis in the AMOS program. The results of all calculations and discussion in the following section.

Validity test

The results of the validity test in Table 1 and Table 2 show that all statements from the questionnaire are valid.

Table1. Validity test

	Optimism (X1)	Innovativeness (x2)	Insecurity (X3)	Discomfort (X4)
Indicator	R count	R count	R count	R count
Indicator 1	0,407	0,428	0,437	0,618
Indicator 2	0,400	0,830	0,772	0,584

Indicator 3	0,467	0,645	0,687	0,574
Indicator 4	0,425	0,611	0,624	0,561
Indicator 5	0,530	0,825	0,596	0,719
Indicator6	0,422	0,559	0,597	0,507
Indicator7	0,534	0,637	0,702	0,571
Indicator8	0,507		0,560	0,451
Indicator9	0,530		0,630	0,659
Indicator10	0,592		0,523	

Source : Data compiledby SPSS versi 24

Table 2 Validity Test Perceive of easy of use (Z2) dan Perceive of usefull (Z2)

	Perceive easy of use (Z1)	Perceive of usefulness (Z2)
Indicator	R count	R count
Indicator 1	0,694	0,504
Indicator 2	0,683	0,719
Indicator 3	0,682	0,627
Indicator 4	0,619	0,599
Indicator 5	0,693	0,447
Indicator 6	0,657	0,693

Source : Data compiledby SPSS versi 24

The reliability test in table 3 shows that all variables are reliable because the Cronbach value is greater than 0.6.

Table 3 Reability test

No	Variable	*Alpha Cronbach*	Criteria	Note
1	Optimism	0,621	0,600	Reliable
2	Innovativeness	0,771	0,600	Reliable
3	Insecurity	0,814	0,600	Reliable
4	Disconfort	0,742	0,600	Reliable
5	Percive of usefull	0,753	0,600	Reliable
6	Perceive easy of use	0,632	0,600	Reliable

Source : Data compiled by SPSS versi 24

Table 4 Relationship of Variable

				Estimate	C.R.	P	Estimate Standardized
1	Perceive of usefull	←-	Optimism	.021	.745	.457	.029
2	Perceive easy of use	←-	Optimism	.015	.542	.588	.019
3	Perceive of usefull	←-	Inovativeness	.070	2.397	.017	.090
4	Perceive easy of use	←-	Inovativeness	-.052	-1.873	.061	-.065
5	Perceive of usefull	←-	Insecurity	.004	.154	.877	.006
6	Perceive easy of use	←-	Insecurity	-.028	-1.189	.235	-.043
7	Perceive of usefull	←-	Disconfort	1.138	14.351	***	1.625
8	Perceive easy of use	←-	Disconfort	.719	25.351	***	.981

				Estimate	C.R.	P	Estimate Standardized
1	Perceive of usefull	<-	Optimism	.021	.745	.457	.029
9	Perceive of usefull	<-	Perceive easy of use	-.784	-7.697	***	-.821
10	Behavior intention	<-	Perceive of usefull	.067	1.957	.050	.305
11	Behavior intention	<-	Perceive easy of use	-.003	-.105	.917	-.016

Source : Data compiled by AMOS

From the relationship between the above, it is obtained that the model consists of 11 paths. The 11 paths are composed of 11 direct paths. Direct relationship means that there are no intermediaries connecting one to another. The magnitude of the direct relationship can be determined by the equation based on the coefficient value. regression, in table 4.

Table 5. Interpretation of result

				Estimate	C.R.	P	Supported / Not supported the hypothesis
1	Perceive of usefull	<-	Optimism	.021	.745	.457	Supported
2	Perceive easy of use	<-	Optimism	.015	.542	.588	Supported
3	Perceive of usefull	<-	Inovativeness	.070	2.397	.017	Supported
4	Perceive easy of use	<-	Inovativeness	-.052	-1.873	.061	Not supported
5	Perceive of usefull	<-	Insecurity	.004	.154	.877	Not supported
6	Perceive easy of use	<-	Insecurity	-.028	-1.189	.235	Supported
7	Perceive of usefull	<-	Disconfort	1.138	14.351	***	Not supported
8	Perceive easy of use	<-	Disconfort	.719	25.351	***	Not supported
9	Perceive of usefull	<-	Perceive easy of use	-.784	-7.697	***	Not supported
10	Behavior intention	<-	Perceive of usefull	.067	1.957	.050	Supported
11	Behavior intention	<-	Perceive easy of use	-.003	-.105	.917	Not supportedg

Of the 11 hypotheses, only 5 hypotheses were supported by the research results. In this study, Optimism has a positive relationship with Perceive of usefull, meaning that employees at the police station have a positive perception of the benefits of using technology in the use of information systems for services at the police station, and believe these benefits will improve service quality. Likewise, Optimism has a positive relationship with Perceive ease of use, meaning that employees at the police station have a positive perception of the ease of use of technology in the use of information systems for services at the police station, where with the belief that ease of use will be very helpful in improving service quality. The nature of innovativeness has a positive relationship with perceived usefulness, meaning that police station employees have the ability to innovate which can support the benefits of information system technology used in providing services and improving services. On the other hand, the Innovativeness characteristic does not support perceived ease of use, in the sense that the innovative ability possessed does not support the ease of using information system technology. The nature of insecurity does not support perceived usefulness, meaning that even though police officers have insecure traits, these traits do not support beliefs about the usefulness of information systems technology. Theoretically, the relationship between insecurity and perceived usefulness should be negative, but in this study the relationship between the two is positive; meaning that insecurity is still positively related to perceived usefulness. On the other hand, insecurity is negatively related to perceivedeasy of use, which means supporting the hypothesis; this is in accordance with the theory. Beliefs of insecurity can have an impact on the perceiveeasy of use of police station employees in using information systems for services.

Discomfort is positively related to perceived usefulness, which theoretically has no significant relationship. In this study, the relationship is positive and significant, meaning that the discomfort experienced by police officers actually has a positive and significant relationship.Likewise, the relationship between discomfort and ease of use is positive and significant, meaning this is contrary to the theory that says the relationship should be negative.

Perceived ease of use has a negative relationship with perceived usefulness, where theoretically the relationship is positive. Thus the research results do not support the hypothesis. In this case, police officers, although they have beliefs about the ease of using technology, these beliefs do not positively support beliefs about the usefulness of technology.

Perceive of usefull has a positive relationship with behavior intention, this is appropriate and supports the hypothesis. In this case the belief in the usefulness of information system technology is significantly related to the intensity of behavior in using information system technology for services. In another case. Confidence in ease of use of technology is negatively related to behavior intensity, which is theoretically contrary to being positively related. In graph, the results of this study can be described as follows:

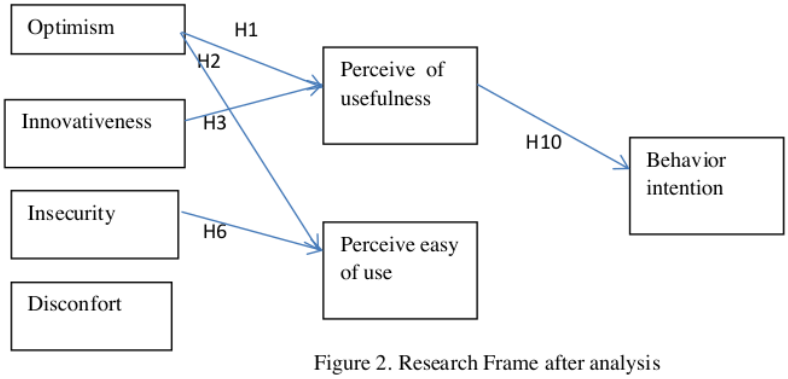

Figure 2. Research Frame after analysis

Based on the proof of the hypothesis, in this study sample, the TRAM (Technology Readiness Acceptance Model) model was not fully implemented in the sample studied. Behavior intention that occurs is due to its relationship with perceived usefulness; where perceived usefulness is associated with optimism and innovativeness. Perception of ease is related to Optimism and insecurity; however, the perceived easy of use is not positively related to the perceived usefulness and behavioral intention.

Table 6 Squared Multiple Correlations

	Estimate
Perceive easy of use	.902
Perceive of usefull	.886
Behavior intention	.086

Source : Data compiled by AMOS

Table 6 shows that the contribution of technology readiness to perceivedeasy of use is 90.2% which is related to optimism and insecurity, the contribution to perceived usefulness is 88.6% which is related to optimism and innovativeness, and the contribution of technology acceptance to behavior intention is only 8.6% which is only related to perceived usefulness. In this case the magnitude of 8.6% is very small, so that police station staff in developing behavior intentions are still heavily influenced or related to other variables besides Technology readiness variables and Technology acceptance variables such as: employee knowledge about information system technology, educational background of employees, having to work using technology, technological environment, etc., which have not been included in this study. Thus this research can be considered as an initial study on a sample of police stations, and of course it can be continued by adding other variables besides the variables in technology readiness and technology acceptance. Thus the TRAM model can be developed further.

V.CONCLUSSIONS

This study aims to find out the relationship between optimism, innovativeness, insecurity, disconfort and perceived ease of use and perceived usefulness towards to the behavior intention of Metro Bekasi City Police officers. The contribution of technology readiness and technology acceptance to the behavior intention of Bekasi Metro Police employees for their information system services is only 8.6%, which is still very low. Based on the results of the data analysis that has been done, the following conclusions can be drawn:

1. There is a positive relationship between the optimism variable and perceived usefulness
2. There is a positive relationship between the optimism variable and the perceived easy of use.
3. There is a positive relationship between the Innovativeness variable and Perceived Usefulness

4. There is no positive relationship between the Innovativeness variable and Perceived easy of use
5. There is no negative relationship between the variable Insecurity and Perceived_usefulness
6. There is a negative relationship between the variable Insecurity and Perceived_easy of use
7. There is no significant relationship between the Discomfort variable and the perceived usefulness
8. There is no negative relationship between the Discomfort variable and the Perceived Ease of use
9. There is no positive relationship between perceived ease of use and perceived usefulness
10. There is a positive relationship between the variable Perception_usefulness and behavioral intention
11. There is no positive influence between the Perception_easy of use variable and the behavioral intention variable

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