
Determination of Information Technology Utilization in Local Regulation Enforcement

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ABSTRACT

The rapid development of digital technology has encouraged government institutions to implement digital transformation in order to improve the effectiveness and efficiency of public services. In the context of *regional regulation enforcement*, the Civil Service Police Unit (*Satuan Polisi Pamong Praja / Satpol PP*) plays a strategic role in maintaining public order and ensuring legal compliance within *regional governance*. However, the utilization of information technology within *Satpol PP* institutions is still influenced by several factors, including digital transformation, employee knowledge, and organizational readiness. This study aims to analyze the influence of digital transformation, knowledge, and organizational readiness on the utilization of information technology in supporting the enforcement of *regional regulations* within the East Java Provincial *Satpol PP*. The research employed a quantitative approach using survey methods. Data were collected through questionnaires distributed to 66 *Satpol PP* employees selected using random sampling. The data were analyzed using descriptive statistics, validity and reliability tests, classical assumption tests, and multiple linear regression analysis using SPSS software. The results show that digital transformation and organizational readiness have a significant positive influence on the utilization of information technology. Meanwhile, knowledge does not significantly affect the adoption of information technology. Organizational readiness was found to be the most dominant factor influencing technology utilization within the institution. This study concludes that strengthening digital transformation strategies and improving organizational readiness are essential for optimizing the use of information technology in supporting effective and responsive enforcement of *regional regulations*.

INTRODUCTION

Digital transformation in the public service sector requires State Civil Apparatus (ASN) to not only act as administrative implementers but also be able to utilize technology, to improve public services in various sectors (Zubaidah, 2024). Digital government positions technology as a primary enabler in improving the quality of public policies and services (OECD, 2025). The Civil Service Police Unit (Satpol PP) as part of the regional apparatus that has a strategic role in enforcing regional regulations, maintaining public order, and protecting the community (Kemenkumham, 2018) is required to have a fast, accurate and coordinated response in dealing with the complexity of social problems in urban and rural areas. It is time to utilize information technology as part of public services (Kemenkumham, 2009). In addition, the presence of Satpol PP in the implementation of Regional Government is expected to help provide legal certainty and expedite the development process in the Region through the enforcement of Regional Regulations and Regional Head Regulations (Heru, 2023).

Enforcement of Regional Regulations (Perda) is a crucial element in realizing good governance and providing legal certainty for the public (Oktaviola A. &., 2022). Improved coordination, standardized filing, and ongoing training for civil servant investigators are crucial to ensure optimal and responsive enforcement of Perda (Trisna Agus Brata, 2025).

A significant challenge today is utilizing information technology in digital transformation (Mochammad Zulvikri, 2024), (Presidential Decree, 2018). Organizations that successfully adopt and integrate information technology into their business processes tend to have higher competitiveness compared to those that have not yet transformed (Fatarolius Harefa, 2025). Organizations that successfully adopt and integrate information technology into their business processes tend to have higher competitiveness compared to those that have not yet transformed (Muhamad H. Rahmadi, 2025).

The performance of Satpol PP is greatly influenced by various aspects, such as income, motivation, work environment, and of course varies from region to region, depending on demographic conditions (Harris Sinurat, 2022). However, the implementation of information technology within the Satpol PP environment currently needs to be reviewed so that public services in the current digital era can be fully optimized (Oktaviani, 2023). The limited digital competence of Satpol PP ASN, the digital literacy gap, and organizational readiness in providing IT infrastructure, regulations, and the adoption of integrated information technology systems (DeLone, 2003) have not fully implemented according to the provisions of the Minister of Home Affairs Regulation No. 17 of 2019 (Ministry of Home Affairs, 2019).

Bureaucratic reform has become a key agenda for the government in its efforts to create good governance (Umami, 2025). One crucial aspect of good governance is effectiveness and efficiency in government management (Oktaviola D. &, 2022). Effective and efficient governance is essential to ensure sustainable, equitable development across all regions (Wijaya, 2022). In this regard, information and communication technology innovation is a crucial instrument for supporting bureaucratic reform, especially in the rapidly evolving digitalization era (Yoen, 2021). Digital transformation not only demands bureaucratic efficiency but also requires government officials to adapt to data-based work patterns, information systems, information technology devices, and digital services (Osborne, 2006). In regional governments, the success of digital transformation is largely determined by organizational readiness and the competence of civil servants (ASN) as the primary implementers of public policy (Wahyuni, 2024).

The government's digital transformation is also heavily influenced by the role of leadership (Sacavém et al., 2025; Senadjki et al., 2024). Leaders who possess the ability to lead and utilize digital technology assist in the creation of innovations to improve public services (Evans E.W. Tulungen, 2022).

Knowledge emerges from the cognitive process that occurs after a person perceives an object (Notoatmodjo, 2022). Knowledge is usually formed holistically and plays a significant role in influencing a person's behavior or actual actions (over-behavior) (A Aksenta, 2023). Public Order Agency (Satpol PP) officers, including those in the enforcement of regional regulations (Perda) and regional head regulations (Perkada), must possess the necessary knowledge to understand legal products.

Organizational readiness is also a crucial variable for optimal changes in public service business processes (Elisa Eunike Lumintang, 2021), particularly in bureaucratic reform (Oktaviola A. &, 2022). In the TOE framework (Tornatzky L.G., 1990), the adoption and utilization of information technology in organizations are influenced by, among other factors: technology, organization, and the environment. TOE is widely used in studies of information system adoption

and technological innovation due to its strong theoretical foundation, consistent empirical support, and flexibility for application in various research contexts (Syahrul Naufalrafa, 2025).

This study sampled data from the East Java Province Public Order Agency (Satpol PP) in December 2024. The data was used to measure several indicators, including digital transformation, knowledge, and organizational readiness. This was done to ensure performance assessments were achieved (Lestari N, 2021). The results of this study can be used by the central and regional governments to prioritize the development of digital government transformation based on their database and organizational readiness (Abrori, 2024). These steps include:

- 1) Analyzing the influence of digital transformation on the use of information technology (Royyana, 2021).
- 2) Identifying the level of knowledge literacy of Civil Service Police Unit (Satpol PP) regarding the use of information technology (Albunsyary, 2021).
- 3) Assessing the readiness of the Satpol PP organization in adopting and using information technology to support the enforcement of Regional Regulations (Tornatzky L. G., 1990).

Readiness to embrace digital transformation, employee knowledge of operating applications, and the condition of information technology infrastructure are crucial for utilizing technology to enforce Regional Regulations to support the duties of the Public Order Agency (Satpol PP) (Mustafa Fahmi, 2024). Employees with a good understanding of technological developments will be better able to optimize the use of information systems and digital applications in the collection, processing, and presentation of data and information (OECD, 2025). The availability of infrastructure, applications, and human resources that support the effective and efficient implementation of information technology is crucial in public services, particularly in public protection (Royyana, 2021).

Technology acceptance factors enable organizations to respond more quickly and flexibly to market changes, better meet community needs, and create greater added value (Davis, 1989). According to Plato (Saettler, 2004), technology and scientific knowledge are closely related. Meanwhile, Abdulhak (2003) defines technology as the application of systematically structured knowledge that is essential to an organization.

Based on the highly dynamic technological developments related to the issues outlined and the variables that can be used, the researcher is interested in examining this issue so that decision-making regarding budget utilization can be prioritized based on test data through analysis of the dimensions of knowledge, digital transformation, and information technology within the Public Order Agency (Satpol PP), particularly in East Java Province. The novelty of this research is the addition of knowledge literacy identification for the Satpol PP. Satpol PP, as enforcers of regional regulations, has rarely been studied from the perspective of information technology adoption. Furthermore, theories and indicators using three dimensions are used specifically to examine the use of information technology in the enforcement of regional regulations, not just public administration services. The hypotheses in this study are as follows:

- 1) H1: Digital transformation influences the use of information technology by the Satpol PP of East Java Province
- 2) H2: Knowledge influences the use of technology by the Satpol PP of East Java Province
- 3) H3: Organizational readiness influences the adoption of information technology by the Satpol PP of East Java Province.

RESEARCH METHODS

This study used a quantitative approach. Quantitative research is commonly applied to examine specific populations or samples and to analyze relationships between variables. The data sources used in this study were primary data obtained through questionnaires distributed to respondents, as well as supporting documentation. The study population consisted of 190 employees of the East Java Province Public Order Agency (Satpol PP) (Jatim, 2026).

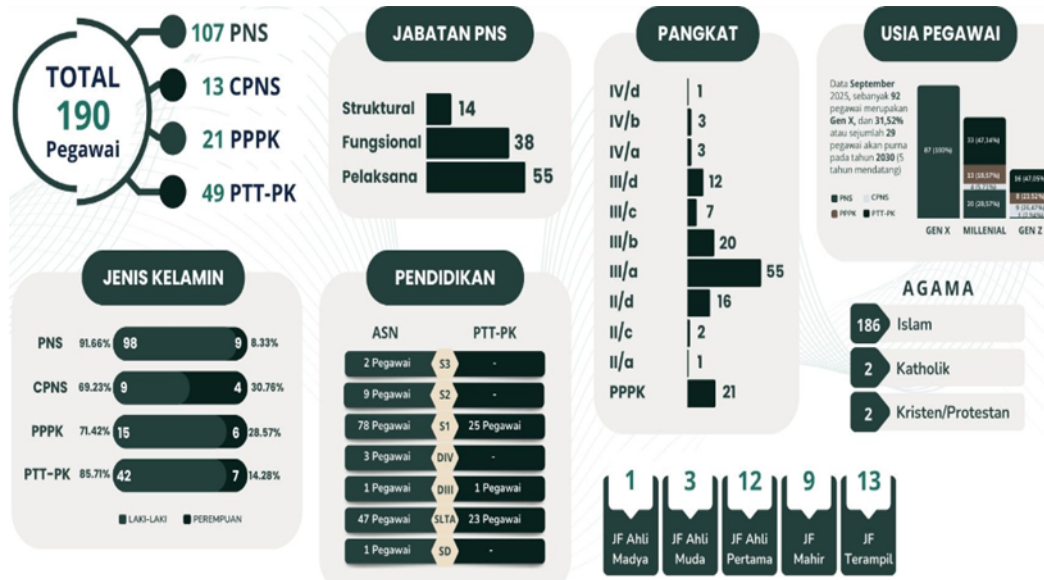


Figure 1. Data on the Distribution of Satpol PP Employees in East Java Province

The sampling technique used in this study was random sampling. The sample size was calculated using the Slovin formula (Sugiyono, Quantitative, Qualitative, and R&D Research Methods, 2016).

$$n = \frac{N}{1 + Ne^2}$$

Figure 2. Slovin Formula

Description :

n = number of samples

N = total population

e = error tolerance (set to 10%)

So based on the results of the calculation

$$n = \frac{190}{1 + 190(0,1)^2} = 66$$

This study set an error tolerance of 10%. So, the total result of the sample calculation using the slovin formula was 65.5 equivalent to 66 samples.

The measurement scale used in this questionnaire research is the Likert Scale (Table 1).

Table 1. Likert Assessment Criteria

Scale	Code	Value
Strongly agree	SS	5
Agree	S	4
Hesitation	R	3
Disagree	TS	2
Strongly Disagree	STS	1

The instrument testing in this study used validity testing to measure the degree of accuracy between the data obtained from the research object and the measurement instrument used by the researcher. Therefore, the Pearson Product Moment coefficient formula was used to test the validity of the research instrument. The validity of a statement was determined through a significance test by comparing the calculated *r* value with the tabulated *r* value. If the calculated *r* was greater than the tabulated *r* and the resulting value was positive, the statement indicator was considered valid (Ghozali, 2018).

The data collection process was conducted through observation, questionnaire distribution to employees of the East Java Provincial Public Order Agency (Satpol PP), and documentation. Observation involved direct and indirect researcher involvement in the research focus using observation sheets or similar instruments (Hasanah, 2021). Questionnaires were used to collect data by providing a number of written questions or statements to predetermined respondents (Sugiyono, 2005). This method was considered appropriate because the study involved a relatively large number of respondents. In addition, the documentation method was used to obtain supporting data by examining documents related to the research (Sugiyono, 2017).

This research aimed to analyze the influence of several independent variables on a dependent variable. The independent variables consisted of X1 (digital transformation), X2 (knowledge), and X3 (organizational readiness), while the dependent variable was Y (the adoption of information technology by the East Java Province Satpol PP). The operationalization of these variables was used to clarify the dimensions and indicators applied in the study.

Table 2. Operational Concept

No	Variabel	Indicator	Code
1	2	3	4
1	Human Resources (X1)	1. Employee qualifications. 2. skills and knowledge of employees.	X1.1 – X1.2
2	Process (X1)	1. Operational Efficiency. 2. Error Reduction.	X1.3 – X1.4

No	Variabel	Indicator	Code
3	Strategy (X1)	1. Innovation and Adaptation. 2. Leadership and employee engagement in Digital Initiatives.	X1.5 – X1.6
4	Structure (X1)	1. Management level. 2. Task divisions by function, product, or region. 3. Formation of a working group.	X1.7 – X1.10
5	Know (X2)	1. Knowledge of technology. 2. Training or courses that employees attend. 3. knowledge of the use of technological devices.	X2. 1 – X2. 3
6	Comprehension (X2)	1. Business understanding of the enforcement process of the Regional Regulation. 2. Understanding of policies and procedures related to the Regional Regulation. 3. Understanding of the enforcement of local regulations.	X2.4 – X2.6
7	Aplication (X2)	1. Knowledge to solve the problem of enforcing local regulations. 2. The level of use of technology.	X2.7 – X2.8
8	Analysis (X2)	1. Identify parts of an information or object. 2. Grouping decisions based on specific criteria.	X2.9 – X2.10
9	Syntesis (X2)	1. Formulate new ideas or theories based on existing information. 2. Develop a plan or strategy from a variety of different components.	

No	Variabel	Indicator	Code
			<i>X2.11 – X2.12</i>
10	<i>Evaluating (X2)</i>	1. Determine criteria to assess community satisfaction. 2. Provide assessments based on critical analysis of digital services	<i>X2.13 – X2.14</i>
11	Technology (X3)	1. The benefits of technology. 2. The difficulty level of technology use. 3. Infrastructure readiness	<i>X3.1 – X3.3</i>
12	Organization (X3)	1. Leadership Support. 2. IT Skills & Training. 3. Organizational culture 4. Financial resources	<i>X3.4 – X3.7</i>
13	Environment (X3)	1. Regulatory support. 2. External pressure. 3. Public demands	<i>X3.8 – X3.10</i>
14	<i>Perceived Ease of Use (Y1)</i>	1. Easy to learn 2. Controllable 3. System interaction is clear and easy	<i>Y1.1 – Y1.3</i>
15	<i>Perceived Usefulness (Y1)</i>	1. Faster work 2. Performance enhancement 3. Effective	<i>Y1.3 – Y1.6</i>
16	<i>Attitude Toward Using(Y1)</i>	1. Happy when using a tech device 2. Facilitate in the completion of work 3. No tedious use of technology/application devices.	<i>Y1.7 – Y1.9</i>

No	Variabel	Indicator	Code
17	<i>Behavioral Intention to Use (Y1)</i>	1. Try to use every available technological feature. 2. A sense of wanting to continue using. 3. Plan to continue using	<i>Y1.10 – Y1.12</i>
18	<i>Actual System Use (Y1)</i>	1. Actual use. 2. True frequency 3. User satisfaction	<i>Y1.13 – Y1.15</i>

According to Fadjarajani et al. (2020, p. 78), data analysis techniques using statistical methods are divided into two types: descriptive statistics and inferential statistics. This study employed inferential statistical analysis to examine the relationships between variables based on questionnaire responses collected from the selected sample. Data analysis of the variables across the tested dimensions was conducted using SPSS version 26 (IBM, 2019).

The statistical testing procedures were as follows:

1. Descriptive statistical test
2. Research Instrument Test (Validity Test and Reliability Test)
3. Classical Assumption Test (Normality Test)
4. Multiple Linear Regression Test, and
5. Hypothesis test (t-test).

RESULTS AND DISCUSSION

Instrument testing is an important stage in quantitative research which aims to ensure that the measuring instrument used is truly capable of producing accurate and consistent data (Sugiyono, 2016).

Descriptive Statistical Test

Descriptive statistics are used to analyze data by describing or depicting the data that has been collected without intending to draw broader conclusions (Sugiyono, 2017).

Table 3. Descriptive Statistical Test Table

	N	Minimum	Maximum	Mean	Hours of deviation
Digital Transformation	66	18.00	45.00	38.9149	7.81534
Knowledge	66	29.00	70.00	59.2128	12.58180
Organizational Readiness	66	12.00	60.00	51.2979	11.91440
Utilization of Information Technology	66	12.00	40.00	33.4043	8.28739
Valid N (listwise)	66				

Validity Test

Validity testing indicates that an instrument has a high degree of validity if the results are accurate, while irrelevant data indicates a low level of validity (Ghozali, 2018). In this validity test, the researcher used SPSS Version 26 with an α -level of 5%. This indicates that the test results are valid if the calculated r obtained from the validity test is greater than the table r with a confidence threshold of 95%.

Based on the validity test results, with a sample size of 66 people, the table r used was 0.287. The calculated r level for each variable and all items in the questionnaire was greater than the table r . Therefore, based on the validity test results, the researcher concluded that all items in each questionnaire were valid.

Reliability Test

Testing research instruments with reliability tests is useful in measuring a questionnaire that has been processed by researchers to be assessed as having indicators of a variable. Reliability testing is a measuring tool in obtaining consistent results from measuring instruments with reliable and consistent results so that reliable results can produce the same analytical test. (Ahmaddien I. &, 2019) states that reliability is shown in numerical form, if the coefficient is high, the consistency or reliability of answers by respondents is also high. Therefore, researchers use the Cronbach's Alpha formula, a method that is useful for assessing a variable's reliability if the Cronbach's Alpha value is $>60\%$ or 0.60. The following is a table of the results of the reliability test tested in the study, namely:

Table 4. Reliability Table X1

Reliability Statistics	
Cronbach's Alpha	N of Items
.976	9

The Cronbach Alpha value is $0.976 > 0.60$, so the results show that the data is reliable.

Table 5. Reliability Table X2

Reliability Statistics	
Cronbach's Alpha	N of Items
.978	14

The Cronbach Alpha value is $0.978 > 0.60$, so the results show that the data is reliable.

Table 6. Reliability Table X3

Reliability Statistics	
Cronbach's Alpha	N of Items
.988	12

The Cronbach Alpha value is $0.988 > 0.60$, so the results show that the data is reliable.

Table 7. Reliability Table X4

Reliability Statistics	
Cronbach's Alpha	N of Items
.985	8

The Cronbach Alpha value is $0.985 > 0.60$, so the results show that the data is reliable

Based on the results of the above reliability test, it was obtained that the three variables used in this study, namely X1, X2, X3 and Y1, were declared to be reliable. This result is based on the value of the reality coefficient of the three variables having a value greater than Croncbah's Alpha value.

Normality Test

The normality test is carried out to obtain the residuals of a regression model that are normally distributed or not. The normality test according to (Ahmaddien I. &., 2019) is a test to determine whether the independent, dependent, or both variables are normally distributed, close to it, or not. In this test, it is oriented to obtain normally distributed data results. In testing this instrument, the researcher used the non-parametric Kolmogorov-Smirnov (1-KS) statistical test using the SPSS Version 2.6 program. Data can be said to be normal if the significance level is >0.05 . The following table shows the results of the 1-KS test tested in this study.

Table 8. Normality Test Table

N		66
Normal Parameters ^{a,b}	Mean	-.0347828
	Hours of deviation	4.40958230
Most Extreme Differences	Absolute	.108
	Positive	.094
	Negative	-.108
Test Statistic		.108
Asymp. Sig. (2-tailed)		.200 ^{c,d}

- Test distribution is Normal.
- Calculated from data.
- Lilliefors Significance Correction.
- This is a lower bound of the true significance

The 1-KS test that has been carried out by the researcher is based on the Sig value. Based on the table above, the Sig value is obtained at 0.200. So that by paying attention to the requirements of the 1-KS test, the data used in this study was declared to be distributed normally with a sig result of $0.200 > 0.05$. The value of the Classical Assumption is $0.200 > 0.05$, then the result shows that the data is normally distributed.

Table 9. Multicollinearity Test Table Coefficients^a

	Model	Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Digital Transformation	.487	2.053
	Knowledge	.406	2.464
	Organizational readiness	.344	2.908

The VIF value indicates a value smaller than 10, then the result shows that the data has passed the classical assumption of multicollinearity.

Linear Regression Equation Test

The multiple linear regression analysis test is a test of the instrument of a linear model by considering the number of independent variables, namely >1 (Sidik, 2024). The multiple linear test is useful for determining the effect of an independent variable, namely X, on the dependent variable, namely Y. In this study, there are three variables, namely the independent variable including X1 Digital transformation, X2 is knowledge, X3 is organizational readiness and the independent variable, namely Y1 is the Utilization of Information Technology. The following is a table of the results of the multiple linear regression analysis regression test carried out using the SPSS program.

Table 10. Linear Coefficient Regression Equation Test Table

Unstandardized Coefficients			Standardized Coefficients	t	Sig.
Model	B	Std. Error	Beta		
1 (Constant)	-2.590	2.808		-.922	.362
Digital Transformation	.251	.094	.237	2.667	.011
Knowledge Literacy	.006	.064	.009	.092	.927
Organizational Readiness	.504	.074	.725	6.857	.000

Through the multiple linear regression equation, the researcher obtained the results of data interpretation, namely:

1. The value of the constant in this equation is -2.590. This indicates that if all independent variables (x_1, x_2, x_3) are zero, then the value of Y will be equal to -2.590.
2. A coefficient of 0.251 for the variable x_1 indicates that every 1-unit increase in x_1 will increase the value of Y by 0.251, assuming the other variables remain constant.
3. A coefficient of 0.006 for the variable x_2 means that every 1-unit increase in x_2 will increase the value of Y by 0.006, assuming the other variables are fixed.

A coefficient of 0.504 for the x_3 variable indicates that every 1-unit increase in x_3 will increase the Y value by 0.504, assuming the other variables remain constant.

Partial Hypothesis Test (T Test)

Partial hypothesis testing, namely the T-test, is an attempt to test the hypothesis being studied by testing the effect of each dependent variable partially on the independent variable (Ahmaddien I.

&., 2019). This hypothesis testing aims to test the truth of the hypothesis of a study that states there is no difference between the two mean samples taken (Munawwarah, 2025). The T-test is used to see the level of significance in testing the hypothesis of a study by looking for the T-Statistics value (Yam, 2021). Hypothesis testing is guided by t according to (Sugiyono, 2016), and partial hypothesis testing has criteria in taking the results of the hypothesis test, namely if the requirement H_0 is rejected and H_a is accepted if $t_{\text{count}} > t_{\text{table}}$ then H_0 is rejected and the requirement H_0 is accepted and H_a is rejected is $t_{\text{count}} < t_{\text{table}}$. The t-test carried out in this study partially looks at the variables of digital transformation, knowledge, and organizational readiness influencing the variable of adoption of information technology utilization and the results are presented in the table below, namely:

Table 11. Partial Secra Hypothesis Test Table
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-2.590	2.808		-.922	.362
Digital Transformation	.251	.094	.237	2.667	.011
Knowledge Literacy	.006	.064	.009	.092	.927
Organizational readiness	.504	.074	.725	6.857	.000

Based on the table above, it is known that:

- The Digital Transformation variable (X1) shows a calculated t value of 2.667, which is greater than the table's t of 1.678. This indicates that Digital Transformation (X1) has a significant effect on the dependent variable (Y) at a significance level of 0.05.
- The Knowledge variable (X2) has a calculated t value of 0.092, which is smaller than the t table of 1.678. Thus, it can be concluded that Knowledge (X2) does not have a significant effect on the dependent variable (Y) at the same level of significance.
- The Organizational Readiness variable (X3) obtained a calculated t value of 6,857, which is greater than the table t of 1,678. Based on these results, it can be concluded that organizational readiness (X3) has a significant effect on the dependent variable (Y) at a significance level of 0.05.

Correlation Coefficients

The correlation coefficient is an analytical tool useful for displaying the closeness of the relationship between independent variables and dependent variables (Sugiyono, 2017). The correlation coefficient is useful in measuring the association between two variables whose values are in the range of +1 to -1. In measuring the correlation coefficient, it is based on Guilford's criteria and the level of influence presented in the following table (Guilford, 1956):

Table 12. Correlation Interpretation Table

Interval Cowphysin	Influence Level
0,8 – 1	Very Powerful
0,6 – 0,79	Strong
0,40-0,599	Quite Powerful
0,00-0,199	Weak
0,20-0399	Very weak

In the correlation coefficient test in this study, the results shown in the following table were obtained:

Table 13. Tabel Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.914a	.835	.823	3.48608	1.892

a. Predictors: (Constant), x3, x1, x2

b. Dependent Variable: y

The Model summary table above shows a correlation value of 0.914 which states that there is a relationship between the dependent variables of digital transformation, knowledge, and organizational readiness with the independent variable, namely the use of information technology. Based on the reference table for correlation interpretation, the magnitude of the correlation value (R) is 0.914 which indicates a strong positive relationship between the variables X1, X2 and X3 and the variable Y1.

CONCLUSION

The results of the data analysis indicated that, among the three examined dimensions—digital transformation, knowledge, and organizational readiness—two variables significantly influenced the use of information technology in supporting the enforcement of Regional Regulations by the East Java Provincial Satpol PP. Digital transformation showed a significant effect on the readiness for information technology adoption ($t = 2.667 > t\text{-table} = 1.678$), while organizational readiness demonstrated the strongest significant influence on the use of information technology ($t = 6.857 > t\text{-table} = 1.678$). In contrast, knowledge did not have a significant effect on the readiness to adopt or utilize information technology ($t = 0.92 < t\text{-table} = 1.678$). These findings suggest that institutional transformation and organizational preparedness play a more decisive role than individual knowledge in encouraging technology utilization within the organization. Future research is recommended to explore additional factors—such as leadership support, digital training, technological infrastructure, or organizational culture—to better understand other determinants influencing information technology adoption in Satpol PP and similar public sector institutions.

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