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E-Government Service for Driving Digital Creative Economy in Developing Region: Perspective of Technology Readiness Index and PLS-SEM

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***Abstract*—E-government plays an important role in digital economic transformation by improving access to public services and driving economic growth. One implementation in West Papua Province is Rumahekraf, a digital marketing platform for creative economy players in the local region. However, the adoption of this platform is still low, and not many studies have examined factors that influence public acceptance of this service. Therefore, this study aims to identify factors that contribute to and inhibit users' intentions to adopt this platform in West Papua. We combine the Technology Readiness Index (TRI) and Technology Acceptance Model (TAM) to understand this phenomenon. Data was gathered via an online survey utilizing Google Forms, consisting of 157 merchants/business owners. The information was examined employing Partial Least Squares Structural Equation Modeling (PLS-SEM). The research indicates that innovativeness, perceived ease of use (PEOU), and facilitating conditions play an important role in increasing users' intention to adopt Rumahekraf (R^2 = 59.4%). Additionally, PEOU also contributes to increased perceived usefulness (PU) (R^2 = 41.1%), which in turn strengthens the benefits perceived by users (R^2 = 55.7%). Optimism significantly affects PEOU but not usefulness. Meanwhile, insecurity and discomfort were not found to be major barriers to the adoption of this platform. This research provides insights for local government and platform development in improving the effectiveness of e-government implementation in West Papua by providing more adequate infrastructure and increasing public trust in the platform.**

***Index Terms*—Digital creative economic transformation, e-government, rumahekraf, technology acceptance model, technology readiness index.**

I. INTRODUCTION

The development of Information and Communication Technology (ICT) has brought major changes in various aspects of life, including the government and economic sectors. Technology not only simplifies the accessibility of information but also creates new possibilities for enhancing the efficiency and transparency of public services [1], [2]. One emerging innovation is e-government, which applies ICT to deliver public services digitally. The success of e-government in promoting the digital economy depends heavily on technological and infrastructural availability, especially in developing regions like West Papua, a rapidly growing province in Indonesia [3].

West Papua is a developing province in Indonesia, with multiple sectors driving its economic growth. West Papua faces infrastructural challenges that influence its technological readiness. This readiness, along with the government's ability to leverage ICT, plays a critical role in successful e-government implementation [4]. Understanding technological readiness helps the government design better strategies to overcome barriers and harness e-government's potential in West Papua. One form of e-government implementation in West Papua is the Rumahekraf platform, developed by the Culture and Tourism Office. This platform supports creative economy actors through services like online product marketing, helping them expand their market reach, enhance competitiveness, and comply with regulations.

However, the implementation of the e-government service in the region faces various challenges. Challenges such as limited infrastructure, low digital literacy, and unequal internet access hinder the effectiveness of digital services and slow adoption [5]. The research seeks to identify factors that contribute and inhibit users' behavioral intents to adopt a platform in West Papua, with the hope of helping the government to increase the adoption of Rumahekraf. Thus, to better understand these adoption dynamics, this study employs the Technology Readiness Index (TRI) a framework used to

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assess individuals' motivation and preparedness to embrace digital services. This is conducted by identifying optimism and willingness to innovate as motivators, while recognizing uncertainty and discomfort as barriers to adoption. For example, if insecurity towards technology is the dominant factor hindering adoption, then efforts are needed to increase public trust through digital education and improve system security. Therefore, mapping technology readiness using TRI can be the first step in designing more appropriate policies in implementing e-government in West Papua.

In addition to TRI, this research also harnesses the Technology Acceptance Model (TAM) and introduces facilitating conditions as key external variables [6], [7]. These conditions include the accessibility of infrastructure, technical assistance, and resources needed. When the environment is supportive, users will be more motivated to adopt technology. Conversely, even if users are interested, implementation can be hindered if these conditions are not met. Therefore, it is crucial to ensure adequate infrastructure and support are in place so that Rumahekraf can operate effectively.

This study is based on various prior studies that have analyzed the acceptance of technologies in different contexts. Reference [8] investigated the willingness to adopt information technology (IT) among micro, small and MSMEs in the Indonesian furniture sector using the TAM and TRI to identify factors influencing technology adoption. Meanwhile, [9] analyzed how user acceptance of a technological innovation is influenced by TRI factors namely optimism, innovativeness, insecurity, and discomfort, by integrating them into the Technology Acceptance Model (TAM) to form the TRAM model. Also, [10] explored technology readiness and acceptance among craft MSMEs. Research by [11] combined UTAUT and TRI theories to understand technology adoption more comprehensively and provide recommendations for policy makers to increase e-Government adoption.

In contrast to previous research, this study not only examines TRI and TAM factors, also uses behavioral intention as the dependent variable, while previous studies often use Actual Use or Intention to Use. This approach provides new insights into factors that shape technology adoption in West Papua, offering practical recommendations for enhancing the effectiveness and reach of the Rumahekraf platform.

II. THEORETICAL BACKGROUND

A. E-government Service technology adoption

Various factors, both internal and external, influence how technology is implemented [12]. Then[13] mentioned in their paper that effective information systems and technology deployment is crucial to understanding technology acceptance issues. Technology adoption can stem from individual traits and perceptions of technology itself [14]. A person's preparedness influences how readily they adopt new technologies [12]. Users' perceptions of technology features shape their acceptance behavior [13].

Governments must consider both user readiness and technology characteristics to ensure successful digital service adoption. This knowledge helps regions embrace and use digital government services. Information and communication technology is essential for government service uptake.

E-government services leverage ICT to increase public service quality, transparency, and citizen involvement [15]. This service helps creative economy actors access information, cooperate, and promote their goods on Rumahekraf. The acceptance of e-government services depends on ease of use, perceived benefits, and available support [16], [17].

B. Technology Readiness Index (TRI)

TRI theory was developed by Parasuraman. In his studies, Parasuraman established how crucial user preparation is for the acceptance or use of the technology. It proposes that an individual's interaction with new technology simultaneously presents different (i.e. beliefs, perceptions, feelings and motivations), which can be categorized into four psychographic factors [18]. While the two negative aspects of discomfort and insecurity function as barriers to people's adoption of new technology, the two positive factors of optimism and innovativeness serve as positive motivators. The optimistic view that technology may improve everyday life's efficiency, control, and flexibility is known as optimism. The inclination to be a thought leader or pioneer in testing cutting-edge technology based on cutting-edge services or goods is shown in innovativeness. Discomfort is a reflection of one's sense of powerlessness, and insecurity is a term used to describe people's mistrust of technology, which arises from uncertainties about its functionality and worries about possibly negative outcomes. However, it should be noted that these positives and negatives do not necessarily indicate a person's competence in using technology [15], [18]. Technology readiness is used in several literatures for technology acceptance in various contexts [8], [9], [10]. Research also uses technology readiness to examine factors influencing e-Government service use [11]. Therefore, ensuring people's technological readiness is important to understand the extent to which they are ready to accept and utilize e-Government services.

C. Technology Acceptance Perspective

The Technology Acceptance Model (TAM), developed as an extension of the Theory of Reasoned Action (TRA) by Fishbein and Ajzen in 1980, examines the factors influencing technological acceptability [19]. According to Davis's 1989 TAM emphasizes that perceived usefulness and ease of use drive technology acceptance [20]. These two aspects influence users' behavioural intention to utilize technology [21]. Facilitating factors, such as technical support and access to resources, strengthen the relationship between PEOU, PU, and behavioural intentions [22]. In research [23], [24], [25]. The acceptability of wearable technology is examined using TAM. Naturally, the diverse studies integrate TAM with other external factors that are specific to their own study goals. To ensure community acceptance of technology, knowing Rumahekraf platform usage aspects is crucial.

D. Behavioural Intention

The individual's behavioral intention explains how they'll employ technology. Perceived usefulness, ease of use, and support conditions shape behavioral intention toward

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Rumahekraf. Positive perceptions of a platform increase the likelihood of long-term utilization [18], [24]. Therefore, ensuring that the Rumahekraf platform has a user-friendly interface, relevant features, and adequate technical support are factors to increase public interest and trust in utilizing digital services.

III. Research Model and Hypotheses Development

This research framework utilizes the TRI model, and the TAM is extended with variables such as optimism, and innovativeness as driving factors, while insecurity, and discomfort as inhibiting factors. Perceived ease of use and perceived usefulness variable is used as a mediator between the independent and dependent variables. Facilitating conditions are external factors that impact technology adoption. Behavioral intentions are used as dependent variables to measure how much users want to use the Rumahekraf platform.

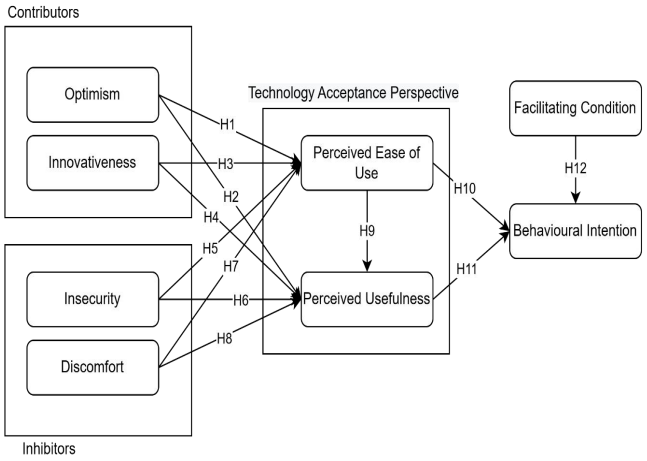

Fig. 1. Research model.

According to the conceptual framework, all variables are connected. Positive attitudes about technology and the belief that it would increase flexibility, productivity, and quality of life represent optimism [18]. Positivity increases perceived usefulness and ease of use [18]. Previous research reveals that optimism influences e-government service perceived usefulness and ease of use to adopt Rumahekraf. Thus, this study's hypotheses one and two are:

H1: Optimism has a significant influence on the perceived ease of use in using the Rumahekraf platform.
H2: Optimism significantly affects perceived usefulness in using the Rumahekraf platform.

According to [18], one factor that influences a person's willingness to adopt new technologies is their level of innovativeness. In line with [27], it claims that innovative people grasp and adapt to new technology better. Innovative people may see the Rumahekraf platform as simple to use, which might improve their assessment of its utility and use. Thus, this study's third and fourth assumptions are:

H3: Innovativeness has a significant influence on the perceived ease of use in using the Rumahekraf platform.
H4: Innovativeness significantly affects perceived usefulness in using the Rumahekraf platform.

Insecurity can cause fear in using technology, so it can affect perspective ease of use and perspective usefulness. According to [15] insecurity is related to user concerns about privacy and data security, so it can reduce user perceptions of the simplicity and usefulness of technology. Based on previous statements, we assume that insecurity influences perceived ease of use and usability. Therefore, hypotheses five and six in this study are:

H5: Insecurity has a significant influence on the perceived ease of use in using the Rumahekraf platform.
H6: Insecurity significantly affects perceived usefulness in using the Rumahekraf platform.

According to [28], it discovered that consumers' opinions of a technology's usability and perceived usefulness may be impacted by discomfort with it, such as nervousness and a lack of confidence. Users tend to rate technology as hard to comprehend and utilize when they find it tough. In the case of Rumahekraf, this discomfort might hinder adoption. We believe discomfort affects perceived usefulness and ease of use based on past studies. Therefore, hypothesis seven and eight are:

H7: Discomfort significantly affects perceived ease of use in using the Rumahekraf platform.
H8: Discomfort significantly affects perceived usefulness in using the Rumahekraf platform.

According to [20], the TAM, perceived usefulness affects perceived ease of use and behavioral intentions. Users who think the technology is simple are more inclined to utilize it. Therefore, hypothesis nine is:

H9: Perceived Ease of Use significantly affects perceived usefulness in using the Rumahekraf platform.

According to [21], the assertion that behavioral intention to use a technology may be directly impacted by perceived ease of use. Therefore, hypothesis ten is:

H10: Perceived Ease of Use significantly affects behavioural intention in using the Rumahekraf platform.

According to [20] showed that perceived benefits are directly related to behavioural intentions to use technology. The more benefits a person perceives, the more likely they are to employ the technology. Therefore, hypothesis eleven is:

H11: Perceived Usefulness significantly affects behavioural intention in using the Rumahekraf platform.

According to [11] emphasized that facilitating conditions in the context of e-Government services with appropriate technical support and infrastructure can strengthen users' intention to adopt these technologies. Based on previous research statements, we hypothesize that facilitating conditions positively influences behavioral intention in the context of the Rumahekraf platform. Therefore, hypothesis twelve is:

H12: Facilitating Conditions significantly affect behavioural intention in using the Rumahekraf platform.

IV. Research Methodology

The study uses a quantitative approach, which means that a systematic approach to collecting, analyzing and interpreting numerical data is applied. According to [29], quantitative methods aim to measure the variables under study objectively and produce data that can be analyzed using statistical techniques. In this research, numerical data is collected through research instruments such as questionnaires, surveys, or structured observations, which are then processed using statistical tools to analyze and explain the phenomenon or variable under study [30].

A. Sample

The population examined in this study consisted of West Papuans. The sample of this study is the community that has the potential to use the Rumahekraf platform, Purposive sampling is used to determine the sample [31], where participants are selected from a pool of respondents who are willing to provide data and meet certain criteria relevant to the research objectives. To determine the sample size, Cohen's Table of Power analysis was used by utilizing the G*power application [32]. With seven predictor variables, an effect size of 0.15, an alpha significance threshold of 5%, and a power of analysis of 95% [32], with seven predictor variables the minimum sample size required was 74 respondents. However, we collected more data with 157 respondents.

The research and data collection process was conducted over three months from October to December 2024, in West Papua. Demographic data obtained included gender, age, and education level. The explanation can be as presented in Table 1. Furthermore, West Papuans received Google Forms surveys to gather data. A 5-point Likert scale was used to record the responses, and the possible answers are strongly disagree, disagree, neutral, agree, and strongly agree. Before sending out the questionnaire, it went through a piloting stage where it was improved by the author, some students, and a professor at the University of Papua's Faculty of Engineering. After the questionnaire is ready, the author sends the questionnaire via Telegram, Instagram, and WhatsApp. There are demographic statements, directions for completing the questionnaire, and statements for each variable in this research [33].

Table 1.
A Description of The Respondents' Demographics

Category	Item	Total	Percentage
Gender	Male	70	44.6%
	Female	87	55.4%
Age	< 17	19	12.1%
	17-35	129	82.2%
	36-55	9	5.7%
Education Level	SMA/SMK	72	45.9%
	D3	7	4.5%
	S1	70	44.6%
	S2	2	1.2%
	More	6	3.8%

Based on Table 1, the respondents can be described as follows: Gender identity shows that the majority of respondents are female, namely 87 people (55.4%) and the remaining 70 male respondents (44.6%). The age of the majority of respondents is in the age range 17–35, a total of 129 people (82.2%), followed by the age range < 17 years 19 people (12.1%), and the age range 36–55 a total of 9 people (5.7%). The education level of the majority of respondents is SMA/SMK numbering 72 people (45.9%), followed by S1 education numbering 70 people (44.6%), followed by D3 education numbering 7 people (4.5%), followed by Others numbering 6 people (3.8%), and S2 education numbering 2 people (1.2%).

B. Analysis method

The statistical approach PLS-SEM analyzes complicated latent variable associations in structural equation modeling [34]. It differs from covariance-based SEM (CB-SEM) in that it emphasizes increasing the explained variance, marking it more suitable for exploratory research and predictive modelling [35]. PLS-SEM is widely applied in research in the fields of social science and business because of its ability to process data with small sample sizes, non-normal distributions, and models that have many constructs [36] . This study tested the reliability, validity, and association between variables in the research hypothesis using PLS-SEM to examine measurement and structural models.

V. Data Analysis

A. Measurement Model Evaluation

The measuring model was tested for reliability, discriminant validity, and convergent validity [37]. Convergent validity was assessed through several indicators, including the outer loading values of each item and the Average Variance Extracted (AVE). According to established criteria, outer loading values should ideally exceed 0.70, indicating that each observed indicator effectively represents the corresponding latent construct [37] . In this study, most indicators met this threshold, suggesting adequate convergence.

Furthermore, the AVE values for each construct were evaluated to ensure they exceeded the minimum cutoff value of 0.50, which implies that more than 50% of the variance in the indicators is captured by the latent variable rather than by measurement error [38], [39]. The results demonstrated that all constructs achieved AVE values above this threshold, confirming acceptable convergent validity.

In addition to convergent validity, internal consistency was assessed using Cronbach's Alpha (CA) and Composite Reliability (CR). A CR value >0.70 imply build dependability [40], [41] . However, CA values > 0.6 and < 0.7 remain

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acceptable [34]. These findings confirm that the instrument used in this study provides valid and reliable measurements to assess the factors influencing behavioral intention in adopting the Rumahekraf platform. Table 2 shows this study's variables' confirmatory analysis.

Table 2.
Confirmatory Variable result

Construct	Statement	Code	LF
Optimism (OPT) [18] CA, CR, AVE = 0.817, 0.916, 0.845	I feel confident that Rumahekraf will help promote local culture in West Papua.	OPT2	0.918
	I feel confident that the products on Rumahekraf are of good quality.	OPT3	0.921
Innovativeness (INN) [18] CA, CR, AVE = 0.657, 0.853, 0.744	I am interested in trying new features offered by Rumahekraf in the future.	INN1	0.842
	I am interested in seeing the products at Rumahekraf.	INN2	0.883
Insecurity (INS) [18] CA, CR, AVE = 0.880, 0.926, 0.806	I feel worried about the security of my personal data when using Rumahekraf.	INS1	0.930
	I am worried if my internet connection is not stable when using Rumahekraf.	INS2	0.884
	I hesitate to use the product catalog feature on Rumahekraf because I am afraid that the information is not accurate.	INS3	0.879
Discomfort (DIS) [18] CA, CR, AVE = 0.888, 0.927, 0.809	I feel uncomfortable when using Rumahekraf.	DIS1	0.883
	I often experience difficulties when using some features on Rumahekraf.	DIS2	0.872
	The technical support available at Rumahekraf is not always adequate to help me resolve usage issues in the application.	DIS3	0.942
Perceived Ease of Use (PEOU) [20] CA, CR, AVE = 0.808,0.912, 0.839	I find Rumahekraf easy to understand and use.	PEOU 1	0.912
	I feel that learning the features of Rumahekraf takes a short time.	PEOU 2	0.920
Perceived Usefulness (PU) [20] CA, CR, AVE = 0.781, 0.901, 0.820	Rumahekraf really helped me find the products I needed.	PU1	0.896
	Rumahekraf provides information that is useful for my daily needs, such as in the culinary and craft features.	PU2	0.915
Facilitating Conditions (FC) [21] CA, CR, AVE = 0.866, 0.918, 0.789	I have a smartphone and the necessary digital devices to access rumahekraaf.id.	FC1	0.904
	I have sufficient internet access to use Rumahekraf.	FC2	0.863
	I have sufficient skills to access Rumahekraf.	FC3	0.898
Behavioural Intention (BI) [21] CA, CR, AVE = 0.816, 0.916, 0.844	I intend to continue using Rumahekraf in the future.	BI1	0.929
	I plan to attend further training related to the use of new features in Rumahekraf.	BI3	0.908

As indicated by the research results in Table 2, the authors decided to remove indicators OPT1, INN3, PEOU3, PU3, and BI2. This decision was taken because the Heterotrait-Monotrait Ratio (HTMT) value of these indicators shows a high correlation that exceeds the recommended threshold of 0.90. If these indicators are not removed, this may interfere with the discriminant validity test, although it does not affect the validity of the previous test. To make the measurement model more valid and reliable, these indicators were removed.

One statistical analysis technique used in this study to ensure that a construct the research model is distinct from others is discriminant validity testing [34]. If discriminant validity is not met, this indicates that there is too high a similarity between the two constructs, so they may measure similar or almost the same thing [42]. The HTMT test value measures discriminant validity [43]. Indicators are discriminatory if their values meet <0.85 or <0.90 criterion [42], [44]. The findings presented in Table 3 validate that the HTMT test does not indicate any problems.

Table 3.
HTMT Test Result Discriminant Validity

	BI	DIS	FC	INN	INS	OPT	PEOU	PU
BI								
DIS	0.132							
FC	0.763	0.151						
INN	0.888	0.172	0.730					
INS	0.113	0.888	0.096	0.243				
OPT	0.875	0.145	0.611	0.892	0.116			
PEOU	0.861	0.155	0.788	0.727	0.074	0.739		
PU	0.837	0.138	0.743	0.838	0.182	0.764	0.844	

B. Structural Model Evaluation

The structural model is assessed following the evaluation of the construct measurement model which can be seen from several indicators. This test analyzes the relationship between one variable and another [7], including R-Square and Variance Inflation Factor (VIF) to test the hypothesis.

Furthermore, the hypothesis tests in this study are intended to determine whether the proposed hypothesis is valid or not [45]. The hypothesis is tested by comparing t-statistic with the p-value. A hypothesis is accepted if T-Statistic exceeds 1.96 and P Values < 0.05 [46]. The outcomes of the structural model evaluation the conducted Hypothesis tests are shown in table 4 and are as taken a look at. Of the 12 hypotheses proposed to be tested, 7 hypotheses are accepted P Values < 0.05 and T-Statistics >1.96, suggesting that they are accepted. Meanwhile, 5 hypotheses have P Value > 0.05 and T-Statistics values < 1.96, which leads to the hypothesis being rejected.

Table 4.
Hypothesis Test Results

Hypothesis	Variables	T-Statistics	P Values	Description
H1	OPT → PEOU	5.327	0.000	Accepted
H2	OPT → PU	1.884	0.060	Rejected
H3	INN → PEOU	2.940	0.003	Accepted
H4	INN → PU	2.236	0.026	Accepted
H5	INS → PEOU	1.527	0.127	Rejected
H6	INS → PU	1266	0.206	Rejected

Hypothesis	Variables	T-Statistics	P Values	Description
H7	DIS → PEOU	1.573	0.116	Rejected
H8	DIS → PU	0.832	0.406	Rejected
H9	PEOU → PU	3.760	0.000	Accepted
H10	PEOU → BI	2.690	0.007	Accepted
H11	PU → BI	2.319	0.021	Accepted
H12	FC → BI	2.200	0.028	Accepted

Additionally, the R-Square test can be employed to evaluate the degree to which the independent variable influences the dependent variable [47]. A strong model is represented by an R-squared value of 0.67, while a moderate model has a value of 0.33, and a weak model is indicated by a value 0.19 [48], [49].

Table 5.
R-Square Test Results

Variables	R-Square	Description
BI	0.594	Moderate
PEOU	0.411	Moderate
PU	0.557	Moderate

According to Table 5, the behavioural intention variable's R^2 value is 0.594, This shows that the variables PU, PEOU, and facilitating condition have a moderate predictive ability and account for 59.4% of the behavioural intention variable. The R^2 for PEOU is 0.411, meaning that the variables innovativeness, optimism, discomfort, and insecurity explain the PEOU variable by 41.1% and have moderate predictive power. Finally, the R^2 for perceived usefulness is 0.557, This indicates that perceived usefulness is explained by 55.7% and has a moderate predictive value for the variables of optimism, innovativeness, insecurity, discomfort, and PEOU.

C. Common Method Bias

Common method bias Common method bias (CMB) was assessed [50] due to the collection of all variables in a single survey. The results of Harman's single-factor analysis indicated that all variables account for 42.29% of the total variance. This value is below 50%, suggesting that CMB is unlikely to be a concern and is not expected to affect the research outcomes of this study. Second, we proceed with this using the Variance Inflation Factor (VIF) is used to evaluate the presence of multicollinearity in each construct in this study [51]. The aim is to ensure that the proposed model constructs do not exhibit high correlation [52]. The VIF value on a construct that is ≥ 5 or ≤ 0.2 indicates that the construct has a multicollinearity problem [45]. Our evaluations show VIF values range between 1.699 (PEOU-PU, the lowest) to 2.682 (INS-PU, the highest), indicating there are no multicollinearity issues as correlations among the variables are lower than the threshold of 3.3 [53].

Table 6.
Multicollinearity Test Results (Inner VIF)

	BI	DIS	FC	INN	INS	OPT	PEOU	PU
BI								
DIS							2.598	2.659
FC	1.968							
INN							1.810	1.928
INS							2.628	2.682
OPT							1.777	2.081
PEOU	2.225							1.699
PU	2.001							

VI. Discussion and Conclusion

Table 4 reveals that optimism (H1) and innovativeness (H3, H4) significantly influence perceived usefulness and ease of use ($p < 0.05$), consistent with [8], [9]. People with a positive view of technology tend to find Rumahekraf easier to use.

However, optimism (H2) does not significantly affect perceived usefulness (T-Statistic = 1.884, P-Value = 0.060) contradicting prior research [8]. Likewise, insecurity (H5, H6) and discomfort (H7, H8) do not significantly impact PU or PEOU value as their p values are > 0.05 (or t-statistic < 1.96) (t-statistic H5 = 1.527, H6 = 1.266, H7 = 1.573, H8 = 0.832), consistent with [10] but differing from [9]. Insecurity did not significantly influence ease of use, indicating that security concerns do not necessarily hinder user perception.

Additionally, perceived ease impacted perceived usefulness (H9), and behavioural intention (H10) because with p values < 0.05 (or t-statistic > 1.96) (P-Value H9 = 0.000, H10 = 0.007), consistent with [8]. Similarly, perceived usefulness significantly impacts behavioural intention (H11), and facilitating conditions significantly influenced behavioural intention (H12), supporting prior research [11].

Overall, optimism, innovativeness, and PEOU support Rumahekraf adoption. Meanwhile, insecurity and discomfort show limited impact, indicating they do not strongly hinder adoption.

In terms of predictive power, the R^2 of 0.594 indicates that PEOU, PU, and facilitating conditions explain 59.4% of behavioural intention, while the remaining 40.6% is likely to be explained by other variables not measured in this model. This means that the easier it is, the more useful Rumahekraf is considered, and the existence of facilitating conditions, the stronger the behavioural intention to use Rumahekraf.

The PEOU's $R^2 = 0.411$ suggests that 41.1% of its explanation comes from components like innovativeness, optimism, discomfort, and insecurity, while the remaining 58.9% may be due to variables not examined in this model. PEOU improves with greater optimism and innovativeness, and less insecurity and discomfort.

The $R^2 = 0.557$ for perceived utility reveals that innovativeness, optimism, discomfort, and insecurity explain 55.7% of PU, whereas the remaining 44.3% is likely due to variables not assessed in this model.

This moderate predictive power indicates that optimism, innovativeness, and PEOU, as well as low levels of insecurity and discomfort, are sufficient to explain the perceived benefits of using the Rumahekraf platform. However, there are still other factors outside the model that have the potential to influence the perceived benefits.

Thus, this study confirms that optimism and innovativeness significantly contribute to the adoption of Rumahekraf, as users who are optimism about technology and open to innovativeness tend to perceive the platform as easy to use and beneficial,

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ultimately increasing their intention to adopt it. Additionally, PEOU strongly influences both PU and BI, emphasizing that a well-designed, user-friendly platform enhances its value and encourages more users to engage with it. Facilitating conditions, such as internet access and platform usability features, also play a crucial role in shaping behavioral intention, highlighting the importance of external support structures in boosting user adoption rates. Interestingly, insecurity and discomfort do not appear to be major barriers to adoption, suggesting that users prioritize the platform's functionality over potential worries regarding safety and ease of access.

Although the study shows positive adoption, the implementation of E-government services like Rumahekraf in West Papua still faces challenges. Limited digital infrastructure, especially in remote areas, and low ICT literacy hinder the effectiveness of facilitating conditions. Additionally, lack of outreach leads to low public awareness of the platform's benefits. While insecurity and discomfort were not significant, concerns about government platforms remain, particularly in areas with uneven public service delivery. Sociocultural factors such as a preference for face-to-face interaction and language barriers also affect adoption. Therefore, strategic efforts like infrastructure development, digital education, and platform improvements based on local needs are essential. Moreover, the R^2 values indicate that optimism, innovativeness, and perceived ease of use adequately explain user adoption behavior, yet other external factors may further influence perceived usefulness and behavioural intention.

A. Theoretical Implications

Based on the research findings of the Rumahekraf e-Government service in the West Papua region, this study presents several important theoretical contributions that deepen the understanding of technology adoption in developing regions. While practical implications provide direction for implementation, the theoretical implications enrich the conceptual foundation for future academic inquiry.

This research adds to the theoretical understanding of digital platform adoption by integrating the TRI and TAM to explain user behavior. Although both models have been widely applied individually, their combined application in the context of creative economy platforms remains underexplored. The integration of TRI and TAM offers a comprehensive framework that considers both psychological predispositions and perceived system attributes, providing a more holistic explanation of behavioral intention toward digital platforms in the public sector.

Specifically, the study highlights the significant role of optimism and innovativeness, two core dimensions of TRI, in shaping PEOU and PU the primary constructs in TAM. Optimism, which reflects a user's positive outlook and belief in the benefits of technology, is shown to significantly enhance the perception that Rumahekraf is user-friendly. Innovativeness, representing a user's openness to new technologies, strengthens the belief that Rumahekraf provides concrete advantages. These findings reaffirm that individual readiness and attitudes toward technology strongly influence their interaction with system characteristics, which ultimately drive behavioral intention to adopt.

Furthermore, the study underscores the importance of facilitating conditions such as the availability of internet access, platform reliability, and interface accessibility as enabling factors that support users' ability and willingness to engage with the platform. Although facilitating conditions are not a core construct of either TRI or TAM, their inclusion and observed impact suggest a need for extending traditional models to better reflect real-world complexities in developing regions, where infrastructural limitations often affect technology adoption.

By integrating TRI and TAM, this research bridges a theoretical gap and provides a structured mechanism for understanding how individual traits (e.g., optimism and innovativeness) interact with perceptions of system functionality (e.g., usefulness and ease of use). The model facilitates deeper insights into how user readiness and platform design co-influence adoption decisions, especially in the context of digital services aimed at supporting the creative economy.

Moreover, the findings open new avenues for future theoretical exploration by emphasizing external contextual factors such as trust in the platform, users' level of digital literacy, and the effectiveness of digital marketing efforts that may further influence adoption behavior. These factors are especially relevant in regions like West Papua, where technology adoption is shaped by socio-cultural, economic, and infrastructural considerations. Future research may expand the integrated TRI-TAM framework by incorporating these external variables to develop more context-sensitive models for digital government service adoption.

In summary, this study offers a novel theoretical contribution by extending established models of technology adoption through their integration and contextual application in a developing region. It strengthens the theoretical foundation for understanding digital platform adoption in the creative economy sector and encourages ongoing investigation into the dynamic interplay between user readiness, system attributes, and external environmental conditions.

B. Practical Implications

Based on the research discoveries of Rumahekraf e-government service in the West Papua region, there are several practical implications that can be applied to enhance the adoption and use of Rumahekraf in the West Papua region. This research combines the TRI model and TAM to identify characteristics that affect user behavioural intention and digital government technology uptake.

In this study, PEOU and PU are crucial factors to adoption of digital government services. Therefore, providing a user-friendly interface and easily accessible features is essential. In addition, products that are relevant, quality, and useful to creative economic actors and the general public increase users' perceived value. Regular evaluation through user satisfaction

surveys and development of new features tailored to local needs are essential to improve the efficiency of using Rumahekraf.

The factors of perceived usefulness on the acceptance of Rumahekraf are very significant. Important steps that can be taken to optimize perceived usability include improving the performance of Rumahekraf, ensuring the app runs quickly and without interruption, and providing clear user guidance. Easily accessible key features also improve convenience and efficiency. Responsive technical support is essential to ensure users feel guided in using Rumahekraf.

In addition, user insecurity and discomfort factors also have a major impact on increasing the desire to continue using Rumahekraf. Strengthening the insecurity aspect with user data protection and privacy policy transparency should be a priority. A comfortable user experience can be improved with a more intuitive interface design and a reduction in complicated steps in the use of Rumahekraf.

To optimism the acceptance of Rumahekraf, adjustments based on local needs and user characteristics in West Papua are also important. In addition to meeting the needs of creative economy actors, but also on understanding user preferences in accessing information. creative economy products on Rumahekraf, such as handicrafts, culinary, arts, and others can be promoted in an attractive way. For example, by presenting content that integrates local cultural elements in product descriptions or using visuals that highlight the distinctive values of West Papua and can increase the adoption of Rumahekraf as well as significant economic benefits for the community and creative economy actors in West Papua.

This test shows that optimising user-friendliness, perceived advantages, insecurity, and discomfort may increase Rumahekraf adoption and boost the digital economy in West Papua.

To further strengthen these efforts, it is necessary to develop comprehensive collaboration between local governments, community leaders, and platform developers. By involving local stakeholders in the process of platform improvement and outreach, Rumahekraf can better align with the socio-cultural context of West Papua. Public awareness campaigns and community training initiatives are essential to introduce the platform to a broader audience, especially in rural or underserved areas. These efforts can help bridge the digital divide and foster greater user trust and confidence in the platform.

Sustainable platform development should also be supported by continuous performance evaluations, user feedback mechanisms, and the integration of local input in every update. Data-driven improvements can help ensure that Rumahekraf remains responsive to user needs and dynamic market changes. Furthermore, the establishment of a supportive digital ecosystem through collaboration with educational institutions, local tech communities, and business incubators can help build a stronger foundation for innovation and user engagement. These actions are not only vital for platform adoption but also for the long-term success of the digital creative economy in the region.

C. Limitations and Future Research Directions

With R-Square values of 41.1% and 55.7%, PEOU, PU, and BI moderately affect user behavioural intentions. This shows that additional variables may influence behavioural intention beyond this research. This research also ignored social and cultural elements that might affect technology adoption, notably in West Papua, which has distinct social and cultural traits.

West Papua presents unique sociocultural dynamics, including communal decision-making patterns, local languages, strong traditional values, and varying levels of formal education and digital literacy. These elements can influence how individuals perceive, accept, and engage with digital platforms such as Rumahekraf. For example, communities in rural areas may rely more on interpersonal trust and recommendations rather than digital platforms, while urban users might be more exposed to technological trends and e-government services.

In addition, socioeconomic disparities including income levels, internet access, and availability of digital devices can create gaps in adoption rates across different population groups. Individuals with limited financial resources or unstable internet connectivity may find it difficult to regularly access and benefit from online government services.

To further understand technology adoption, future study should incorporate digital infrastructure, technological accessibility, and government backing. It may also add appropriate mediating or moderating factors. This is to assist understand behavioural intention-influencing elements.

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