

ARTICLE

Does E-Service Quality in Banyuwangi's Smartkampung Improve Public Satisfaction Directly and Through E-Trust?

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ABSTRACT

Rapid developments in information technology require local governments to strengthen the quality of electronic public services; however, empirical studies examining how e-service quality shapes public satisfaction through e-trust in the context of local e-government applications remain limited. This study addresses this gap by analyzing the Smartkampung Banyuwangi super-application, one of the most advanced e-government implementations in Indonesia, to identify how e-service quality influences public satisfaction directly and indirectly through e-trust. Using an explanatory quantitative design, data were collected from 166 residents who used the Smartkampung application and analyzed using Partial Least Squares–Structural Equation Modeling (PLS-SEM). The findings demonstrate that e-service quality significantly affects e-trust ($\beta = 0.773$; $p < 0.001$) and public satisfaction ($\beta = 0.520$; $p < 0.001$). E-trust also significantly influences satisfaction ($\beta = 0.338$; $p < 0.001$) and mediates the relationship between e-service quality and satisfaction (indirect effect $\beta = 0.261$; $p < 0.001$), with the model explaining 65.7% of the variance in satisfaction ($R^2 = 0.657$). The study contributes theoretically by extending e-service quality and trust frameworks within village-level e-government services. In practice, the findings highlight the importance of improving system availability, efficiency, and data security to strengthen users' trust and enhance satisfaction with digital public service delivery.

A. INTRODUCTION

Digital transformation has fundamentally reshaped how governments deliver public services, making electronic service quality and user trust central determinants of effective e-government implementation. Despite widespread adoption, many e-government platforms continue to face issues related to service reliability and citizen trust, which directly affect user satisfaction. It is expected that the implementation of E-Government can provide benefits by improving the quality of government services to the community and enhancing government management, making public services more efficient and transparent. Electronic service, or e-service, is the process of providing services through electronic networks, such as the internet. E-Service can also be interpreted as the entire process, from the first visit to a web page to the delivery and availability of the requested service or product for use (Hanun & Prasetyo, 2023).

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Electronic service quality, or e-service quality, refers to the use of internet networks as an intermediary between service providers and recipients to carry out transactions efficiently and effectively (Alnaim et al., 2022). This e-service quality reflects the extent to which a website or application assists customers in completing online transactions and ensures that services run smoothly and efficiently over the internet, serving as the medium between the service provider and recipient. Service quality, according to Tjiptono (2019) is one of the critical factors in determining a business's success or failure. Electronic service quality (e-service quality) is the latest version of traditional service quality, resulting from the adaptation and development of service quality models for electronic services. The advantage of e-service quality lies in its ability to offer greater flexibility, speed, and accessibility than conventional services (Sadiq & Albari, 2024). Electronic services allow customers to access services anytime, anywhere, without being limited by time or geographic location, greatly facilitating use in various situations. Speed of information and efficiency are the main advantages, and high-quality electronic services can increase customer satisfaction and improve the efficiency of the company or organization. A well-delivered service will improve the relationship between the serving party and the public and positively impact the public's perception of the institution. When public services are high quality, people will feel more satisfied with the services they receive, which in turn strengthens trust in the institution. Public satisfaction not only improves the positive image of a service, but also strengthens the institution's reputation and credibility, making community oversight an essential component in this process.

Research by Prasetyo et al. (2023) states that there is a significant relationship between e-service quality, which is divided into four dimensions, namely efficiency, fulfillment, system availability, and privacy, with customer satisfaction. The four dimensions are significant to customer satisfaction, indicating that an increase in any of them can result in a more positive experience for users, thereby increasing public or customer satisfaction. Research San et al. (2020) shows a positive relationship between e-service quality and customer satisfaction. This positive relationship indicates that if e-service quality increases or decreases, customer satisfaction will move in the same direction by the same magnitude.

Local governments in Indonesia are competing to introduce innovations in public services, with the emergence of various applications and public service websites. Only 4 local governments, or around 0.7% of the total 548 local governments in Indonesia, have reached the stage of e-government utilization. The four local governments are Surabaya City Government, Banyuwangi Regency Government, Ternate City Government, and Buru Regency Government. Therefore, researchers chose Banyuwangi Regency as the research object because the area is one of the areas that has reached the utilization stage and is classified as successful in implementing e-government, yet still has weaknesses, such as technical network constraints and a lack of socialization within the community (Rozykin et al., 2020). The research location was determined using a purposive sampling method that considered specific criteria. The research location was selected based on the region's status, area, geographical conditions, and population size. Based on these considerations, Banyuwangi Regency was determined as the research location.

Banyuwangi Regency is one of the regions that continues to improve the quality of public services. One of the innovations presented is the Smartkampung Banyuwangi Program. The program is regulated by Banyuwangi Regent Regulation No. 18 of 2016 on the Integration of Village/Kelurahan-Based Work Programs Through Smartkampung, which emphasizes the integration of such programs. The Smartkampung Program innovation was born in 2016 and launched as an application in 2019 (Aji et al., 2024). The SmartKampung Banyuwangi app was designed to simplify complex government procedures by utilizing technology, making it more accessible to the community. Over time, the application was also integrated with various government agencies in Banyuwangi Regency. The Banyuwangi Smartkampung application

then evolved into Superapps covering seven areas: public services, economic empowerment, health, poverty alleviation, legal information, education, cultural arts, and human resource development.

Although improvements and updates to the Banyuwangi Smartkampung application are regularly implemented, the application-based administration service still faces several obstacles. The obstacles that often arise in the application system that experiences technical problems result in a number of service features not functioning optimally. Based on research [Daroini et al. \(2023\)](#), most users reported difficulties during the registration process, especially at the face-scanning verification stage. This makes account activation take longer because users have to wait until the verification feature works properly. The Banyuwangi Smartkampung application is targeted at village communities that generally have limited mastery of technology and digital literacy, resulting in low readiness to use it.

Doubts about its application often cause failure in the use of information technology. Not all individuals who use information technology, such as the Banyuwangi Smartkampung application, fully accept the technology. Users need specific reasons why information technology is or isn't feasible. In this context, each individual has their own considerations in deciding to use or ignore this information technology. Therefore, electronic trust or e-trust is needed in government applications to strengthen the relationship between government and society. According to [Nawafleh & Khasawneh \(2024\)](#), e-trust plays an essential role in increasing user satisfaction with e-government services. According to states that e-trust is consumer confidence that product or service providers can be relied upon to act in the long-term interests of consumers or users. When users have confidence in the security, privacy, and quality of e-services, they tend to be more comfortable using these services. With e-trust, the government can demonstrate the public's commitment to user safety and convenience, thereby increasing adoption and public engagement with digital government services.

Previous studies on Smartkampung and similar programs have generally shown that digital service quality and innovation can improve community and trust in government. Still, most of this work treats Smartkampung as a broad village development concept or examines service quality and trust separately, without explicitly modeling the role of electronic trust as a mediator between e-service quality and public satisfaction. Moreover, many existing studies focus on urban or more digitally literate populations, leaving unanswered whether the same patterns exist in rural, village-based super apps like Banyuwangi Smartkampung, where connectivity constraints and digital literacy gaps are far more pronounced ([Daroini et al., 2023](#); [Rozikin et al., 2020](#)). This creates a conceptual and empirical space for more focused research examining how users' trust in the security, reliability, and integrity of the application shapes their satisfaction with public services ([Martio et al., 2023](#); [Nawafleh & Khasawneh, 2024](#)). Based on the background that has been described, this research investigates explicitly: (1) the influence of E-Service Quality and Public Satisfaction, (2) the influence of E-Service Quality and E-Trust, (3) the influence of E-Trust and Public Satisfaction, (4) the influence of E-Service Quality on Public Satisfaction through E-Trust.

B. LITERATURE REVIEW

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), introduced by [Davis & Granic \(2024\)](#), posits that users' acceptance of a technological system is primarily driven by two cognitive beliefs: perceived usefulness and perceived ease of use. These beliefs shape users' attitudes, which, in turn, determine their behavioral intentions and satisfaction with the system. This study draws on TAM as its theoretical basis, given the model's capacity to explain how the quality of

electronic services influences public satisfaction. The dimensions of e-service quality, efficiency, fulfillment, system availability, and privacy map directly onto the TAM constructs. Efficiency and system availability reflect the perceived ease of use because they determine how effortlessly users can navigate the application and complete transactions, as shown in studies by [San et al. \(2020\)](#) & [Juwitasary et al., \(2020\)](#). Meanwhile, fulfillment and privacy relate to perceived usefulness, as they demonstrate whether the application reliably delivers services and safeguards user information, thereby contributing to users' perceived value of the system ([Nhung & Ngan, 2022](#); [Prasetyo et al., 2023](#)). Based on TAM, high e-service quality enhances both ease-of-use and usefulness beliefs, thereby strengthening user attitudes and ultimately increasing satisfaction. Prior literature consistently supports this theoretical pathway by showing that improvements in efficiency, fulfillment, and reliability lead to higher satisfaction levels across digital service platforms, indicating that the exact mechanism applies to public-sector applications such as Banyuwangi Smartkampung.

TAM also implicitly explains the formation of e-trust as an extension of perceived usefulness. When a system demonstrates consistent performance, accuracy, and security, attributes embedded within the e-service quality dimensions, users develop a stronger belief in the system's dependability, which evolves into trust. Studies by [Martio et al. \(2023\)](#) and [Setiabudi & Sutanto \(2024\)](#) reinforce this view by demonstrating that e-service quality significantly enhances e-trust, which in turn influences satisfaction. Therefore, TAM provides a cognitive–evaluative mechanism in which e-service quality shapes trust through perceptions of usefulness and reliability, thereby affecting public satisfaction.

Information System Success Model (ISSM)

The DeLone and McLean Information System Success Model (ISSM) offers a more comprehensive theoretical lens for understanding the relationships among e-service quality, e-trust, and public satisfaction. ISSM argues that system quality, information quality, and service quality jointly determine user satisfaction and net benefits ([DeLone & McLean, 2016](#)). In this study, e-service quality corresponds directly to these three components of IS success. System availability reflects system quality, capturing the platform's stability, reliability, and functionality. Fulfillment and efficiency reflect service quality, capturing whether the application delivers the promised services and supports users effectively. Privacy contributes to both system quality and service quality by ensuring data protection, security, and user confidence. Empirical studies from studies such as [Ardiansyah & Handrijaningsih \(2021\)](#) [Ali et al. \(2021\)](#), and [Harijanto & Winston \(2021\)](#), consistently confirm that these e-service quality aspects influence satisfaction, supporting the theoretical proposition of ISSM.

Furthermore, ISSM provides a conceptual justification for e-trust's mediating role. According to IS success literature, system and service quality reduce uncertainty, enhance perceived security, and foster trust in digital environments. When users perceive high privacy protection, reliable system availability, and accurate service fulfillment, they experience lower perceived risk and develop stronger trust, a pattern observed in studies such as [Nawafleh & Khasawneh \(2024\)](#) and [Martio et al. \(2023\)](#). Trust then contributes to user satisfaction by reinforcing the belief that the system is dependable, secure, and capable of delivering consistent benefits. This mechanism aligns with the ISSM structure, in which trust serves as an intermediate cognitive response linking system/service quality to user satisfaction. Thus, ISSM not only explains the direct effect of e-service quality on satisfaction but also clarifies how e-trust emerges as a psychological outcome of perceived system quality, mediating the impact on overall satisfaction.

E-Service Quality and Public Satisfaction

E-Service Quality has four main dimensions that serve as the core scale, namely efficiency, fulfillment, system availability, and privacy (Prasetyo et al., 2023). These four dimensions are considered essential because they reflect consumers' basic needs when making online transactions. The four core dimensions of e-service quality, namely efficiency, fulfillment, system availability, and privacy, simultaneously affect customer or community satisfaction. In a study conducted across several public service sectors and e-commerce, it was found that the core dimensions significantly and simultaneously affect customer satisfaction, with efficiency and fulfillment having a greater positive impact on user satisfaction.

H1: E-Service Quality influences Public Satisfaction positively and significantly

E-Service Quality and E-Trust

There is a significant relationship between e-service quality and e-trust. The effect of e-service quality on e-loyalty, with e-trust as a mediator, was found to be that good e-service quality directly increases user trust in the application, which in turn has a positive impact on user loyalty (Setiabudi & Sutanto, 2024). The relationship between e-service quality and e-trust results indicates that e-service quality has a significant effect on building e-trust, which, in turn, increases user satisfaction (Martio et al., 2023).

H2: E-Service Quality influences E-Trust positively and significantly

E-Trust and Public Satisfaction

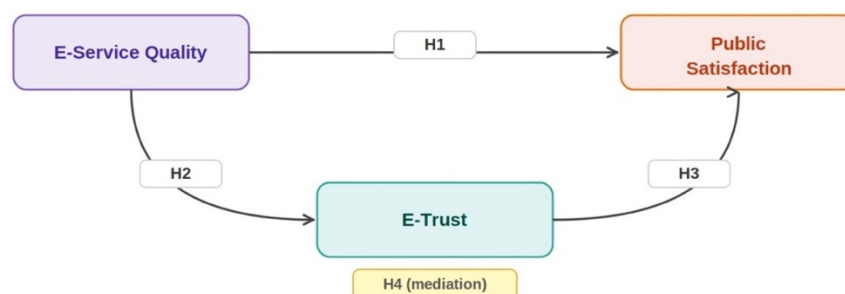
E-trust influences customer satisfaction, especially in the context of digital transactions. E-trust encompasses user confidence in the security, privacy, and integrity of the platform, as well as trust that the platform will provide reliable services and meet user expectations. Research Setiabudi & Sutanto (2024) shows that e-trust can reduce uncertainty and concerns about online transactions, thereby strengthening customer satisfaction. Customers who have high trust in the platform are more likely to return to use the service and provide positive feedback.

H3: E-Trust influences Public Satisfaction positively and significantly

E-Service Quality, Public Satisfaction, and E-Trust

E-service quality has a significant influence on public satisfaction through e-trust as a mediating variable (Martio et al., 2023). Good electronic service quality can increase user or community satisfaction while building trust in the application or platform used. This shows that positive experiences in interactions with electronic services not only encourage satisfaction but also strengthen people's confidence in the reliability and credibility of services (Nawafleh & Khasawneh, 2024).

H4: E-Service Quality influences Public Satisfaction positively and significantly through E-Trust



Source: Authors' Computation (2025)
Figure 1. Hypothesis Model Development

C. METHOD

This study employs an explanatory research design. Since this study sought to identify causal links among public satisfaction, e-service quality, and e-trust, an explanatory research design was used. The population of this study consists of residents of Banyuwangi Regency. The total population in this study is unknown, so it uses non-probability sampling with purposive sampling methods. So, the criterion for the selected sample is residents who have access to information through the Banyuwangi Smartkampung application. Regarding the margin of error, this study used a 95% significance threshold ($\alpha = 5\%$) for sample size determination, with a calculation formulation as described in [Hair et al. \(2021\)](#).

$$\text{Significance level} = 5\%: n_{\min} > \left(\frac{2.486}{|P_{\min}|} \right)^2$$

$$n_{\min} > \left(\frac{2.486}{0.2} \right)^2 = 154.505 = 155$$

The primary data collection method used in this study is a Likert scale with five-point items ranging from 1 (strongly disagree) to 5 (strongly agree) ([Sekaran & Bougie, 2020](#)). An electronic questionnaire was employed in this investigation. All questionnaire items were prepared by researchers in Google Forms and distributed to respondents via various social media platforms, including Facebook, Instagram, Twitter, LinkedIn, Line, and WhatsApp.

Measurement items for e-service quality were adapted from ([Parasuraman et al., 2005](#)). E-SERVQUAL model ([Parasuraman et al., 2005](#)), while e-trust items were adapted from the ability–benevolence–integrity framework proposed by [Kartono and Halihah \(2019\)](#), and public satisfaction was adapted from ([Aspiani, 2018](#)). Content validity was assessed by three experts in public administration and e-government to evaluate clarity, relevance, and wording. A pilot test involving 30 Smartkampung users was conducted to assess item reliability and refine wording before full deployment. The measurements are presented in Table 1 below.

Table 1. Item Measurement

Variable	Item	Item Measurement	Reference(s)
E-Service Quality	ESQ1	The Banyuwangi Smartkampung application makes it easy to explore public services and information in Banyuwangi Regency as needed.	(Parasuraman et al., 2005)
	ESQ2	The Banyuwangi Smartkampung application makes it easy to quickly complete public service and information transactions in Banyuwangi Regency.	
	ESQ3	The Banyuwangi Smartkampung application provides services according to need.	
	ESQ4	The Banyuwangi Smartkampung app is always available when users need it.	
	ESQ5	The Banyuwangi Smartkampung app rarely has errors.	
	ESQ6	The Banyuwangi Smartkampung app does not share customers' personal information with other parties.	
	ESQ7	The Banyuwangi app protects its users' personal information.	
E-Trust	ETR1	Trust that the service provider can deliver quality services.	Kartono & Halihah (2019)
	ETR2	Trust that the service provider can secure transactions.	

Public Satisfac-tion	ETR3	Trust that the provider cares about providing the best service.	(Aspiani, 2018)
	ETR4	Trust that the provider has the good faith to deliver satisfaction.	
	ETR5	Trust that the provider will maintain its reputation.	
	PS1	Supporting facilities available on the Banyuwangi Smartkampung App match or even exceed public expectations.	
	PS2	Users are satisfied with the Banyuwangi Smartkampung application service, so they are interested in using it again.	
	PS3	Users are interested in using the Banyuwangi Smartkampung Application again because the supporting facilities provided are adequate.	
	PS4	Users are satisfied with the services of the Banyuwangi Smartkampung application, so they are willing to share positive thinks about it with others.	
	PS5	Users invite friends or relatives to perform services available on the Banyuwangi Smartkampung application.	

Source: Author's Computation (2025)

This study employs descriptive statistical analysis and Partial Least Squares–Structural Equation Modeling (PLS-SEM) as the primary data analysis techniques. Descriptive statistics are used to summarize respondents' characteristics and general response patterns, including frequencies, percentages, and means, calculated in IBM SPSS version 25. PLS-SEM is applied using SmartPLS version 3 and is preferred over covariance-based SEM (CB-SEM) because this study is prediction-oriented and aims to examine complex relationships and the mediating mechanism among constructs, rather than to confirm a well-established theoretical model. In addition, PLS-SEM is considered appropriate given the presence of multiple indicators, the potential non-normality of the data, and a moderate sample size, all of which are consistent with the characteristics of the current research. All constructs are specified as reflective measurement models, as changes in the latent variables are expected to affect their respective indicators, which are assumed to be conceptually interchangeable.

The PLS-SEM analysis follows a two-stage approach. First, the reflective measurement model (outer model) is evaluated to assess reliability and validity by examining indicator reliability and internal consistency, convergent validity through the Average Variance Extracted (AVE), and discriminant validity using cross-loadings, the Fornell–Larcker criterion, and the Heterotrait–Monotrait Ratio (HTMT). Second, the structural model (inner model) is assessed to test the hypothesized relationships among latent variables by evaluating collinearity issues, path coefficients, the coefficient of determination (R^2), and the model's predictive power. Finally, mediation analysis is conducted by assessing both direct and indirect effects through path coefficient testing to determine the presence and strength of mediating relationships within the proposed model.

D. RESULT AND DISCUSSION

Of the questionnaires distributed, 166 respondents are eligible. The 166 respondents obtained have met the minimum total sample size requirement of 155. The nearly equal gender distribution between men (49,4%) and women (50,6%) indicates that this study offers a balanced perspective from both genders, allowing the results to reflect the experiences and perceptions of society at large without gender bias. The majority of respondents were in the young-to-middle-age range, especially those aged 18-27 (68.1%), indicating that Banyuwangi

smartkampung application users are predominantly from a more productive age group familiar with digital technology. This is important because the success of e-government applications depends heavily on the level of digital literacy and the readiness of young users to use technology.

In terms of education, most respondents had at least a bachelor's degree (48,2%), followed by those with a high school education (38%). This indicates that the respondents' level of education was relatively high, which could influence their understanding and acceptance of e-government applications. The geographical distribution of respondents is quite diverse and evenly spread across several subdistricts in Banyuwangi Regency, with the concentration in Banyuwangi subdistrict (19,9%) and Rogojampi subdistrict (19,3%). This shows that the application can be accessed and used across various regions, not only at the center of government but also in wider subdistricts.

Table 2. Demographic Profile

Demographic Variables		Frequency	Percentage
Gender	Male	82	49,4%
	Female	84	50,6%
	Total	166	100%
Age	18-27	113	68,1%
	28-37	30	18,1%
	38-47	13	7,8%
	48-57	9	5,4%
	>58	1	0,5%
	Total	166	100%
Level of Education	Junior High School	3	1,8%
	Senior High School	63	38%
	Diploma	12	7,2%
	Bachelor	80	48,2%
	Master	7	4,2%
	PhD	1	0,6%
	Total	166	100%
Domicile/Sub-District	Banyuwangi	33	19,9%
	Giri	5	3%
	Glagah	4	2,4%
	Kalipuro	3	1,8%
	Kabat	24	14,5%
	Licin	3	1,8%
	Rogojampi	32	19,3%
	Blimbigsari	12	7,2%
	Srono	10	6%
	Wongsorejo	2	1,2%
	Singojuhur	4	2,4%
	Cluring	3	1,8%
	Muncar	3	1,8%
	Songgon	3	1,8%
	Sempu	4	2,4%
	Gambiran	1	0,6%
	Purwoharjo	2	1,2%
	Bangorejo	4	2,4%
	Tegalsari	1	0,6%
	Genteng	2	1,2%
	Siliragung	3	1,8%
	Pesanggaran	1	0,6%
	Tegaldlimo	1	0,6%
	Glenmore	1	0,6%
	Kalibaru	5	3%
	Total	166	100%

Source: Author's Computation (2025)

Evaluating the Reflective Measurement Model (Outer Model Test)

The outer model test assesses the validity and reliability of measurements. The outer model measurement procedure [Hair et al. \(2021\)](#) begins by checking internal consistency using Cronbach's alpha and composite reliability values above 0.7, and by testing indicator reliability using outer loadings, which must be greater than 0.7. Convergent validity is further tested by examining the Average Variance Extracted (AVE), which must be greater than 0.5. The findings from testing convergent validity, internal consistency, and indicator reliability are shown in Table 3.

Table 3. Outer Model Test Result

Variable	Item	Outer Loading	Cronbach Alpha	Composite Reliability	AVE
E-Service Quality	ESQ1	0,760	0,857	0,891	0,538
	ESQ2	0,741			
	ESQ3	0,728			
	ESQ4	0,717			
	ESQ5	0,726			
	ESQ6	0,722			
	ESQ7	0,739			
E-Trust	ETR1	0,771	0,862	0,900	0,644
	ETR2	0,808			
	ETR3	0,810			
	ETR4	0,807			
	ETR5	0,815			
Public Satisfaction	PS1	0,828	0,876	0,910	0,669
	PS2	0,806			
	PS3	0,828			
	PS4	0,815			
	PS5	0,812			

Source: Author Computation (2025)

Outer model evaluation in this study was also carried out to assess discriminant validity in three steps, as described in [Hair et al. \(2021\)](#). To test the Fornell-Larcker criterion, the correlation between constructs is first evaluated by the square root value (AVE) of each construct. The value must be more than 0.50 to test for cross-loading. The Heterotrait-Monotrait Ratio (HTMT) value, which should be less than 0.90, can be used to assess whether discriminant validity testing is required.

Table 4. Fornell Larcker Test Result

	ESQ	ETR	PS
ESQ	0,733		
ETR	0,773	0,082	
PS	0,782	0,740	0,869

Source: Author Computation (2025)

Table 5. Cross Loading Test Result

	ESQ	ETR	PS
ESQ1	0,760	0,540	0,593
ESQ2	0,741	0,591	0,636
ESQ3	0,728	0,483	0,577
ESQ4	0,717	0,574	0,559
ESQ5	0,726	0,599	0,619
ESQ6	0,722	0,613	0,518
ESQ7	0,739	0,559	0,496
ETR1	0,541	0,771	0,536
ETR2	0,607	0,808	0,547

ETR3	0,686	0,810	0,693
ETR4	0,592	0,807	0,578
ETR5	0,658	0,815	0,596
PS1	0,656	0,646	0,828
PS2	0,615	0,529	0,806
PS3	0,650	0,665	0,828
PS4	0,632	0,536	0,815
PS5	0,642	0,638	0,812

Source: Author Computation (2025)

Table 6. Heterotrait-Monotrait Ratio (HTMT) Test Result

	ESQ	ETR	PS
ESQ			
ETR	0,892		
PS	0,898	0,842	

Source: Author Computation (2025)

Evaluating the Structural Model (Inner Model Test)

The structural model demonstrates strong explanatory power for both endogenous variables. The R-square value for e-trust is 0.598, indicating that 59.8% of the variance in citizens' trust toward the Smartkampung application is explained by the predictor construct, which reflects a moderate-to-substantial level of predictive accuracy based on the criteria of [Hair et al. \(2021\)](#). This suggests that e-service quality is a strong antecedent to trust, highlighting how users' perceptions of reliability, efficiency, and system integrity significantly shape their willingness to rely on digital public services. Meanwhile, the R-square value for public satisfaction is 0.657, meaning that e-service quality and e-trust together account for 65.7% of the variation in satisfaction. This represents a substantial explanatory level and indicates that the model effectively captures the key determinants of satisfaction in an e-government context. These findings align with the IS Success Model and trust-based theories, which posit that system and service quality influence trust, and that trust, in turn, enhances user satisfaction. Overall, the high R-square values reinforce the model's theoretical coherence and underscore the importance of improving digital service quality to build trust and enhance citizen satisfaction on e-government platforms.

Table 7. R-Square Test Result

	R-Square
E-Trust	0,598
Public Satisfaction	0,657

Source: Author Computation (2025)

Hypothesis Testing (Path Coefficients)

The hypothesis of this study was tested using a one-tailed test. Therefore, the original sample value is used to determine the path coefficient in this study (a positive relationship between variables is indicated by +1, and a negative relationship by -1). Furthermore, the level of significance of the relationship between variables is seen based on the T-Value, which must be greater than 1.65, and the P-Value, which must be smaller than 0.05 ([Hair et al., 2021](#)). Therefore, H1, H2, and H3 are acceptable. The three hypotheses have P-values below 0.05, T-values above 1.65, and original sample values above 1. Table 8 presents the results of the hypothesis tests in this study.

Table 8. Path Coefficients Test Result

Hypothesis	Original Sample (O)	T-Value	P-Value	Result
E-Service Quality > E-Trust	0,773	18,181	0,000	Accepted
E-Service Quality > Public Satisfaction	0,520	6,742	0,000	Accepted
E-Trust > Public Satisfaction	0,338	4,022	0,000	Accepted

Source: Author Computation (2025)

Mediation Analysis

This study also conducted a mediation analysis. Hypotheses with an indirect effect between variables have full mediation properties: exogenous variables can affect an endogenous variable only if they first go through the mediating variable. This can be seen from the T-Value, which is above 1.65, and the P-Value, which is below 0.05, as shown in Table 9 below.

Table 9. Mediation Analysis Result

Hypothesis	Original Sample (O)	T-Value	P-Value	Result
E-Service Quality > E-Trust > Public Satisfaction	0,261	3,819	0,000	Accepted

Source: Author Computation (2025)

Discussion

Of the four hypotheses formulated, the results show that all have a positive and significant effect on one another. The first hypothesis in this study states an acceptable conjecture. This is indicated by the e-service quality variable, which has a positive and significant effect on e-trust. This research shows that the Banyuwangi Smartkampung application, developed by the Banyuwangi Regency Government, has provided high-quality electronic services. This is reflected in various aspects, such as increased service efficiency, optimal fulfillment of public service needs, high application accessibility, and a security system that protects user data, thereby increasing public trust in electronic public services in Banyuwangi Regency. The distribution of respondents' processed answers, analyzed descriptively, also shows that the majority agree that the electronic services of the Banyuwangi Smartkampung application are of high quality, indicating a positive attitude towards the application's user confidence. The results of this study are also in line with research [Nawafleh & Khasawneh \(2024\)](#) where e-service quality has a positive and significant effect on e-trust, increasing e-service quality, including efficiency, system availability, service fulfillment, and privacy, can increase user trust in government services or e-government. This is also reinforced by research [Setiabudi & Sutanto \(2024\)](#) showing that e-service quality has a positive and significant effect on e-trust, meaning that the better the electronic services provided, the higher the user's trust in the application.

The second hypothesis in this study shows an acceptable conjecture. This is evidenced by the e-service quality variable, which directly has a positive and significant effect on community satisfaction. This research shows that the quality of electronic services provided by the Banyuwangi Smartkampung application demonstrates efficiency, system availability, service fulfillment, and a secure system, thereby increasing public satisfaction in Banyuwangi Regency. The distribution of respondents' processed answers, analyzed descriptively, shows that the majority have a positive perception and agree with the level of community satisfaction, as reflected in feelings of pleasure when comparing the performance of the Banyuwangi Smartkampung application. The results of this study are consistent with several previous studies that show that e-service quality affects public satisfaction. Research [San et al. \(2020\)](#)

found that e-service quality has a positive relationship with community or customer satisfaction in online services. Meanwhile, research focusing on BMKG public services also shows that e-service quality significantly contributes to public satisfaction with e-government services.

The third hypothesis in this study shows an acceptable conjecture. This is evidenced by the e-trust variable, which has a positive and significant effect on community satisfaction. This research shows that the Banyuwangi Smartkampung application service provider's ability, kindness, and integrity can build electronic trust among its users, thereby directly affecting public satisfaction. The distribution of respondents' processed answers, analyzed descriptively, also shows that the majority agree that the electronic trust generated can increase public satisfaction with the Banyuwangi Smartkampung application service, leading people to be more interested in reusing and to say positive things to others. This is in line with research by [Martio et al. \(2023\)](#), which shows that e-trust has a positive and significant effect on public satisfaction, meaning that the higher the user's trust in the service provider, the more satisfied the user will be when making transactions. Furthermore, research by [Setiabudi & Sutanto \(2024\)](#) shows that e-trust has a positive and significant effect on customer satisfaction. Users who have high trust in the application are more likely to feel satisfied and continue using the service.

The fourth hypothesis in this study shows an acceptable conjecture. This is evidenced by the e-service quality variable, which positively and significantly affects public satisfaction through the e-trust variable. In the distribution of respondents' processed answers, the majority agree that the Banyuwangi Smartkampung application already provides high-quality electronic services. In this study, the Banyuwangi Smartkampung application provides quality services through efficiency, service fulfillment, system availability, and strong system security. The quality electronic services provided by the Banyuwangi Smartkampung application build electronic trust among its users, resulting in public trust in Banyuwangi Regency. The distribution of respondents' answers also indicates a positive perception of the quality of the Banyuwangi Smartkampung application's electronic services, which can increase public satisfaction, both directly and indirectly, through user trust. This aligns with several studies that find that e-service quality has a positive and significant effect on public satisfaction through e-trust. Research [Martio et al. \(2023\)](#) shows that e-service quality has a significant effect on e-trust, which in turn increases public satisfaction.

Furthermore, research [Nawafleh & Khasawneh \(2024\)](#) found that e-service quality directly affects e-trust, and that e-trust plays an essential role in increasing user satisfaction with government digital services. Thus, e-service quality not only has a direct effect on public satisfaction. But also through e-trust as a mediating variable. This means that quality e-services will increase users' trust, and ultimately increase their satisfaction. Therefore, government organizations that want to increase public satisfaction in their public services need to optimize the quality of electronic services while building user trust.

E. CONCLUSION

This study examined how e-service quality influences public satisfaction, both directly and indirectly through e-trust, within the Banyuwangi Smartkampung super-application. The findings confirm that higher efficiency, fulfillment, system availability, and privacy protection significantly enhance public trust, thereby increasing user satisfaction. In addition, e-service quality has a substantial direct effect on satisfaction, indicating that high-performing digital services are central to citizens' positive experiences on e-government platforms. The model demonstrates substantial explanatory power, indicating that trust is a critical psychological mechanism linking service quality and satisfaction in rural-based digital governance contexts.

Theoretical Implication

This study advances e-government literature in several ways. First, it extends the application of TAM and the DeLone–McLean IS Success Model to a village-level super-application. In this underexplored context, digital literacy, infrastructure limitations, and public service complexity differ significantly from urban settings. Second, it offers empirical evidence that e-trust acts as a key mediating construct, reinforcing the argument that trust is not merely an outcome but a central pathway through which service quality shapes satisfaction. Third, the study contributes to Indonesian e-government research by providing one of the few quantitative assessments of Smartkampung, thereby enriching cross-country comparisons of the effectiveness of local digital governance.

Practical Implication

The results highlight several actionable implications for local governments. Strengthening system availability, reducing response times, improving data protection, and ensuring error-free features are crucial to sustaining public trust. Trust, in turn, helps ensure long-term engagement and satisfaction, which are essential for scaling e-government initiatives. Banyuwangi's government can use these insights to prioritize investments in technical reliability, cybersecurity, and user support systems, particularly given that the application targets communities with varying levels of digital readiness. Continuous monitoring, user education programs, and iterative updates can further enhance Smartkampung's usability and acceptance.

Limitations and Future Research Directions

Several limitations should be acknowledged. First, the study uses a non-probability purposive sampling approach, limiting the generalizability of the findings beyond current Smartkampung users. Second, the research relies on self-reported perceptions, which may be subject to subjective biases. Third, the scope is limited to one regional super-application; thus, contextual factors unique to Banyuwangi may affect the observed relationships. Additionally, the model focuses on only three variables, without considering other potential determinants such as perceived risk, digital literacy, or satisfaction with offline services.

Future studies could expand the model by incorporating additional predictors, such as system anxiety, perceived security risks, perceived value, and digital literacy, to develop a more comprehensive framework for understanding citizen satisfaction. Comparative studies between rural and urban e-government applications would also help identify structural differences in digital service adoption. Longitudinal approaches may capture changes in trust and satisfaction over time as the Smartkampung platform evolves. Finally, exploring qualitative user insights could provide a deeper understanding of pain points and critical service attributes that quantitative models may not fully capture.

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Contributorship

In this research, each author has a contribution. Ahmad Fuad Hasan, Firda Hidayati, Alfi Haris Wanto, and Sjamsiar Sjamsuddin were the drafters of the research proposal. Andrean

Nathaniel and Alfina Auliyaul Chusna analyzed and interpreted the data from respondents' answers.

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