



Determinants of Community Satisfaction through Loyalty in Sidoarjo Free Homecoming Program: Service, Competence, Infrastructure, Digitalization

Sutarni^{1*}, Sukesi², Jovi Iristian³

*Master of Management Study Program, Faculty of Economics and Business, Universitas Dr. Soetomo,
Surabaya, Indonesia^{1,2,3}*

*Corresponding author: sutarni.92072@student.unitomo.ac.id | sukesi@unitomo.ac.id |
joviiristian@unitomo.ac.id

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Abstract

Purpose: This study examines the effects of service quality, officer competence, facilities and infrastructure, and service digitalization on community satisfaction, with community loyalty examined as a mediating variable in the Free Homecoming Program organized by the Transportation Division of the Sidoarjo Regency Transportation Department.

Research Methodology: A quantitative approach was employed involving 78 respondents selected through purposive sampling. Data were collected using a five-point Likert-scale questionnaire comprising 25 items across six variables. The analysis included validity and reliability testing, classical assumption testing, two-stage multiple linear regression, and the Sobel test.

Results: Service quality and facilities and infrastructure significantly influenced community loyalty, whereas officer competence and service digitalization did not. Service digitalization and community loyalty significantly affected community satisfaction, while service quality, officer competence, and facilities and infrastructure showed no significant direct effects. The models explained 24.6% and 41.3% of the variance in community loyalty and satisfaction, respectively. However, the Sobel test showed that none of the four indirect effects were statistically significant.

Conclusions: Community loyalty significantly contributes to satisfaction, but it does not significantly mediate the effects of the four service-related predictors.

Limitations: The study is limited by its relatively small sample, cross-sectional design, and reliance on the Sobel test.

Contributions: This study clarifies the roles of service quality, infrastructure, digitalization, and loyalty in evaluating public transportation programs and provides practical implications for improving community-oriented services.

Keywords: *Community Loyalty, Community Satisfaction, Facilities and Infrastructure, Free Homecoming Program, Officer Competence*

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1. Introduction

Transportation constitutes a fundamental component of modern society because it supports population mobility, economic activity, and equitable access to public services. In regional governance, transportation services are expected not only to facilitate movement but also to ensure accessibility, reliability, safety, and public convenience ([Saif, Zefreh, & Torok, 2019](#); [Karner, Pereira, & Farber, 2025](#)). Sidoarjo Regency, as an area with high population mobility and strong interaction with Surabaya City, places its Transportation Department in a strategic position to provide transportation services that are responsive to community needs. Among the various programs implemented by the agency, the Free Homecoming Program represents one of the most prominent annual public services because it accommodates seasonal mobility during major religious holidays and involves a relatively large number of participants ([Li, 2018](#)). The scale and complexity of the program require effective coordination, competent personnel, adequate facilities, and accessible service systems to ensure that community expectations are adequately met.

Despite its strategic importance, the implementation of the Free Homecoming Program still encounters several operational challenges. These include inconsistencies in service speed and reliability, such as departure delays and schedule mismatches, as well as uneven officer competence in registration, verification, and direct interaction with participants. In addition, the condition and availability of vehicles and supporting facilities may not always fully meet participants' expectations regarding comfort and convenience. The introduction of digital registration has also created new challenges, particularly technical constraints and uneven utilization among participants with different levels of digital literacy. These practical issues indicate that community responses to the program may be shaped by several interrelated service dimensions rather than by a single factor ([Al-Rashid, Nahiduzzaman, Ahmed, Campisi, & Akgün, 2020](#)).

From a theoretical perspective, these conditions can be represented through four principal determinants. Service quality reflects the extent to which actual service delivery meets or exceeds community expectations and can be understood through the SERVQUAL framework proposed by [Parasuraman, Zeithaml, and Berry \(1988\)](#). Officer competence refers to the knowledge, skills, attitudes, and abilities required to perform public service responsibilities effectively. Facilities and infrastructure represent the physical and operational resources that support the delivery of services and influence users' perceptions of convenience and adequacy. Service digitalization reflects the integration of information technology into public service processes to improve accessibility, efficiency, and administrative responsiveness ([Indrajit, 2016](#)). Together, these four variables provide a comprehensive framework for evaluating the quality of public service delivery in the Free Homecoming Program.

In addition to these service-related determinants, this study places particular emphasis on community loyalty. In many service studies, loyalty is commonly positioned as an outcome of satisfaction. However, the relationship between satisfaction and loyalty is not always strictly unidirectional. [Dick and Basu \(1994\)](#) conceptualize loyalty as a combination of repeat behavior and attitudinal attachment, while [Bloemer and Kasper \(1995\)](#) suggest that satisfaction and loyalty may interact in more complex ways depending on the service context. In a free, seasonal, and noncommercial public program such as the Free Homecoming Program, repeated participation may arise not only from post-service satisfaction but also from habit, trust, familiarity, and emotional attachment to the program. This condition provides a theoretical basis for examining community loyalty as an antecedent that may influence satisfaction ([Susanti, Reniati, & Warlina, 2025](#); [Surya, Sagita, WA, CN, Hasbullah, & Yulistina, 2024](#)).

Previous studies have examined service quality, competence, facilities, digitalization, satisfaction, and loyalty in various public and service contexts. However, the existing literature has generally treated loyalty as a consequence of satisfaction and has rarely integrated all four service-related predictors within a single model in which loyalty precedes satisfaction. This limitation is particularly relevant in

seasonal public transportation programs, where repeated participation may be driven by recurring need and accumulated trust rather than by conventional commercial loyalty mechanisms ([Sepriani, Purwanto, & Ferdinal, 2026](#)). [Mujianto, Hartoyo, Nurmalinga, and Yusuf \(2023\)](#) provide useful empirical insight into related service relationships, but the simultaneous examination of service quality, officer competence, facilities and infrastructure, and service digitalization with community loyalty positioned as a mediating antecedent of satisfaction remains limited.

Accordingly, the novelty of this study lies in examining a reversed mediation framework in a noncommercial and seasonal public transportation context. Specifically, the study investigates whether service quality, officer competence, facilities and infrastructure, and service digitalization influence community loyalty and community satisfaction, and whether community loyalty mediates the relationship between these four service-related factors and satisfaction. By applying this model to the Free Homecoming Program organized by the Transportation Division of the Sidoarjo Regency Transportation Department, the study seeks to provide a more context-sensitive explanation of how public service experiences are translated into repeated participation, attachment, and satisfaction. The findings are expected to contribute both theoretically to the literature on public service satisfaction and loyalty and practically to the improvement of transportation service management at the regional government level.

2. Literature Review and Hypothesis/es Development

2.1 Service Quality

Service quality refers to the extent to which service delivery meets or exceeds users' expectations. [Parasuraman et al. \(1988\)](#) conceptualize service quality through the SERVQUAL dimensions of reliability, responsiveness, assurance, empathy, and tangibles. In public transportation services, these dimensions are reflected in schedule accuracy, responsiveness of officers, clarity of information, service certainty, and the physical condition of supporting facilities. High service quality can strengthen positive perceptions because users evaluate both the service outcome and the process through which the service is delivered. Therefore, reliable and responsive public service is expected to improve users' confidence and willingness to continue using the service ([Abbasi-Moghaddam, Zarei, Bagherzadeh, Dargahi, & Farrokhi, 2019](#)).

In the Free Homecoming Program, service quality becomes especially important because participants experience the service from registration until departure and, where applicable, return transportation. Delays, unclear procedures, inconsistent information, or inadequate responsiveness may weaken public confidence in the program. Conversely, accurate and consistent service delivery may create stronger attachment and encourage repeat participation. Previous transportation studies have shown that service quality is associated with satisfaction and loyalty among public transport users ([Efendi et al., 2024](#); [Kusumawardani & Yenita, 2023](#)). Thus, service quality is expected to contribute to both community loyalty and community satisfaction.

2.2 Officer Competence

Officer competence refers to the knowledge, skills, attitudes, and professional abilities required to perform service responsibilities effectively. [Thornhill-Miller, Camarda, Mercier, Burkhardt, Morisseau, Bourgeois-Bougrine, and Lubart \(2023\)](#) emphasizes that competence is closely related to the capability of individuals to carry out assigned tasks according to organizational standards. In public service settings, officer competence is particularly important because service users depend on front-line personnel for information, verification, administrative assistance, and problem resolution. Competent officers are expected to communicate clearly, understand procedures, respond appropriately to service users, and maintain professionalism throughout the service process. Therefore, officer competence may shape users' perceptions of service reliability and institutional credibility ([Irfan, Aiyub, & Chalirafi, 2023](#)).

Within the Free Homecoming Program, officer competence may influence participants' evaluation of the service, especially during registration, verification, and departure coordination. Officers who can explain procedures accurately and resolve problems quickly may increase public confidence in the program. In contrast, uneven competence can create delays, inconsistent information, and dissatisfaction. Prior research has also linked apparatus competence and communication quality with public satisfaction ([Angraini & Aini, 2026](#)). Accordingly, officer competence is theoretically expected to influence community loyalty and satisfaction, although its strength may vary across service contexts.

2.3 Facilities and Infrastructure

Facilities and infrastructure represent the physical and operational resources that support service delivery. These resources include vehicles, waiting areas, registration facilities, information media, service-point accessibility, and other supporting equipment. [Risdianto, Mujahid, and Suyuthi \(2025\)](#) explain that physical evidence influences users' perceptions because tangible conditions provide visible indications of service readiness and professionalism. Adequate facilities can improve comfort, safety, and convenience during service use. Conversely, inadequate infrastructure may reduce users' confidence in the service provider.

In the Free Homecoming Program, participants interact directly with transportation fleets, departure points, waiting areas, and supporting facilities. The physical condition of these resources can therefore influence participants' willingness to use the service again. Previous findings in public transportation show that service facilities and overall service quality contribute to trust and loyalty among users ([Kusumawardani & Yenita, 2023](#)). Well-maintained facilities may also signal organizational commitment to providing safe and comfortable public services. Consequently, improvements in facilities and infrastructure may strengthen both community loyalty and satisfaction.

2.4 Service Digitalization

Service digitalization refers to the integration of information and communication technology into public service processes to improve accessibility, efficiency, speed, and convenience. [Indrajit \(2016\)](#) explains that digital public services can simplify administrative procedures and reduce barriers between government institutions and citizens. Digitalization may include online registration, digital verification, information systems, reminders, and other technology-based service channels. When effectively implemented, digital systems can reduce waiting time and improve access to service information. Therefore, digitalization has become an increasingly important element in modern public service delivery.

However, the effectiveness of digitalization depends on system reliability, ease of use, information completeness, and users' digital literacy. In the Free Homecoming Program, online registration can increase efficiency, but technical disruptions or difficulties experienced by older participants may reduce its perceived usefulness. Research on e-government services shows that digital public service effectiveness can enhance public satisfaction when systems are accessible and reliable ([Gislawati & Karniawati, 2024](#); [Hulahi et al., 2022](#)). Digital convenience may also encourage repeated participation when users perceive the system as consistently beneficial. Therefore, service digitalization is expected to influence both community satisfaction and community loyalty.

2.5 Community Loyalty

Community loyalty refers to users' willingness to continue using, supporting, and recommending a service or program. [Dick and Basu \(1994\)](#) conceptualize loyalty as a combination of behavioral repetition and attitudinal attachment. In public services, loyalty may be reflected through repeat participation, recommendation, trust in the service provider, and resistance to alternative services. Unlike commercial loyalty, public-service loyalty may also arise from familiarity, repeated experience, perceived social value, and institutional trust. These characteristics make loyalty particularly relevant in recurring government programs.

In the context of the Free Homecoming Program, loyalty is important because the program is seasonal and may attract the same participants across multiple years. Repeated participation may arise not only from immediate satisfaction but also from habit, confidence, and emotional attachment to the program. The respondent profile shows that 56.4% of participants had joined the program more than once, indicating the presence of repeated use behavior. This condition provides an empirical basis for examining loyalty as a distinct construct in the study. Therefore, community loyalty is positioned as an important behavioral and psychological factor that may influence subsequent satisfaction evaluations.

2.6 Community Satisfaction

Community satisfaction refers to the overall evaluation of whether public service performance meets users' expectations and needs. Satisfaction is generally formed through a comparison between expected service quality and actual service experience. In public administration, satisfaction is important because it reflects citizens' perceptions of service responsiveness, accessibility, usefulness, and effectiveness. High satisfaction may indicate that a government program successfully provides benefits in accordance with public expectations. Therefore, satisfaction is commonly used as an important outcome indicator in public service evaluation ([Lanin & Hermanto, 2019](#)).

In the Free Homecoming Program, satisfaction may be influenced by service quality, officer competence, physical facilities, digital accessibility, and participants' prior experiences. Previous studies often position satisfaction as an antecedent of loyalty, including [Natalia and Sukesu \(2021\)](#). However, [Bloemer and Kasper \(1995\)](#) suggest that the relationship between satisfaction and loyalty may be more complex and not strictly unidirectional. In recurring public programs, prior trust and repeated participation may shape how users evaluate the current service experience. Accordingly, this study positions community satisfaction as the final outcome influenced by both service-related factors and community loyalty.

2.7 Service Determinants and Community Loyalty

Service quality, officer competence, facilities and infrastructure, and service digitalization may each contribute to the formation of community loyalty. Service quality can strengthen trust through consistent and responsive service, while officer competence can build confidence through professional interaction ([Nur, Suriani, Abubakar, Baharuddin, Salam, & Vano, 2025](#)). Facilities and infrastructure can reinforce positive perceptions through comfort and safety, whereas digitalization may increase convenience and ease of access. These four service dimensions therefore represent different mechanisms through which users may develop stronger attachment to the program. In a recurring public transportation program, positive evaluations of these factors may encourage participants to return and recommend the service to others ([Yunus, Susilo, Riyadi, Indrasari, & Putranto, 2019](#)).

Previous transportation studies indicate that service quality and facilities are associated with loyalty and trust among service users ([Efendi et al., 2024](#); [Kusumawardani & Yenita, 2023](#)). Competence and digitalization may also influence loyalty when users perceive the service as professional and accessible. However, because the Free Homecoming Program is seasonal and noncommercial, the strength of these relationships may differ from commercial service settings. The influence of each service determinant on loyalty therefore requires empirical examination. Based on this reasoning, the following hypotheses are proposed:

H₁: Service quality has a significant effect on community loyalty.

H₂: Officer competence has a significant effect on community loyalty.

H₃: Facilities and infrastructure have a significant effect on community loyalty.

H₄: Service digitalization has a significant effect on community loyalty.

2.8 Service Determinants and Community Satisfaction

Service quality, officer competence, facilities and infrastructure, and service digitalization may also directly influence community satisfaction. Service quality affects whether users perceive the service as reliable and responsive, while officer competence influences the quality of direct interaction ([Yermachenko, Bondarenko, Akimova, Karpa, Akimov, & Kalashnyk, 2023](#)). Facilities and infrastructure shape comfort and safety during participation, whereas digitalization affects administrative efficiency and accessibility. These dimensions together form important aspects of users' overall service experience. Therefore, improvements in these factors may contribute to higher satisfaction with the Free Homecoming Program ([Berlato, Binni, Durmus, Gatto, Giusti, Massari, & Mirarchi, 2025](#)).

Prior research supports the importance of service quality, competence, facilities, and digital service effectiveness in shaping user satisfaction in public-service settings. For example, [Hulahi, Pribadi, Rasyid, Pora, and Sari \(2022\)](#) found that public service quality significantly affects community satisfaction, while [Angraini and Aini \(2026\)](#) emphasize the role of apparatus competence. Digital public service effectiveness has also been associated with improved user experience and satisfaction ([Gislawati & Karniawati, 2024](#)). Nevertheless, the simultaneous effects of these four determinants in the context of a seasonal transportation program remain insufficiently examined. Based on this theoretical and empirical basis, the following hypotheses are proposed:

H₅: Service quality has a significant effect on community satisfaction.

H₆: Officer competence has a significant effect on community satisfaction.

H₇: Facilities and infrastructure have a significant effect on community satisfaction.

H₈: Service digitalization has a significant effect on community satisfaction.

2.9 Community Loyalty and Community Satisfaction

The relationship between loyalty and satisfaction is often discussed as a sequential process in which satisfaction leads to loyalty. However, [Dick and Basu \(1994\)](#) argue that loyalty contains both behavioral and attitudinal dimensions that may develop through repeated experience and attachment. ([Bloemer & Kasper, 1995](#)) further suggest that satisfaction and loyalty are not necessarily related in a strictly one-way direction. In recurring services, established loyalty may influence how users interpret subsequent service experiences. This possibility is particularly relevant in noncommercial and seasonal public programs.

In the Free Homecoming Program, repeat participants may already possess trust and familiarity with the service before evaluating their current experience. Their established attachment may therefore contribute to a more favorable satisfaction judgment. The relatively high proportion of repeat participants supports the relevance of examining this reversed relationship. This study consequently positions community loyalty as an antecedent of community satisfaction rather than solely as its consequence. Based on this reasoning, the following hypothesis is proposed:

H₉: Community loyalty has a significant effect on community satisfaction.

2.10 Mediating Role of Community Loyalty

Community loyalty may function as a mediating mechanism between service-related factors and community satisfaction. Positive service quality, competent officers, adequate facilities, and effective digitalization may strengthen users' trust and willingness to participate again ([Martins & Patricio, 2018](#)). This loyalty may then shape how participants evaluate the overall service and form their satisfaction judgment. In this sense, service-related improvements may influence satisfaction not only directly but also indirectly through the attachment developed toward the program. The mediating mechanism is particularly relevant in recurring public services where users accumulate experience over time.

The proposed mediation framework differs from the conventional satisfaction-to-loyalty sequence by positioning loyalty before satisfaction. This structure is considered appropriate because the Free Homecoming Program is seasonal, noncommercial, and characterized by repeated participation. Existing literature indicates that the satisfaction–loyalty relationship may vary according to service context ([Dick, & Basu, 1994](#); [Bloemer, & Kasper, 1995](#)). Therefore, the study examines whether community loyalty transmits the effects of the four service-related predictors to community satisfaction. Based on this reasoning, the following mediation hypotheses are proposed:

H₁₀: Community loyalty mediates the effect of service quality on community satisfaction.

H₁₁: Community loyalty mediates the effect of officer competence on community satisfaction.

H₁₂: Community loyalty mediates the effect of facilities and infrastructure on community satisfaction.

H₁₃: Community loyalty mediates the effect of service digitalization on community satisfaction.

3. Research Methodology

This study used a quantitative approach with a causal research design, combining descriptive statistics to characterize the collected data and inferential statistics to test the proposed hypotheses ([Sugiyono, 2019](#)). The population comprised all 350 registered participants of the most recent Free Homecoming Program organized by the Transportation Division, Sidoarjo Regency Transportation Department. The sample size was determined using the Slovin Formula [1](#):

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

with a 10% tolerable error, yielding a minimum sample of 78 respondents. Respondents were selected through purposive sampling, requiring that participants had joined the program at least once, had completed the full service process from registration to departure (and return, if applicable), and were willing to complete the questionnaire.

Primary data were collected through a closed online questionnaire distributed via Google Form, measured on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree) across 25 items covering six variables: Service Quality (5 items, adapted from the SERVQUAL dimensions of reliability, responsiveness, assurance, empathy, and tangibles), Officer Competence (4 items: technical knowledge, service skills, professionalism, and communication), Facilities and Infrastructure (3 items: fleet condition, service-point accessibility, and supporting facilities), Service Digitalization (4 items: access ease, process speed, information completeness, and system reliability), Community Satisfaction (5 items), and Community Loyalty (4 items: repeat use, recommendation, trust, and resistance to alternatives).

Instrument validity was assessed using the corrected item-total correlation by comparing each item's correlation coefficient with the critical *r*-table value of 0.223 (*df*=76, $\alpha=0.05$, two-tailed). Instrument reliability was evaluated using Cronbach's Alpha, with a minimum acceptable threshold of 0.60. Prior to hypothesis testing, both regression models were examined to ensure compliance with the classical assumptions of multiple linear regression, including normality using the One-Sample Kolmogorov-Smirnov test, multicollinearity using Tolerance and Variance Inflation Factor (VIF) values, and heteroscedasticity using the Glejser test. Two regression models were then estimated.

Model 1 examined the direct effects of Service Quality (X_1), Officer Competence (X_2), Facilities and Infrastructure (X_3), and Service Digitalization (X_4) on Community Loyalty (Z), expressed as Formula [2](#):

$$Z = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e \quad (2)$$

Model 2 examined the direct effects of the four independent variables and Community Loyalty (Z) on Community Satisfaction (Y), expressed as Formula 3:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5Z + e \quad (3)$$

to test the direct effect of the four independent variables and Community Loyalty on Community Satisfaction (Y). Partial effects were tested with the t -test and simultaneous effects with the F -test, both at $\alpha=0.05$.

The mediating role of Community Loyalty in the indirect path from each independent variable to Community Satisfaction was tested using the Sobel test, computed as the product of path a ($X \rightarrow Z$) and path b ($Z \rightarrow Y$) divided by their pooled standard error, with $|z| > 1.96$ indicating a significant indirect effect at the 5% level.

4. Results and Discussions

4.1 Respondent Profile and Descriptive Statistics

Table 1. Respondent profile

Category	Group	n	Percentage (%)
Gender	Male	39	50.0
	Female	39	50.0
Age	< 25 years	10	12.8
	25-35 years	26	33.3
	36-45 years	22	28.2
	46-55 years	15	19.2
	> 55 years	5	6.4
Education	Senior high school	35	44.9
	Diploma	13	16.7
	Bachelor degree	22	28.2
	Master/Doctoral	8	10.3
Program frequency	1 time	34	43.6
	2 times	24	30.8
	3 times or more	20	25.6

Table 1 presents the demographic characteristics of the 78 respondents based on gender, age, educational background, and frequency of participation in the program. As shown in Table 1, the respondents were evenly distributed by gender, while the majority were within the productive-age groups. In terms of education, most respondents had completed senior high school, followed by those holding bachelor's and diploma degrees. Furthermore, more than half of the respondents had participated in the program at least twice, indicating a substantial proportion of repeat participants who were relevant for examining the formation of participant loyalty.

Table 2. Descriptive statistics of research variables

Variable	Items	Min	Max	Mean	SD
Service Quality (X_1)	5	1.80	5.00	3.785	0.761
Officer Competence (X_2)	4	1.75	5.00	3.683	0.668
Facilities and Infrastructure (X_3)	3	2.00	5.00	3.603	0.705

Variable	Items	Min	Max	Mean	SD
Service Digitalization (X_4)	4	2.00	5.00	3.609	0.658
Community Satisfaction (Y)	5	2.00	5.00	3.477	0.737
Community Loyalty (Z)	4	1.50	5.00	3.179	0.646

Table 2 presents the descriptive statistics of the six research variables. Service Quality obtained the highest mean among the independent variables (3.785), followed by Officer Competence (3.683), Service Digitalization (3.609), and Facilities and Infrastructure (3.603). Among the outcome variables, Community Satisfaction averaged 3.477, while Community Loyalty recorded the lowest mean of all variables (3.179), indicating that participants' commitment to consistently re-register and recommend the program has not yet matched their positive evaluation of the service itself.

4.2 Validity and Reliability of the Instrument

Table 3. Reliability test summary

Variable	Items	Cronbach Alpha	Result
Service Quality (X_1)	5	0.925	Reliable
Officer Competence (X_2)	4	0.859	Reliable
Facilities and Infrastructure (X_3)	3	0.832	Reliable
Service Digitalization (X_4)	4	0.859	Reliable
Community Satisfaction (Y)	5	0.911	Reliable
Community Loyalty (Z)	4	0.878	Reliable

All 25 measurement items across the six variables demonstrated corrected item-total correlation values ranging from 0.627 to 0.820, exceeding the critical r-table value of 0.223. These results indicate that all items satisfied the validity criteria and were therefore retained for further analysis. As presented in Table 3, the reliability test also showed satisfactory internal consistency for all constructs, with Cronbach Alpha coefficients ranging from 0.832 to 0.925, well above the minimum threshold of 0.60. Service Quality recorded the highest reliability coefficient ($\alpha=0.925$), followed by Community Satisfaction ($\alpha=0.911$), Community Loyalty ($\alpha=0.878$), Officer Competence ($\alpha=0.859$), Service Digitalization ($\alpha=0.859$), and Facilities and Infrastructure ($\alpha=0.832$). Thus, all variables were considered reliable and suitable for subsequent statistical analysis.

Following the validity and reliability assessment, classical assumption tests were conducted to determine the suitability of the data for multiple linear regression analysis. The Kolmogorov–Smirnov test yielded Asymp. Sig. values of 0.982 for Model 1 and 0.420 for Model 2, both exceeding the 0.05 significance level and indicating normally distributed residuals. Furthermore, all tolerance values were greater than 0.10 and all Variance Inflation Factor (VIF) values were below 10, with the highest VIF recorded at 1.327, confirming the absence of multicollinearity. The Glejser test also produced significance values above 0.05 for all predictors in both models, indicating that heteroscedasticity was not present. Accordingly, both regression models satisfied the required classical assumptions and were considered appropriate for further regression analysis.

4.3 Effects on Community Loyalty (Model 1)

Table 4. Regression results for community loyalty (Z) in Model 1

Variable	B	t	Sig.	Result
(Constant)	0.805	1.529	0.131	-
Service Quality (X_1)	0.260	2.778	0.007	Significant
Officer Competence (X_2)	0.037	0.341	0.734	Not significant
Facilities and Infrastructure (X_3)	0.210	2.125	0.037	Significant
Service Digitalization (X_4)	0.138	1.297	0.199	Not significant
Community Loyalty (Z)	4	0.878		Reliable

As presented in Table 4, Model 1 produced an R Square value of 0.246, indicating that Service Quality, Officer Competence, Facilities and Infrastructure, and Service Digitalization jointly explained 24.6% of the variance in Community Loyalty. The model was statistically significant ($F=5.969$; $p<0.001$), confirming that the four independent variables simultaneously contributed to the prediction of Community Loyalty. At the partial level, Service Quality had a significant positive effect on Community Loyalty ($B=0.260$; $t=2.778$; $p=0.007$), supporting H_1 , while Facilities and Infrastructure also showed a significant positive effect ($B=0.210$; $t=2.125$; $p=0.037$), supporting H_3 . In contrast, Officer Competence ($B=0.037$; $t=0.341$; $p=0.734$) and Service Digitalization ($B=0.138$; $t=1.297$; $p=0.199$) did not significantly affect Community Loyalty, leading to the rejection of H_2 and H_4 . Among the significant predictors, Service Quality demonstrated the largest regression coefficient, indicating the strongest contribution to Community Loyalty in Model 1.

4.4 Effects on Community Satisfaction (Model 2)

Table 5. Regression results for community satisfaction (Y) in Model 2

Variable	B	t	Sig.	Result
(Constant)	-0.111	-0.204	0.839	-
Service Quality (X_1)	0.147	1.466	0.147	Not significant
Officer Competence (X_2)	0.034	0.314	0.754	Not significant
Facilities and Infrastructure (X_3)	0.172	1.665	0.100	Not significant
Service Digitalization (X_4)	0.410	3.765	0.000	Significant
Community Loyalty (Z)	0.254	2.140	0.036	Significant

As presented in Table 5, Model 2 produced an R Square of 0.413 ($F=10.115$; $p=0.000$), indicating that the four independent variables together with Community Loyalty explain 41.3% of the variance in Community Satisfaction. Service Digitalization emerged as the strongest and only significant independent-variable predictor ($\beta=0.410$; $p=0.000$, H_8 accepted), while Community Loyalty also had a significant positive effect on Community Satisfaction ($\beta=0.254$; $p=0.036$, H_9 accepted). In contrast, Service Quality ($\beta=0.147$; $p=0.147$), Officer Competence ($\beta=0.034$; $p=0.754$), and Facilities and Infrastructure ($\beta=0.172$; $p=0.100$) did not have significant direct effects on Community Satisfaction (H_5 , H_6 , and H_7 rejected). These results indicate that Service Digitalization and Community Loyalty are the main determinants of Community Satisfaction in Model 2.

4.5 Mediation Test (Sobel Test)

Table 6. Sobel test results - mediating effect of community loyalty

Hypothesis	Mediation Path	Indirect Effect (a×b)	Sobel z	Sig.	Result
H_{10}	$X_1 \rightarrow Z \rightarrow Y$	0.0661	1.695	0.090	Not significant
H_{11}	$X_2 \rightarrow Z \rightarrow Y$	0.0094	0.337	0.736	Not significant
H_{12}	$X_3 \rightarrow Z \rightarrow Y$	0.0534	1.508	0.132	Not significant
H_{13}	$X_4 \rightarrow Z \rightarrow Y$	0.0350	1.110	0.267	Not significant

As presented in Table 6, the Sobel test was conducted to examine whether Community Loyalty mediates the effects of Service Quality, Officer Competence, Facilities and Infrastructure, and Service Digitalization on Community Satisfaction. Although all indirect effects were positive, none of the mediation paths reached statistical significance at the 5% level, as all Sobel z-values were below 1.96 and all p-values exceeded 0.05. Service Quality showed the strongest indirect effect ($a \times b=0.0661$; $z=1.695$; $p=0.090$), followed by Facilities and Infrastructure ($a \times b=0.0534$; $z=1.508$; $p=0.132$), Service Digitalization ($a \times b=0.0350$; $z=1.110$; $p=0.267$), and Officer Competence ($a \times b=0.0094$; $z=0.337$; $p=0.736$). Therefore, H_{10} , H_{11} , H_{12} , and H_{13} are not supported, indicating that Community Loyalty does not significantly mediate the relationship between the four independent variables and Community Satisfaction.

4.6 Discussion

Service Quality emerged as the strongest predictor of Community Loyalty, supporting the theoretical perspectives of [Griffin \(2005\)](#), the SERVQUAL framework developed by [Parasuraman, Zeithaml, and Berry \(1988\)](#). This finding is also consistent with [Efendi, Dudung, and Sudriyanto \(2024\)](#), indicating that reliable and responsive service delivery plays an important role in strengthening participants' loyalty. Facilities and Infrastructure also had a significant effect on Community Loyalty, in line with [Kusumawardani and Yenita \(2023\)](#). However, its relatively lower contribution suggests that improvements in physical facilities, transportation comfort, and supporting infrastructure remain necessary to strengthen participants' overall service experience.

In contrast, Officer Competence did not significantly affect Community Loyalty, differing from the findings of [\(Bonnar-White, Tartaro, Mastrangelo, Erbaugh, & Mulvihill, 2022\)](#). This result may reflect variations in the competence and performance of field officers, causing participants to perceive officer capability as less decisive in forming loyalty. Service Digitalization, meanwhile, emerged as the strongest predictor of Community Satisfaction, consistent with [Hulahi, Pribadi, Rasyid, Pora, and Sari \(2022\)](#) and [Indrajit \(2016\)](#). This finding indicates that accessible and efficient digital services can directly improve participants' satisfaction. However, Service Digitalization did not significantly influence Community Loyalty, suggesting that digital convenience may generate immediate satisfaction without necessarily creating long-term commitment, particularly because the Free Homecoming Program is a seasonal service accessed only once a year. This differs from the findings of [Gislawati and Karniawati \(2024\)](#), which were obtained in service settings involving more frequent interactions.

Community Loyalty was found to have a significant positive effect on Community Satisfaction, supporting the proposed direction in which loyalty functions as an antecedent of satisfaction in this specific service context. This finding is consistent with the perspectives of [Dick and Basu \(1994\)](#) and [Bloemer and Kasper \(1995\)](#), but differs from the conventional satisfaction-to-loyalty relationship reported by [Natalia and Sukesu \(2021\)](#) in a paid hospital service setting. The difference may be explained by the unique characteristics of the Free Homecoming Program, where participants may develop loyalty through previous experiences, institutional trust, or repeated participation before evaluating their current level of satisfaction. Nevertheless, the Sobel test results showed that Community Loyalty did not significantly mediate the effects of Service Quality, Officer Competence, Facilities and Infrastructure, or Service Digitalization on Community Satisfaction. Therefore, although Community Loyalty directly contributes to Community Satisfaction, its role as a mediating variable is not statistically supported in this study.

5. Conclusions

Of the thirteen hypotheses tested, four were accepted and nine were rejected. Service Quality and Facilities and Infrastructure significantly strengthen Community Loyalty; Service Digitalization significantly strengthens Community Satisfaction; and Community Loyalty significantly affects Community Satisfaction, confirming loyalty as an antecedent rather than a consequence of satisfaction in this free, seasonal transportation program. Officer Competence did not significantly affect either outcome, and none of the four Sobel-tested mediation paths reached significance, although the Service Quality and Service Digitalization paths approached the conventional threshold. The two models explain 24.6% and 41.3% of the variance in Loyalty and Satisfaction, respectively.

Practically, the Sidoarjo Regency Transportation Department should prioritize continuous improvement in schedule reliability, officer responsiveness, fleet condition, and waiting-area comfort; digital registration platforms should be enhanced with features that build long-term engagement (re-registration reminders, participation history), and field-officer training should be standardized. Academically, future studies are encouraged to use higher-power mediation techniques (bootstrapping or SEM) and longitudinal designs to more conclusively establish the causal direction between

satisfaction and loyalty, and to extend the model with variables such as institutional image or trust. This study is limited by its cross-sectional design, small sample ($n=8$), reliance on self-reported data, and focus on a single public program.

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Author Contributions

S contributed to conceptualization, research design, and methodology. S was responsible for data collection, data analysis, and interpretation of findings. JI contributed to manuscript preparation, critical revision, and editing. All authors read and approved the final version of the manuscript.

Conflict of Interest

The authors declare that there are no conflicts of interest regarding the publication of this article.

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