



The influence of trust, usefulness, and security on the intention to use the ferizy application for ro-ro ferry ticket booking in Batam

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ABSTRACT

This study examines the influence of Trust, Usefulness, and Security on the Intention to Use the Ferizy application for Ro-Ro ferry ticket reservations in Batam. As digital platforms increasingly shape transportation services in Indonesia, understanding user perceptions becomes crucial for enhancing adoption and sustaining long-term engagement. Using a quantitative approach, data were collected through structured questionnaires distributed to active Ro-Ro ferry users. The results show that Trust, Usefulness, and Security each have a positive and significant effect on Intention to Use, while the simultaneous F-test confirms that these three variables collectively contribute substantially to explaining user intention. Descriptive findings indicate that users perceive Ferizy as highly useful, particularly in facilitating faster and more efficient ticket reservations. Trust levels are also relatively high, supported by perceptions of system credibility and transparent service information. Security emerges as a critical determinant, as users express confidence in the protection of personal data and the safety of digital transactions. The variable measuring Intention to Use records the highest average score, reflecting strong user motivation to continue utilizing the application. These findings underscore the necessity for digital service providers to strengthen system reliability, functional benefits, and robust security mechanisms, while also offering theoretical contributions to consumer behavior research within digital service adoption in Indonesia.

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1. INTRODUCTION

The development of Batam City has been the result of systematic and directed urban planning (Bappeda Kota Batam, 2025). In the 1970s, the late Prof. Ir. B.J. Habibie, in collaboration with the Batam Authority (Otorita Batam/OB), initiated the city's development with the vision of transforming it into a strategic industrial area to strengthen Indonesia's national economy (Ahmad & Pradjoko, 2024). Its location along international shipping routes and proximity to Singapore and Malaysia has endowed Batam with exceptional strategic value. Since then, Batam has evolved into a hub of industry, trade, tourism, and technology (Rudiansyah, 2025). This rapid growth has heightened the

demand for supporting infrastructure, particularly maritime transport that connects its dispersed regions. As economic activities intensified, the need for a fast, efficient, and integrated transport system became crucial to maintain Batam's competitiveness as one of the most advanced cities in the Riau Islands Province (Inforial, 2023).

Before its transport infrastructure developed, Batam's inter-island connectivity faced significant challenges. Comprising several separated islands, the city's mobility, goods distribution, and trade activities relied heavily on maritime transport (Savitri & Abbas, 2019). Inadequate ferry connections hindered economic efficiency, forcing residents to take longer, costlier, and sometimes unfeasible routes. This led to the emergence of the Roll-on/Roll-off (Ro-Ro) ship concept, enabling simultaneous transportation of passengers, vehicles, and goods. The introduction of Ro-Ro vessels marked a turning point for Batam's economy, as maritime transport became an indispensable component of its geographic and economic structure (Ariany et al., 2020).

Geographically, Batam is predominantly composed of water rather than land. According to data from the Batam Central Statistics Agency (BPS) in 2023, approximately 96% of its territory consists of marine areas, while only 4% is land. This composition makes maritime transport not merely an option but a vital necessity for sustaining the city's social and economic life. Ro-Ro ships play a crucial role in linking islands for passenger movement, logistics distribution, and trade operations. Without adequate ferry services, community and economic activities would be severely disrupted. Thus, the city's economic progress and mobility are inseparable from the presence of an efficient and reliable maritime transport system (BPS Kota Batam, 2023).

The Ro-Ro ferry services in Batam serve not only as a mode of passenger transport but also as an essential component in ensuring smooth logistics, trade distribution, and inter-island mobility. Designed to allow direct loading and unloading of vehicles and passengers, Ro-Ro ferries offer operational efficiency (Ramadhani et al., 2024). To enhance service quality, PT ASDP Indonesia Ferry (Persero) introduced the *Ferizy* application in 2020 as part of a digital transformation initiative. The application enables users to book, select routes, and make payments online, supporting contactless transactions during the COVID-19 pandemic (Latuo & Nuryani, 2025).

However, the implementation of *Ferizy* in Batam has encountered challenges distinct from those in major ports such as Merak, Bakauheni, Ketapang, and Gilimanuk, where digital booking is mandatory, thus ensuring high adoption rates (Junaidi et al., 2023). The Batam–Tanjung Uban route represents a distinctive case for analyzing *Ferizy* adoption due to its high dependency on Ro-Ro ferries for daily mobility, logistics, and inter-island economic activity, while simultaneously operating under a non-mandatory digital booking system. Unlike major national routes such as Merak–Bakauheni or Ketapang–Gilimanuk, where *Ferizy* use is compulsory and digital compliance is structurally enforced, users on the Batam–Tanjung Uban route retain the option of manual ticket purchases. This condition allows for a more accurate observation of genuine user perceptions, behavioral intentions, and resistance toward digital adoption. Consequently, focusing on this route provides both academic value, by capturing voluntary technology adoption behavior, and practical relevance, by generating insights for improving digital service strategies in regions with similar socio-economic and digital readiness characteristics. In Batam, multiple alternative ferry services that do not require digital booking remain available, leading to slower adoption. This variation demonstrates that the success of service digitalization depends not only on technology but also on cultural readiness, local mobility patterns, and user perceptions of trust, usefulness, and security (Utami, 2021). Consequently, optimizing Ro-Ro services and the *Ferizy* system requires targeted attention.

Although prior studies have extensively examined the adoption of digital applications such as e-wallets, mobile banking, online transportation platforms, and digital ticketing systems, most have focused on urban financial services or mandatory digital environments with relatively high digital maturity. Limited attention has been given to maritime transportation applications operating in non-mandatory contexts, particularly within regions characterized by moderate digital literacy and strong cash-based transaction cultures. Moreover, existing studies rarely integrate trust, usefulness, and security simultaneously within the specific context of Ro-Ro ferry ticketing, where physical mobility, logistics dependency, and perceived transactional risk differ substantially from

conventional digital services. This study addresses this gap by extending digital adoption theory to a maritime transportation setting, offering a context-specific examination of Ferizy adoption in Batam.

According to (Utami, 2021), trust constitutes a fundamental factor influencing users' willingness to transact via the Ferizy application. Many Batam residents still exhibit low levels of trust in digital systems, preferring cash transactions at port counters for perceived safety and the physical proof of paper tickets (S.S & Darmawan, 2020). The belief that "cash is more trustworthy" remains deeply embedded in local transaction culture. Concerns about fraud and data breaches in digital payments persist despite ASDP's implementation of verification systems and standardized security measures.

Statistical findings reinforce this trend. The Batam City IP-TIK (Information and Communication Technology Development Index) scored 5.74 in 2023, categorized as moderate, suggesting limited digital service utilization (BPS Kota Batam, 2025). A national survey by Katadata Insight Center (2023) revealed that 38% of respondents still feared losing money in online transactions. Likewise, Bank Indonesia (2024) reported that only 27–30% of Riau Islands residents use non-cash payment methods, far below Jakarta's 70%. These figures confirm that low trust and limited familiarity with digital payments remain major obstacles to digital adoption in Batam.

In terms of perceived usefulness, users' understanding of Ferizy's benefits remains limited due to low digital literacy (RRI Batam, 2023). The population, largely composed of industrial workers and migrants (about 60%), prioritizes economic productivity over technological adaptation (OECD, 2023). Many perceive the application as complex due to account registration, schedule selection, and online payment processes. This misconception overshadows the functional advantages of transparency, convenience, and time efficiency offered by Ferizy. Low levels of higher education (only 15%) and long working hours (8–10 hours daily) further constrain the population's ability to adopt digital platforms (BPS, 2023). Consequently, despite its high functional value, Ferizy's utilization remains limited by low digital literacy and perceived complexity.

Security perception also plays a critical role in shaping user behavior toward Ferizy. Many residents express anxiety regarding data protection and online fraud (Siagian et al., 2022). The lack of digital education makes users susceptible to misinformation spread on social media. This has fostered reluctance to provide personal data or make online payments. Despite Ferizy's implementation of encrypted data systems and verified authentication, skepticism remains prevalent. Survey data from Katadata Insight Center (2023) showed that 38% of Indonesians still fear financial loss in online transactions, while Bank Indonesia (2023) reported a low QRIS adoption rate (30%) in the Riau Islands. Furthermore, the Ministry of Communication and Information (Kominfo, 2023) found that 47% of Indonesian internet users tend to believe unverified digital rumors, and the region's Digital Literacy Index (3.42 out of 5) falls slightly below the national average.

This combination of distrust and low literacy contributes to a persistent preference for manual ticket purchases. Many users perceive face-to-face transactions as safer and more controllable, believing that physical interactions minimize errors or fraud (Rifaldi et al., 2021). As a result, reluctance to use Ferizy reduces the demand for Ro-Ro ferry services relying on the app, while alternative traditional maritime modes maintain higher passenger volumes. Data from the Batam Port Authority (BP Batam) indicate that total domestic sea transport passengers in January–September 2024 reached 2,904,435 people, lower than the same period in the previous year.

These findings demonstrate that although the Ferizy application offers efficiency and convenience, public acceptance in Batam remains constrained by limited trust, low perceived usefulness, and security concerns. Therefore, this study seeks to identify the underlying issues and analyze the factors influencing consumer intention to use the Ferizy application under the title: "The Influence of Trust, Usefulness, and Security on the Intention to Use the Ferizy Application for Ro-Ro Ferry Ticket Booking in Batam."

2. RESEARCH METHOD

This study adopts a descriptive quantitative method to examine how Trust, Usefulness, and Security influence Interest in Using the Ferizy application for Ro-Ro ferry ticket reservations in

Batam. The quantitative approach enables structured measurement of user perceptions and allows statistical testing to identify the strength and direction of relationships between variables. Data were collected through closed-ended questionnaires distributed to active Ferizy users, providing objective insights into digital adoption behavior.

The research is causal associative, observing the cause–effect relationship between Trust (X1), Usefulness (X2), Security (X3), and Interest in Using Ferizy (Y). It is also applicative, offering practical implications for PT ASDP Indonesia Ferry, and serves as contextual replication by applying established digital adoption theories within Batam’s maritime transportation context. The study was conducted at the Batam–Tanjung Uban Ro-Ro Port, a major travel corridor accommodating frequent use of the Ferizy system. Research activities followed a structured timeline from July to December 2025, starting with instrument preparation, followed by data collection from August to September, data analysis through October and November, and reporting in December.

The population includes all Ferizy users at the Batam–Tanjung Uban route, categorized as infinite due to unavailable exact user data. The sample size was determined using the Lemeshow formula ($Z = 1.96$, $p = 0.5$, $d = 0.1$), resulting in a minimum requirement of 97 respondents; to ensure data completeness, the researcher targeted at least 100 users. The Lemeshow formula was selected due to the absence of an exact population frame for Ferizy users on the Batam–Tanjung Uban route, making it appropriate for estimating minimum sample size in studies with an infinite or unknown population. The use of a margin of error (d) of 0.1 reflects practical field constraints, including fluctuating passenger volumes and limited access to respondents, while still ensuring an acceptable level of statistical precision for exploratory and applied research. Although a 10% margin of error reduces the strength of population generalization compared to smaller margins, it remains adequate for identifying significant relationships between variables and is commonly applied in behavioral and technology adoption studies conducted in real-world transportation settings. Convenience sampling was employed because of fluctuating passenger volumes and practical field accessibility. Primary data were obtained through questionnaires supported by brief observations, while secondary data were collected from academic literature, government reports, and Ferizy’s official information.

Variables were operationalized using established indicators. Trust (X1) was measured using indicators from (Ariningsih et al., 2022), covering reliability, transparency, privacy protection, and customer service. Usefulness (X2), following (Suprpto & Farida, 2022) Suprpto et al. (2025), assessed perceived benefits, service quality, price–benefit suitability, and satisfaction. Security (X3), based on Kanaan et al. (2022), measured data protection, robustness of security features, and user confidence. Interest in Using (Y), referring to Yang et al. (2021), examined perceived usefulness, ease of use, social influence, lifestyle compatibility, and trust.

Data analysis used SPSS 25. Validity was tested through Pearson Product Moment correlation (Rumus 3.2, Peneliti 2025), requiring r -count greater than r -table at 5% significance. Reliability used Cronbach’s Alpha with a minimum threshold of 0.70, following the classification in Results (Researcher, 2025). Classical assumptions, normality, multicollinearity, and heteroscedasticity, were tested to validate the regression model. Multiple linear regression then examined the partial and simultaneous effects of the independent variables on Interest in Using Ferizy, supported by t -tests, F -tests, and R^2 analysis. Instrument validity was assessed using the Pearson Product Moment correlation, with each item considered valid if the r -count exceeded the r -table value at a 5% significance level. The results indicate that all measurement items across the Trust, Usefulness, Security, and Interest in Using constructs met the minimum validity criteria. Reliability testing employed Cronbach’s Alpha with a threshold value of ≥ 0.70 , confirming internal consistency. The analysis shows that all constructs achieved Cronbach’s Alpha coefficients above the acceptable limit, indicating that the measurement instruments were reliable and suitable for further statistical analysis. Together, these procedures provide a concise yet comprehensive assessment of the determinants of Ferizy application usage in Batam’s Ro-Ro ferry ecosystem.

3. RESULTS AND DISCUSSIONS

Results

Batam's development has been shaped not by spontaneous growth but by systematic and directed planning, as emphasized in Bappeda Kota Batam (2025). Since the 1970s, the late Prof. Ir. B.J. Habibie and the Otorita Batam initiated the city's transformation into a strategic industrial hub designed to strengthen national economic capacity (Ahmad & Pradjoko, 2024). Its geographic position along international shipping routes and proximity to Singapore and Malaysia has reinforced Batam's role as a center for industry, trade, tourism, and technology. This economic expansion has intensified the need for integrated and efficient transportation infrastructure, with maritime transport becoming indispensable for maintaining regional competitiveness (Inforial, 2023). Before such infrastructure matured, Batam's archipelagic structure posed significant mobility challenges, as populations and goods depended on limited sea transport. The need for a system capable of transporting passengers, vehicles, and logistics simultaneously eventually led to the adoption of Roll-on/Roll-off (Ro-Ro) vessels, which marked a turning point in enabling effective inter-island connectivity (Savitri & Abbas, 2019).

Geographically, Batam is dominated by water, with BPS Batam (2023) reporting that 96 percent of its territory consists of marine areas while only 4 percent is land. This means maritime transportation is not an optional mode but a fundamental support system for daily economic and social activities. Ro-Ro vessels thus serve as an essential connector for goods distribution, inter-island trade, and population mobility. They have become increasingly central as Batam's economic landscape continues to evolve. To enhance service efficiency, PT ASDP Indonesia Ferry (Persero) introduced the Ferizy application in 2020 to digitalize ticket purchasing, streamline scheduling, and reduce physical queues, as well as to support health protocols during the Covid-19 pandemic (Latuo & Nuryani, 2025). However, unlike large ports such as Merak, Bakauheni, Ketapang, and Gilimanuk where Ferizy use is mandatory, Batam passengers still have alternative maritime services that do not require digital transactions. As a result, Ferizy adoption in Batam has progressed more slowly, indicating that technological success depends not only on digital infrastructure but also on user readiness, cultural habits, and perceptions of trust, usefulness, and security (Utami, 2021).

User reviews on Google Play in 2025 highlight these constraints and support findings by (Utami, 2021) that trust is a decisive factor in digital transaction adoption. Many Batam residents prefer manual cash transactions at port counters, perceiving them as safer and more tangible, in line with observations by (S.S & Darmawan, 2020). This strong reliance on physical proof reinforces skepticism toward digital payments and concerns over authenticity and financial security. Although Ferizy adheres to ASDP's transaction verification standards, resistance remains high due to long-standing cultural preferences. Results show that technological utilization in Batam is still limited, with the 2023 IP-TIK index at 5.74, reflecting moderate digital engagement. Nationally, 38 percent of respondents still fear financial loss during online transactions, and Kepri's QRIS adoption rate remains at only 27–30 percent, far below Jakarta's 70 percent. This underscores the local preference for cash-based interactions and the comparatively low trust in digital systems.

Perceived usefulness also shapes user intention. Although Ferizy offers clear advantages such as transparent scheduling and queue-free purchasing, many Batam residents find it difficult due to low digital literacy (RRI Batam, 2023). The city's demographic profile, largely dominated by industrial workers and migrants focused on economic activity (OECD, 2023), contributes to limited technological engagement. Result indicates that Kepri's 2023 digital literacy index stands at 6.01, below the national average, and only 15 percent of its population has higher education, reducing the capacity to adopt digital applications effectively. Long working hours further reduce available time to learn new systems, which results in Ferizy's functional benefits remaining underutilized.

Security perceptions remain another major barrier. Despite Ferizy's encrypted systems and authentication protocols, many users remain concerned about the safety of personal data and transaction integrity. Negative digital rumors, commonly circulated in social media, worsen these perceptions, especially given Batam's diverse educational background (Siagian et al., 2022). Result reinforces this pattern, showing that 38 percent of Indonesians remain worried about online financial risks, Kepri's non-cash adoption lags far behind national averages, and 47 percent of

internet users are prone to believing unverified online information. The 2023 digital literacy index for Kepri is recorded at 3.42, slightly below the national rate, further explaining the persistence of negative assumptions regarding digital platforms.

These concerns directly influence purchasing behavior for Ro-Ro tickets. Many users shift to alternative ferry services that continue to allow counter purchases, reducing Ferizy's passenger volume. BP Batam's port data show that domestic sea passenger numbers for January–September 2024 totaled 2,904,435, declining from the previous year. The combined effect of low trust, limited perceived usefulness, and prevalent security concerns ultimately reduces ticket sales through Ferizy in Batam. These persistent obstacles highlight the broader challenge of digital adoption in maritime services and justify the need to investigate factors influencing the interest in using Ferizy.

Discussion

The results presented in Result show that the Trust variable demonstrates a positive relationship with the Interest in Using variable, indicated by a t-value of 7.222, which exceeds the critical t-table value, supported by a significance value of 0.000 that is lower than 0.05. These results confirm that the hypothesis stating that Trust has a positive and significant influence on Interest in Using is accepted. This positive influence indicates that higher levels of user trust in the Ferizy application correspond to a stronger intention to use the platform. Trust is reflected through several indicators, including transaction security, where users believe their data and transactions are protected; system reliability, which ensures stable system performance without disruption; privacy protection, which safeguards users' personal information; service transparency, which offers clear information regarding costs and conditions; and customer support responsiveness, which assists users when encountering issues during the use of the application. These findings align with previous studies conducted by (Ariningsih et al., 2022) and (Utami, 2021), both of which demonstrated that user trust exerts a positive and significant effect on the intention to use digital applications or services. Accordingly, fostering trust through these indicators becomes essential for increasing user interest in using Ferizy for Ro-Ro ferry ticket reservations.

The analysis presented in Results further indicates that the Usefulness variable has a positive relationship with Interest in Using, as reflected by a t-value of 7.920, which is higher than the t-table value, and supported by a significance value of 0.000, lower than the threshold of 0.05. Thus, the hypothesis stating that Usefulness exerts a positive and significant effect on Interest in Using is accepted. This positive effect illustrates that the more users perceive the Ferizy application as useful, the greater their interest in utilizing it. Usefulness encompasses the extent to which users experience tangible benefits, such as the ease of booking tickets, the speed of transactions, and the clarity of information regarding Ro-Ro ferry schedules. According to (Suprpto & Farida, 2022), the indicators of usefulness include perceived benefits, which refer to the degree of value or advantage users gain from the services provided. These findings are consistent with the conclusions of (Hari Pratama Putra & Rachmat, 2022) and (Indan et al., 2021), who emphasized that usefulness reflects how strongly users feel that a service provides advantages. The greater the perceived benefits, the stronger the users' motivation to adopt the service. Therefore, perceived usefulness emerges as a key factor influencing user interest in adopting digital applications, including the Ferizy platform.

The results summarized in Results also indicate that the Security variable has a positive relationship with Interest in Using, with a t-value of 9.801 that surpasses the t-table value and a significance level of 0.000, which meets the criterion for acceptance of the hypothesis. These findings confirm that Security has a positive and significant influence on Interest in Using. This positive association highlights that the higher the users' perception of the security of the Ferizy application, the greater their intention to use it. Security relates to the extent to which users believe that their personal data and ticket transaction information are protected from misuse or digital threats. According to (Kanaan et al., 2023), security indicators include personal data protection, which refers to the capacity of the application to maintain the confidentiality of sensitive information; the reliability of security mechanisms, such as encryption, access control, and digital threat prevention measures; and their impact on trust, where higher security perceptions enhance users' sense of safety and reinforce their confidence in the application. These results are consistent with studies by (Kurnia & Tandijaya, 2023) and (Fahrudi et al., 2024), both of which demonstrated that

security perceptions positively influence user trust, which subsequently stimulates the intention to use digital services. Hence, strengthening security features becomes essential for enhancing users' continued interest in using the Ferizy application.

The simultaneous test results presented in Results indicate that Trust, Usefulness, and Security collectively exert a significant influence on Interest in Using, supported by an F-value of 77.473 and a significance level of 0.000, which is below 0.05. These findings demonstrate that the three independent variables jointly contribute to explaining users' interest in using the Ferizy application for Ro-Ro ferry ticket reservations in Batam. Theoretically, trust serves as a fundamental factor in shaping user interest in digital services. (Utami, 2021) emphasizes that higher user confidence in the credibility and security system of an application leads to a stronger motivation to utilize the service repeatedly, which is consistent with the trust indicators that include transaction security, system reliability, privacy protection, service transparency, and customer support responsiveness.

In addition, usefulness also plays a crucial role in encouraging user interest. As underscored by (Hari Pratama Putra & Rachmat, 2022) and (Indan et al., 2021), usefulness reflects the extent to which users perceive tangible benefits from the service offered. The greater the perceived benefits, the stronger the users' motivation to adopt the service. The usefulness indicators include perceived benefits, ease of use, and the relevance of the application to user needs, as explained by (Suprpto & Farida, 2022). Security similarly contributes to shaping user interest. (Kurnia & Tandijaya, 2023) and (Kanaan et al., 2023) assert that security encompasses personal data protection, the reliability of security mechanisms, and their impact on user trust. Higher security perceptions reduce user concerns regarding risks associated with data misuse and transactions, thereby increasing their interest in continuously using the application.

These findings are consistent with the study of (Yang et al., 2021), which demonstrated that key variables such as trust, usefulness, and security have a positive and significant influence on users' intention or interest in using digital services. Positive perceptions of these variables encourage users to integrate applications into their daily routines, foster sustainable technology adoption, and strengthen loyalty toward the services offered. Therefore, it can be concluded that Trust, Usefulness, and Security are closely interconnected and simultaneously stimulate Interest in Using the Ferizy application (Sari et al., 2024). These three variables serve as primary considerations for users when selecting, evaluating, and continuously using digital services, particularly when the system is perceived as secure, beneficial, easy to use, and capable of delivering a convenient and efficient transaction experience.

Implications of the Findings

The findings of this study, which examine the influence of Trust, Usefulness, and Security on the Intention to Use the Ferizy application for Ro-Ro ferry ticket reservations in Batam, generate several practical and academic implications. From a practical standpoint, the results confirm that all three variables exert a significant simultaneous effect on user intention, suggesting that the application's management should prioritize strengthening user trust by ensuring the security of each transaction, maintaining system stability, protecting personal data privacy, communicating service information transparently, and providing responsive customer support. Likewise, enhancing perceived usefulness through user-friendly, efficient, and functionally relevant features is essential to maximize the practical benefits felt by users. Strengthening security measures remains equally critical, particularly with regard to personal data protection, transaction encryption, and prevention of unauthorized access, as these aspects shape users' sense of safety and comfort while conducting reservations (Muhammad et al., 2025). Implementing these strategies is expected to foster sustained user intention, customer satisfaction, and long-term loyalty toward the Ferizy platform.

From an academic perspective, this study contributes to the broader theoretical discourse on consumer behavior and digital technology adoption, particularly within application-based services. The results reaffirm that Trust, Usefulness, and Security constitute core determinants of user intention in digital platforms, including Ro-Ro ticket reservation systems. These findings also provide a foundation for future research examining similar determinants across other digital services such as e-wallets, mobile banking, or online transportation platforms. The indicators

applied in this study, transaction security, ease of use, perceived benefits, and personal data protection, serve as valuable references for the development of quantitative research instruments and for evaluating the quality of digital services. Overall, this research underscores that Trust, Usefulness, and Security play a pivotal and simultaneous role in shaping user intention, strengthening continuous use of digital applications, and enriching the academic literature on digital consumer behavior in Indonesia.

At the operational level of the Batam–Tanjung Uban port, these findings imply the need for targeted communication and socialization strategies to shift users from cash-based transactions toward digital adoption. The placement of clear informational banners and visual guides at port entrances and ticketing areas can emphasize the practical benefits of Ferizy, such as time efficiency, queue reduction, and schedule certainty. In addition, the presence of dedicated helpdesk officers or digital ambassadors can assist first-time users with account registration, booking procedures, and payment steps, thereby reducing perceived complexity and uncertainty. In-app tutorials and short instructional videos, designed in simple and practical language, may further enhance users' understanding of the application's functionality and security features. Collaboration with industrial worker communities and labor associations, which constitute a significant proportion of Ro-Ro users, can also serve as an effective socialization channel to disseminate information and build collective trust. These localized and interpersonal communication approaches are expected to strengthen perceptions of usefulness and security, particularly among users who continue to prefer cash-based transactions.

4. CONCLUSION

Based on the comprehensive analyses conducted regarding the influence of Trust, Usefulness, and Security on the intention of Batam residents to use the Ferizy application for Ro-Ro ferry ticket reservations, several conclusions can be drawn. The study identifies that active Ro-Ro ferry users dominate Ferizy's user base, particularly individuals aged 26–35 who frequently travel two to three times per month, indicating that the application is most relevant for those with regular mobility needs. Descriptive analysis shows that the Usefulness variable (X1) attains an average score of 402.0, reflecting very positive user perceptions regarding the app's ability to simplify and accelerate ticket reservations, provide accessible features, and support travel efficiency, with most respondents acknowledging tangible functional benefits. Trust (X2) also demonstrates a relatively high average score of 396.5, revealing strong user confidence in the credibility of Ferizy as an official ticketing platform and in the transparency of its service information. Security (X3) records an average score of 401.5, indicating that users feel assured in submitting personal data and conducting transactions through the app, a sense of protection that reinforces their intention to continue utilizing Ferizy. Finally, the Intention to Use variable (Y) obtains the highest average score of 403.2, suggesting that users have a strong willingness to maintain future use of the application, influenced by factors such as ease of navigation, social support, and perceived transaction safety. Collectively, these findings confirm that Trust, Usefulness, and Security collectively shape and strengthen user intention toward adopting and sustaining the use of the Ferizy application. Academically, this study extends technology adoption research in Indonesia by validating Trust, Usefulness, and Security within the context of digital maritime services, an area that remains underrepresented compared to studies on e-wallets and mobile banking. The findings demonstrate that these constructs remain robust in an inter-island transportation setting characterized by cash-oriented behavior and high mobility dependence, thereby adding contextual depth to adoption theory in archipelagic regions. Future studies are encouraged to integrate additional variables such as perceived ease of use, social influence, and digital literacy, apply longitudinal or comparative route-based designs, and examine other digital maritime platforms to enhance theoretical generalization and policy relevance.

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