

The Role of User Satisfaction in Mediating Transaction Security and Customer Engagement on Loyalty in Using E-Wallet Services (Dana)

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Abstract: The rapid growth of digital payment systems has intensified competition among e-wallet providers, making user loyalty a critical challenge. This study examines the role of user satisfaction as a mediating variable in the relationship between transaction security and customer engagement on loyalty toward the DANA e-wallet service. The research was conducted using a quantitative approach, with data collected through questionnaires distributed to DANA users in Sumbawa City. A total of respondents were selected using purposive sampling, and the data were analyzed using Structural Equation Modeling with Partial Least Squares (SEM-PLS). The results show that user satisfaction has a positive and significant effect on user loyalty. Transaction security and customer engagement both significantly influence user satisfaction, while their direct effects on loyalty are not fully consistent without the presence of satisfaction. Further analysis confirms that user satisfaction significantly mediates the effect of transaction security and customer engagement on loyalty. These findings indicate that loyalty toward e-wallet services is not formed solely through technical features or interaction intensity, but through users' evaluative experiences that lead to satisfaction. Transaction security creates a sense of trust and comfort, while customer engagement enriches user experience; However, both factors contribute to long-term loyalty only when they result in user satisfaction. This study highlights the strategic importance of prioritizing user satisfaction to transform secure systems and engagement initiatives into sustainable loyalty within digital financial services.

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Introduction

Transactional activities in modern life have become an integral part of meeting people's needs, driven by advances in payment technology such as e-wallets, which offer speed, convenience, and security (Bank Indonesia, 2019). E-wallets, as electronic payment services that store digital payment instruments, enable transactions via mobile devices for various purposes, such as purchasing phone credit, paying electricity bills, and even online transportation.(Rahmawati & Wati, 2023) In Indonesia, the dominance of platforms like DANA demonstrates user preference for services that are not only practical, but also secure and interactive, where user satisfaction serves as a bridge between transaction security, customer engagement, and long-term loyalty. In Sumbawa City, in particular, digital transformation is being accelerated through the adoption of e-wallets by MSMEs, despite still being hampered by financial literacy and security concerns (Margareta & Mandasari, 2025).

The phenomenon of mass data leaks by hacker "Bjorka" has shaken public trust in digital services in Indonesia, including e-wallets that store sensitive data such as identity and transaction history (Pratama & Solihin, 2023). This case highlights the vulnerability of security systems, with 30% of e-wallet users still unsure about the protection of their personal data (Nurrahma et al., 2025). While DANA responded with encryption, 2FA, and the DANA Protection Guarantee, fierce competition between platforms like OVO and GoPay, as seen from the dominance of social media, demands customer engagement strategies through Instagram, TikTok, and influencer collaborations to build emotional attachment (Sugiarto & Bahri, 2024).

The urgency of this research stems from the need to maintain DANA user loyalty amidst security risks and competition in Indonesia's rapidly growing e-wallet market. User satisfaction, influenced by security and engagement, is a key foundation for loyalty, as evidenced by the implementation of DANA's open platform, which is integrated with various payment instruments.(Nugroho & Sundari, 2025);(Rusliani & Notaria, 2025) Without a deep understanding of satisfaction mediation, platforms risk losing users to safer or more attractive alternatives, especially in areas like Sumbawa where digital adoption is uneven due to security concerns (Luthfi et al., 2023).

The novelty of this research lies in examining the mediating role of user satisfaction in influencing transaction security and customer engagement on DANA loyalty, focusing on the local context of Sumbawa City, which is undergoing digital transformation. Unlike previous general studies, this approach integrates DANA's digital strategies, such as TikTok campaigns and influencer collaborations, to measure emotional engagement (Rifai et al., 2022), and explores open platforms as a competitive differentiator that has not been extensively researched specifically.

While previous studies have addressed security and engagement separately in relation to e-wallet satisfaction or loyalty, there is a gap in testing the mediation model of satisfaction as a simultaneous link between transaction security, customer engagement, and loyalty specifically to DANA in developing regions like Sumbawa. Previous research has focused more on large cities or general platforms, ignoring local dynamics such as low digital literacy and the social media preferences of the younger generation (Sijoen et al., 2024);(Kurniawan et al., 2024), so this research fills this gap with contextual empirical data.



Based on the background presented, this study formulates several main questions to test the influence of independent variables on user loyalty of the DANA e-wallet service. First, does transaction security affect user loyalty of the DANA e-wallet service? Second, does customer engagement affect user loyalty of the DANA e-wallet service? Third, does transaction security affect user satisfaction of the DANA e-wallet service? Fourth, does customer engagement affect user satisfaction of the DANA e-wallet service? Fifth, does user satisfaction affect user loyalty of the DANA e-wallet service? Sixth, does transaction security affect user loyalty of the DANA e-wallet service as mediated by user satisfaction? Seventh, does customer engagement affect user loyalty of the DANA e-wallet service as mediated by user satisfaction?

Research Methods

This study uses a quantitative research method with an associative approach. Primary data is information obtained directly from individuals or groups who are the focus of the research through instruments such as questionnaires. The population consists of all individuals who use the DANA e-wallet service in Sumbawa City. Sumbawa City consists of three sub-districts: Unter Iwes, Sumbawa, and Labuan Badas. The sample size was determined using the Hair formula. The sampling technique applied in this study is non-probability sampling, which means that each individual in the population does not have an equal chance of being selected as a sample. In this study, the sample was selected based on specific criteria, as follows:

1. Residents domiciled in cities in Sumbawa who are at least 18 years old in Sumbawa District
2. DANA e-wallet service users

So the number of samples in this study was 160. Data collection was carried out by distributing questionnaires using a Likert scale, through the Google Form digital platform and the data was analyzed using Structural Equation Modeling with the Partial Least Squares (SEM-PLS) approach.

Results and Discussion

Inner Model Test Results

1. R-Square (R²) Test Results

The R-Square value is used to assess the ability of independent variables to explain the dependent variable. The greater the R² value, the greater the model's ability to explain variations in the endogenous construct.

Table 1. R-Square Test Results

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
User Satisfaction	0.553	0.581	0.052	10,588	0.000
Loyalty_Usage	0.528	0.561	0.048	11,043	0.000

The R² value for User Satisfaction is 0.553, meaning that 55.3% of the variation in User Satisfaction can be explained by Customer Engagement and Transaction Security. The R²



value for User Loyalty is 0.528, indicating that 52.8% of the variation in User Loyalty can be explained by Transaction Security, Customer Engagement, and User Satisfaction. Both values are in the moderate to strong category, so the structural model has adequate explanatory power.

2. Path Coefficient Test Results

Table 2. Path Coefficient Test Results

	Original sample e (O)	Sample n (M)	Standard deviatio n (STDEV)	T statistics (O/STDEV)	P values
Customer Engagement	0.575	0.575	0.063	9,159	0.000
->					
User Satisfaction					
Customer Engagement	0.004	0.011	0.109	0.035	0.972
->					
Loyalty_Usage					
Transaction Security -> User Satisfaction	0.249	0.267	0.070	3,563	0.000
Transaction Security ->	0.301	0.317	0.081	3,727	0.000
Loyalty_Usage					
User_Satisfaction ->	0.509	0.500	0.104	4,882	0.000
Loyalty_Usage					

The test results show that Customer Engagement has a positive and significant effect on User Satisfaction ($\beta = 0.575$; $t = 9.159$; $p = 0.000$). Transaction Security also has a positive and significant effect on User Satisfaction ($\beta = 0.249$; $t = 3.563$; $p = 0.000$). Transaction Security has a positive and significant direct effect on User Loyalty ($\beta = 0.301$; $t = 3.727$; $p = 0.000$), as does User Satisfaction ($\beta = 0.509$; $t = 4.882$; $p = 0.000$). However, Customer Engagement does not have a direct effect on User Loyalty ($\beta = 0.004$; $t = 0.035$; $p = 0.972$). These findings indicate that user engagement does not automatically drive loyalty, but must first form user satisfaction. In other words, the role of Customer Engagement on Loyalty is indirect.

3. Indirect Effect Test Results

Table 3. Results of the Indirect Effect Test

	Original sample e (O)	Sampl e mean (M)	Standar d deviatio n (STDEV)	T statistics (O/STDEV)	P values
Customer Engagement	0.293	0.287	0.066	4,402	0.000
->					
Loyalty_Usage					



Transaction Security -	0.127	0.135	0.048	2,641	0.008
>					
Loyalty_Usage					

The test results show that Customer Engagement has a significant effect on User Loyalty through User Satisfaction ($\beta = 0.293$; $t = 4.402$; $p = 0.000$). Similarly, Transaction Security has a significant effect on User Loyalty through User Satisfaction ($\beta = 0.127$; $t = 2.641$; $p = 0.008$). These findings indicate that User Satisfaction acts as a mediator in the relationship between the independent variables and User Loyalty. Specifically for Customer Engagement, the absence of a direct effect on User Loyalty accompanied by a significant indirect effect indicates the occurrence of full mediation. This means that user engagement can only increase loyalty if it first forms satisfaction.

4. Effect Size Test Results (f2)

Table 4. Effect Size Test Results

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Customer Engagement	0.510	0.554	0.176	2,894	0.004
-> User Satisfaction					
Customer Engagement-> Loyalty_Usage	0.000	0.012	0.018	0.001	0.999
Transaction Security -	0.096	0.126	0.069	1,375	0.169
> User Satisfaction					
Transaction Security -	0.121	0.151	0.082	1,481	0.139
>					
Loyalty_Usage					
User_Satisfaction	0.246	0.251	0.107	2,296	0.022
n ->					
Loyalty_Usage					

Customer Engagement has a large influence on User Satisfaction ($f^2 = 0.510$), while Transaction Security has a small to moderate influence on User Satisfaction ($f^2 = 0.096$). Customer Engagement has no direct contribution to User Loyalty ($f^2 = 0.000$), while Transaction Security has a small contribution ($f^2 = 0.121$) and User Satisfaction has a moderate contribution ($f^2 = 0.246$). These results reinforce previous findings that User Satisfaction is a key factor that bridges the influence of Customer Engagement on Loyalty.



5. Predictive Relevance Test Results (Q2)

Table 5. Predictive Relevance Test Results

	Q²predict	RMSE	MAE
User Satisfaction	0.502	0.704	0.533
Loyalty_Usage	0.349	0.812	0.576

The Q² value for User Satisfaction is 0.502 and for User Loyalty is 0.349. Both values are greater than zero (> 0), so it can be concluded that the research model has good predictive ability.

Discussion

The Role of Transaction Security in Influencing Loyalty in Using DANA E-wallet Services

The results of the structural model test indicate that the Transaction Security variable has a positive and significant effect on Loyalty in Using the DANA e-wallet service. This finding indicates that the higher users' perceptions of the transaction security provided by DANA, the greater their tendency to continue using the service. Wahyuningsih & Nirawati (2024) demonstrated that transaction security has a positive and significant effect on loyalty in DANA e-wallet users.

This trust is further strengthened by the respondent profile based on duration of use, which indicates that the majority have used the DANA e-wallet service for a relatively long period. The study showed that the proportion of respondents with a usage period of 6–12 months reached 27.5%, while those who had used DANA for more than a year reached 32.5%. This data implicitly underscores that sustained positive experiences, particularly in terms of security, are a crucial foundation for building long-term loyalty (Dirnaeni et al., 2021). The predominance of respondents with a medium to long usage duration indicates a continuous user experience, accompanied by a high level of comfort and trust in the system and features offered by DANA.

Other data also demonstrates that transaction security is explicitly evident in the descriptive statistics of the transaction security variable. The statements with the highest mean scores were "I feel my personal data is kept confidential when using the DANA e-wallet service" and "My account information cannot be accessed by unauthorized parties," each with a mean of 3.48. High scores on both items indicate that the majority of respondents have strong confidence in DANA's capabilities in maintaining data confidentiality and preventing unauthorized access. This is reflected in security features such as two-factor authentication, data encryption, and suspicious transaction monitoring, which comprehensively enhance user trust. (Swastika et al., 2024) This positive assessment illustrates that DANA's security features, such as PIN, OTP, biometrics, and transaction notification system, successfully foster a sense of security when using the service. When users believe that every transaction is protected and the risk of misuse is minimized, trust in the system increases, which in turn encourages retention and reduces the likelihood of switching to other e-wallets.

These findings align with the Theory of Planned Behavior, which states that attitudes toward transaction security play a crucial role in shaping users' positive attitudes toward using DANA services. When users believe that the transaction system is secure, their personal data is



kept confidential, and the risk of misuse is minimized, their cognitive evaluation of DANA usage behavior becomes more positive. This positive attitude then triggers the formation of behavioral intentions to maintain service usage, which is ultimately reflected in user loyalty. Thus, based on the TPB framework, transaction security functions not merely as a technical element but also as a psychological determinant that influences users' decision-making processes. The results of this study are consistent with these findings.(Hikmah, 2023)which confirms that transaction security has a significant influence on consumer loyalty.

The Insignificant Influence of Customer Engagement on Loyalty in Using the DANA E-wallet Service

The results of the structural model analysis indicate that Customer Engagement does not have a significant influence on Loyalty in Using the DANA e-wallet service. This finding suggests that the level of user engagement, encompassing cognitive, emotional, and behavioral aspects, has not been able to directly trigger the formation of user loyalty. This contrasts with Apriyanto's (2025) research, which concluded that customer engagement has a positive and significant effect on customer loyalty. This low level of behavioral engagement indicates that the engagement formed is still passive and functional. Users generally only utilize core features such as payments and fund transfers, while additional features that have the potential to strengthen long-term engagement such as DANA Goals for dream planning or saving, DANA+ which facilitates balance development through a daily reward mechanism, DANA Siaga as a digital protection or insurance service, DANA Feeds as an in-app social feature, and DANA Premium Mini targeted at the youth segment with parental supervision have not yet become a primary focus in their daily activities. This condition reflects that users view the DANA e-wallet more as a practical transaction tool than a comprehensively explored financial platform.

From the perspective of the Theory of Planned Behavior, service user loyalty is a manifestation of actual behavior influenced by behavioral intentions. These intentions are formed through evaluations of attitudes toward the behavior, subjective norms, and perceived behavioral control. In the context of this research, customer engagement measurements primarily represent initial interactions and superficial involvement, thus not being able to fully shape stable long-term usage intentions. This finding aligns with research(Pangestika, 2025), which states that customer engagement does not have a significant effect on consumer loyalty.

Transaction Security Results Influence DANA E-wallet Service User Satisfaction

The analysis results show that the Transaction Security variable has a positive and significant influence on User Satisfaction of the DANA e-wallet service. This finding implies that the higher the user's perception of transaction security, the higher the level of satisfaction they experience in using the service. This aligns with previous research by(Andriansyah & Fasa, 2024), which confirms that transaction security has a significant impact on user loyalty.

The finding of a positive and significant influence of transaction security on user satisfaction is also worth analyzing within the framework of the multi-platform behavior observed among respondents. The study revealed that, in addition to DANA, respondents also utilize other e-wallets, with GoPay being the most popular (used by 55 respondents), followed by ShopeePay (46 respondents), OVO (41 respondents), and other e-wallets (18 respondents). This pattern indicates that most respondents do not rely solely on a single e-wallet platform, but rather integrate various applications to accommodate transaction needs, maximize promotions,



and optimize user convenience. This phenomenon of multi-platform e-wallet use underscores that satisfaction with DANA, while adequate, remains functional and rational, and has not yet developed into solid loyalty. In this context, transaction security serves as a key differentiator. If users believe that DANA's security mechanisms effectively protect personal data and financial assets consistently, their perception of service quality will improve, thus maintaining satisfaction despite the availability of alternatives. However, the presence of competing e-wallets with comparable features and competitive incentives allows users to remain flexible in switching or using them concurrently.

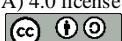
Based on descriptive statistical analysis, the level of satisfaction and loyalty among DANA e-wallet users is at a relatively good level, but not yet fully robust and exclusive. The average score for all indicators ranged from 3.13 to 3.32, indicating that the majority of respondents tended to agree with statements related to satisfaction and loyalty, although the level of agreement did not reach the very high category. In the user satisfaction dimension, the indicator "The service provided by DANA meets my expectations" recorded a mean of 3.25, while "The features in the DANA application function as I expected" had a mean of 3.22. These findings indicate that the performance of DANA services and features has generally met basic user expectations. However, the indicator "I feel that DANA services perform well and rarely experience problems when using them for transactions" obtained a relatively lower mean of 3.13. This value implies that, although the service is considered quite good overall, there are still certain user experiences that are not fully optimal, such as technical glitches or transaction obstacles experienced by some respondents. This condition confirms that protection of personal data and guarantee of financial security are fundamental factors in creating a sense of satisfaction, where user trust in a superior security system directly increases their positive assessment of the quality of service received (Prameswari, 2021).

This phenomenon indicates that user satisfaction with DANA services has reached an adequate level. Users rate DANA as ergonomic, reliable, and meets expectations, although they are still open to alternative e-wallet options if they offer more attractive incentives. Based on the Theory of Planned Behavior, transaction security plays a crucial role in shaping user attitudes toward e-wallet use. When users believe the transaction system is secure, trustworthy, and effectively protects personal data and funds, their cognitive evaluation of DANA usage behavior becomes more positive. Therefore, although this study focuses on satisfaction as the dependent variable, the results also shed light on the initial mechanisms underlying user loyalty, as proposed by Husain et al. (2025).

Customer Engagement Results Influence DANA Service User Satisfaction

The test results show that the Customer Engagement variable has a positive and significant effect on DANA e-wallet user satisfaction. This finding indicates that the higher the level of user engagement in interacting with DANA services, whether through system understanding, emotional comfort, or feature usage, the higher the level of user satisfaction. This is in line with previous research.(Jasmine et al., 2024)Customer engagement has a positive and significant effect on user satisfaction.

These findings align with the respondent profile, where the majority of DANA users in Sumbawa District are aged 23–26, followed by those aged 18–22. This young adult group



generally has high digital literacy, is familiar with financial technology, and tends to actively explore various features within e-wallet applications. This superior technological adaptability drives users' cognitive and emotional engagement with DANA services, thus directly contributing to increased levels of perceived satisfaction.

These findings are also consistent with the Theory of Planned Behavior (TPB) as the primary theoretical framework. From a TPB perspective, customer engagement plays a role in shaping users' attitudes and perceived behavioral control toward using the DANA e-wallet. A high level of engagement, including understanding features, ease of use, and transaction convenience, will result in a positive attitude toward DANA services. Meanwhile, a routine and smooth user experience increases perceived behavioral control in conducting digital transactions. This integration of positive attitudes and strong behavioral control encourages the formation of sustainable usage behavior, which is ultimately reflected in user satisfaction levels. The results of this study align with previous research by(Jasmine et al., 2024)which states that customer engagement has a positive and significant effect on user satisfaction.

User Satisfaction Influences Loyalty in Using DANA Services

The results of the structural model test indicate that the User Satisfaction variable has a positive and significant effect on Loyalty in Using the DANA e-wallet service. This finding indicates that the higher the level of satisfaction perceived by users, the greater their tendency to continue using DANA services consistently and sustainably. This finding aligns with previous research by(Jasmine et al., 2024), which states that customer satisfaction has a direct influence on loyalty.

This finding is reinforced by the average respondent response to the user satisfaction variable, where the statement "DANA is my primary choice for digital transactions" received the highest average score of 3.32. This relatively high average score indicates that the majority of respondents have a positive perception of DANA and position it as their primary e-wallet service above other alternatives. This situation reflects a strong level of satisfaction, particularly in terms of user preference and trust in DANA services. A high level of satisfaction creates a strong psychological bond between users and the service, making DANA the primary choice and reducing the probability of switching to other digital financial service providers, as evidenced by research that customer satisfaction significantly increases loyalty.(Yani & Sugiyanto, 2022).

Judging from the duration of DANA e-wallet usage, 57 respondents (35.6%) were categorized as having used the DANA e-wallet for 3–6 months, indicating that the majority of users have surpassed the initial adoption phase and have sufficient experience to objectively evaluate the features and benefits of DANA services. Forty-six respondents (28.8%) had used the service for more than 1 year, representing a group of experienced users with relatively stable levels of trust and satisfaction with the service. Furthermore, 36 respondents (22.5%) were in the 6–12 month range, reflecting an intermediate stage where consistent usage patterns are beginning to form. Meanwhile, the smallest group, with 21 respondents (13.1%), were in the early adaptation phase, and their perceptions of DANA were more influenced by their initial experience. These medium- to long-term users have built stronger loyalty because they have directly experienced the consistent performance of the application and the tangible benefits obtained, thus strengthening their commitment to continue using DANA services.(Syahidah &



Aransyah, 2023).

From the perspective of the Theory of Planned Behavior, user satisfaction plays a crucial role in shaping individual attitudes toward e-wallet usage. This positive attitude then influences behavioral intentions to consistently utilize DANA services. In this context, user loyalty can be defined as the realization of a strong and sustained behavioral intention, which in turn manifests itself in actual behavior through repeated use of DANA e-wallet services. In summary, a high level of user satisfaction reinforces a positive user attitude, thus facilitating the formation of a sustained intention to maintain DANA as the primary e-wallet service of choice. Therefore, this finding aligns with research suggesting that user satisfaction has a positive and significant effect on e-wallet loyalty, as perceived satisfaction can encourage consumers to continue making transactions and reduce the intention to switch to other service providers.(Yani & Sugiyanto, 2022).

User Satisfaction Mediates the Effect of Transaction Security on Loyalty in Using DANA Services

The results of the indirect effect test indicate that user satisfaction significantly mediates the influence of transaction security on loyalty in using the DANA e-wallet service. This finding indicates that transaction security not only directly influences loyalty but also works through the user's evaluative process, which first forms satisfaction before developing into loyalty. This is in line with(Jasmine et al., 2024)User satisfaction significantly mediates the effect of transaction security on loyalty.

This strengthening of loyalty is reflected in the loyalty indicators that achieved the second and third highest average scores, namely the statements "I will continue to use DANA even though other e-wallet services with similar functions are available" and "I plan to make DANA my primary choice for conducting digital transactions in the future." These values indicate that user satisfaction triggered by transaction security effectively fosters a long-term commitment to maintain use of DANA services. This finding confirms the statement that transaction security plays a key role in shaping user satisfaction, which then encourages users to maintain their loyalty to DANA e-wallet services.(Syahidah & Aransyah, 2023)Thus, this study confirms that the relationship between transaction security and loyalty is not solely direct, but rather operates through the mediation of user satisfaction, a representation of positive attitudes within the Theory of Planned Behavior framework. Transaction security shapes satisfaction, satisfaction builds behavioral intentions, and these intentions drive continued loyalty in using the DANA e-wallet.

User Satisfaction Mediates the Effect of Customer Engagement on Loyalty in Using DANA Services

The results of the indirect effect test indicate that user satisfaction significantly mediates the influence of customer engagement on loyalty in using the DANA e-wallet service. This finding confirms that user engagement does not directly shape loyalty but must first be translated into a satisfying user experience.

In the context of the DANA e-wallet, high levels of customer engagement are inextricably linked to extensive advertising and promotional strategies, such as digital campaigns, discounts, cashback, free transfer fees, and frequent promotional notifications.



These strategies have proven effective in encouraging users to interact with the app, try specific features, and increase usage frequency in the short term. However, promotional engagement is stimulus-driven and transactional, and therefore does not necessarily reflect emotional attachment or long-term commitment to the service. This finding explains the insignificant results of testing the direct effect of customer engagement on user loyalty. This indicates that engagement generated by extensive advertising and promotions tends to be temporary, and users can easily switch to other e-wallet services when more attractive promotions become available. In other words, high engagement does not automatically result in loyalty if it is not accompanied by a truly satisfying user experience.

User satisfaction, in this case, acts as an evaluative filter that determines whether engagement triggered by advertising and promotions will develop into loyalty. When promotions are accompanied by a user experience that is easy, safe, fast, and meets expectations, users will feel satisfied and begin to develop a preference for DANA. Conversely, if engagement occurs solely due to promotional incentives without sustained satisfaction, the engagement stalls at the short-term usage stage.

Conclusion and Recommendation

This study concludes that transaction security has a positive and significant effect on user loyalty and satisfaction with the DANA e-wallet service, as a sense of security is the primary foundation for long-term commitment. Conversely, customer engagement does not directly influence loyalty, although it significantly increases satisfaction through enjoyable experiences. User satisfaction acts as a key mediator: it bridges the influence of security and engagement on loyalty, confirming that loyalty is formed through satisfying experiences built on a sense of security and meaningful interactions. Research recommendations include strengthening DANA's security system and developing a satisfaction-oriented engagement strategy to transform user engagement into loyalty. Users are encouraged to be more selective in choosing services based on security and benefits, while future researchers are encouraged to explore the mediation of satisfaction or trust in the broader e-wallet context. Readers can use these findings as a reference for rational and wise use of digital services.

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