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MORALITY BEFORE KNOWLEDGE

Exploring the dynamics of digital transformation and service innovation in digital financial services

David Dick[1], Muhammad Fikri Eka Saputra[1], Andrian Haro[1]
[1] *Department of Management, Faculty of Economics and Business, Universitas Negeri Jakarta, Jakarta, DKI Jakarta 13220, Indonesia.*
*Correspondence: dickdavid217@gmail.com

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ABSTRACT

Background: The increasing reliance on digital platforms in financial services has made mobile applications an essential medium for customer interaction and relationship management. PT Pegadaian introduced the Tring! by Pegadaian application to enhance digital service delivery and support financial inclusion. However, shortly after its launch, the application received numerous user complaints related to technical performance. This study aims to analyze user complaints to identify recurring issues and examine the gap between users' expectations and their actual experiences. **Methods**: This study employs qualitative content analysis of 300 user reviews collected from the Google Play Store. The reviews were selected based on their relevance to the research topic using predefined inclusion and exclusion criteria. Guided by the Information Systems Success Model and Customer Relationship Management (CRM) theory, the analysis applies directed content analysis with inductive coding to categorize user complaints into key issue areas, including technical and system performance, access and login problems, complexity/usability, and user feedback. The coding process was conducted manually through repeated review to maintain consistency in interpreting user reviews and assigning categories. **Findings:** The findings show that technical and system-related issues are the most frequently reported concerns, followed by access and login problems indicating weaknesses in system reliability and stability. These issues negatively affect user satisfaction and may undermine effective customer relationship management. **Conclusion**: The study highlights the importance of system quality in shaping digital service experiences and provides practical insights for improving digital financial service performance. **Novelty/Originality of this article:** This study contributes to the existing IS Success and CRM literature by demonstrating how user-generated app reviews can reveal the relationship between system quality issues and CRM performance outcomes in digital financial services. The study also extends existing research by examining a state-owned enterprise undergoing digital transformation, a context that has received limited scholarly attention.

KEYWORDS: financial service; qualitative content analysis; Tring!.

1. Introduction

Financial services are an important foundation for economic growth and long-term stability (Levine, 2005). Different types of financial services, such as banks, insurance companies, and financing institutions, help people save, manage, and utilize their money more effectively. Furthermore, these institutions also help reduce economic uncertainty by providing risk protection, supporting the initiation of the businesses, and expanding their business operations (Sutton & Jenkins, 2007). At the national level, financial institutions play a strategic role not only in encouraging economic growth but also in supporting

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national development goals. Through government involvement, financial inclusion has become a key priority aimed at expanding public access to financial services.

The Office of Assistant to the Deputy Cabinet Secretary for State Documents & Translation (2020) highlights that the National Strategy for Financial Inclusion (SNKI) aims to stimulate economic growth and reduce socioeconomic inequality, yet certain vulnerable groups continue to experience limited access to formal financing services despite these development priorities. Complex loan requirements and the strict application of prudential regulations within financial institutions are key factors that hinder such access. As a result, non-bank financial institutions (NBFIs) are often viewed as viable alternative sources of financing. Han (2017) supports this view, noting that banks tend to be more sensitive to information availability and physical distance between borrowers and lenders. In contrast, NBFIs are less constrained by these factors because they use different financing mechanisms. This allows NBFIs greater flexibility in serving borrowers who are difficult for banks to reach, which allows them to expand access to financing for specific segments of the population.

One of the financing mechanisms commonly used by NBFIs is collateral-based financing, in which lenders require collateral or guarantees, such as assets, securities, or other valuables, to secure the loan (Love et al., 2016). This scheme is considered relatively straightforward because if borrowers are unable to repay the loan or encounter financial difficulties, the collateral can be used to settle their outstanding obligations (Equifax, 2024; Budiman & Rahadiyan, 2024). As a result, collateral-based financing allows NBFIs to manage credit risk more effectively while simultaneously providing financing to borrowers who may have limited access to traditional bank loans.

PT Pegadaian is one of the non-bank financial institutions (NBFIs) that provides collateral-based financing services to the public. As a state-owned enterprise, Pegadaian is widely recognized as a key solution for individuals seeking financing due to its fast and simple application process (Tempo, 2023). This highlights Pegadaian's strategic role in supporting financial inclusion by providing access to capital, particularly for small and micro enterprises as well as underserved segments of society. Over time, Pegadaian consistently served a broad range of communities by adapting its service model through the integration of digital technology, thereby further expanding access to financing.

Pegadaian Digital Service (PDS) represents Pegadaian's effort to deliver financial services through an integrated digital platform that operates via mobile applications and web-based channels. By enabling customers to conduct transactions directly through their personal devices, PDS is designed to improve service speed and convenience. This digital transformation has yielded strong results, with Pegadaian recording more than 10 million digital transactions in the first half of 2025, reflecting a significant year-to-date growth of 215% and a total transaction value of IDR 32 trillion (Tempo, 2023). These outcomes were driven not only by the availability of regular financing services but also by the expansion of complementary digital products, including gold savings, gold installment programs, and Sharia-based financing services. At the same time, the increasing volume of transactions suggests more frequent and intensive use of digital services as customer needs continue to diversify. In response to this growth, strengthening system reliability and processing speed has become essential to improve service efficiency and ensure a consistently positive customer experience.

Despite the growing body of research on digital financial services, existing studies primarily focus on private fintech companies and commercial banking platforms (Avianto et al., 2024; Chen et al., 2023). Comparatively limited attention has been given to digital transformation challenges experienced by state-owned financial institutions, which operate under different institutional pressures and public service responsibilities (Liu et al., 2024). Unlike private fintech firms that mainly compete through innovation and market-driven service optimization, state-owned enterprises are required to balance commercial objectives with broader public service responsibilities, including expanding financial inclusion and serving underserved communities. These institutional differences may create distinct challenges in maintaining system reliability, service continuity, and customer

satisfaction during digital transformation processes. Consequently, findings from private-sector digital service studies may not fully capture the operational and relational complexities experienced by state-owned digital financial platforms such as Pegadaian.

In October 2025, Pegadaian introduced Tring! by Pegadaian, a new application that replaced its previous digital service following a comprehensive rebranding initiative. The launch was intended to offer a more comprehensive and integrated digital experience with improvements in both functionality and security. As a result, Tring! Pegadaian was expected to provide customers with a safer and more convenient online transaction experience (Sahabat Pegadaian, 2025). However, within less than two months of its release, Tring! by Pegadaian received numerous complaints from customers who had transitioned to the new application. Reported issues included technical difficulties during login, frequent server errors, and instances where the application could not be accessed at all. These complaints indicate a significant gap between customers' expectations of digital services and their actual user experience. Such issues not only affect user satisfaction but also have broader implications for the company's brand reputation and customer retention.

User complaints expressed through digital platform reviews can serve as an important diagnostic tool for evaluating the effectiveness of digital financial services. Unlike formal evaluation mechanisms, user-generated reviews reflect direct experiences encountered during actual application usage, allowing recurring technical, operational, and service-related problems to be identified more organically. Previous study on app review analysis and digital service evaluation suggests that online user complaints provide valuable insights into system quality, usability, customer satisfaction, and service reliability, particularly in technology-driven financial platforms (Oh & Kim, 2021). Consequently, analyzing user complaints enables organizations to identify gaps between intended service performance and users' actual experiences while also providing empirical evidence regarding the strengths and weaknesses of digital service implementation.

In digital financial service environments, the ability of organizations to respond effectively to technical failures and customer complaints is also closely associated with service recovery practices. Service recovery refers to organizational efforts to address service failures, restore customer satisfaction, and rebuild trust following negative service experiences. Previous studies suggest that responsive support, transparent communication, and timely problem resolution play important roles in mitigating dissatisfaction and maintaining customer loyalty after digital service disruptions (Kau & Loh, 2006; Tax et al., 1998). In technology-driven financial platforms, ineffective responses to recurring technical issues may amplify negative customer perceptions and further weaken trust in the digital service provider.

Given that the Tring! application functions not only as a platform for transactions and access to various financial products, but also as a channel for interaction between the company and its customers, these technical shortcomings may hinder the effectiveness of customer relationship management (CRM). Customer Relationship Management theory emphasizes that the quality of interactions across touchpoints directly influences customer satisfaction, trust, and long-term loyalty (Payne & Frow, 2005). These interactions are mediated not just by service offerings but by the digital systems through which customers engage. Thus, when users face repeated errors, access issues, or unstable system performance, their overall CRM experience deteriorates (Bupu et al., 2023). In digital financial services, these interactions are largely mediated through mobile applications, making system reliability and usability critical components of the customer experience. Rahardjo & Darma (2025) show that digital service quality in mobile banking, particularly aspects related to system performance and service continuity, has a significant effect on customer loyalty and institutional reputation which indicates that unstable digital services can weaken relational outcomes. CRM is not merely about collecting customer data but about enabling seamless, reliable, and meaningful engagement that fosters satisfaction and ongoing use (Clarissa & Veri, 2023). This suggests that repeated technical issues, such as system errors or access failures, can negatively affect how customers perceive and engage with digital financial service providers.

From a theoretical perspective, the IS Success Model proposed by DeLone & McLean (2003) identifies system quality as a key dimension influencing system performance and user satisfaction, suggesting that weaknesses in system quality can undermine both service effectiveness and customer relationships. System quality includes reliability, responsiveness, usability, and accessibility, all of which are directly implicated in users' ability to complete tasks without error or frustration. Recent empirical studies have reaffirmed the centrality of system quality in various digital contexts. Empirical evidence from the banking sector supports this framework, as Kim & Yang (2025) found that digital quality significantly affects customer satisfaction and brand loyalty, even under conditions of environmental uncertainty. Similarly, Rahmatullah et al. (2025) found that system quality significantly influences user satisfaction and perceived net benefits in digital public service systems, indicating that reliable and accessible digital platforms are essential for achieving positive user experiences and service outcomes. Studies in online transportation and e-service platforms also confirm that system quality strongly affects ease of use, usefulness, and overall satisfaction, reinforcing the idea that technical performance is a critical antecedent of positive user outcomes (Mariana et al., 2023). Based on these findings, this study aims to analyze user complaints related to the Tring! by Pegadaian application in order to identify recurring problems and to understand the mismatch between customers' expectations and their actual experiences while using the application.

Empirical work integrating DeLone & McLean (2003) IS Success Model with modern digital services indicates that service quality and customer experience play significant roles but often operate through system quality and satisfaction pathways. For instance, Thanh & Le (2025) highlight that multi-channel integration and reliability strongly influence user satisfaction and loyalty in digital banking, further illustrating the connection between quality dimensions and CRM outcomes in digital environments. Similarly, recent studies on mobile banking services show that system quality, service quality, and system reliability significantly influence customer satisfaction, trust, and continued usage intentions in digital financial services (Kim & Yang, 2025; Nandy et al., 2025). Users interact with services primarily through technological interfaces, meaning that the perceived quality of service delivery is inseparable from the performance of the underlying system. When system quality is high, users are more likely to perceive the service as reliable and valuable, which enhances satisfaction and continued use. Research on mobile banking trust further demonstrates that customers' trust is strongly influenced by system reliability, security, responsiveness, and ease of use, indicating that unstable system performance can weaken confidence in digital financial platforms (Che et al., 2023).

Recent studies on app review mining also demonstrate that user-generated reviews provide valuable insights into recurring technical issues, usability concerns, and service quality perceptions in digital applications. Research using text mining and sentiment analysis on mobile banking application reviews shows that online user feedback can reveal recurring complaints related to login failures, system instability, software updates, and usability problems that directly affect customer satisfaction and service perceptions (Oh & Kim, 2021). The finding suggests that customers evaluate service quality not only based on available features, but also on how consistently and smoothly these features function across platforms. Poor system performance, even in the presence of diverse service offers, can disrupt customer experiences, reduce trust in digital financial providers, and weaken relational outcomes. Consequently, maintaining reliable system performance becomes essential not only for operational effectiveness but also for sustaining customer trust and long-term engagement in digital financial ecosystems.

Beyond system quality, CRM effectiveness is mediated by user perceptions and satisfaction, which are influenced by overall experience quality. Research on CRM systems shows that customer satisfaction mediates the relationship between service quality and CRM success, indicating that systems must not only function technically but also fulfill customer expectations to be effective (Al-Bashayreh et al., 2022). These findings support the notion that technical deficiencies in the Tring! application can degrade the quality of CRM interactions, weaken trust, and reduce the likelihood of sustained use.

The IS Success Model and CRM theory together provide a robust theoretical foundation for understanding why and how technical system issues can impair both user satisfaction and the broader objectives of customer relationship management in digital service contexts. Consistent with findings from recent digital banking studies, weaknesses in system quality may reduce customer satisfaction, disrupt service continuity, and ultimately undermine relationship-building efforts in digital financial services (Rahardjo & Darma, 2025; Kim & Yang, 2025). Improving system quality remains a central strategic priority for digital service providers aiming to enhance customer satisfaction and achieve long-term customer engagement.

2. Methods

2.1 Research method and approach

Content analysis is a research method used to examine the content of various forms of data, including both visual and verbal materials. This method enables researchers to systematically categorize and interpret complex phenomena by reducing them into predefined analytical categories (Harwood & Garry, 2003). In this study, content analysis was particularly suitable for examining user complaints, as it facilitated the identification of recurring issues and patterns in user experiences in a structured and objective manner.
Accordingly, this study applies a directed qualitative content analysis with inductive coding to examine user complaints systematically. Directed content analysis was used because the study builds on existing theoretical categories related to digital service quality, while inductive coding facilitates the identification of specific user issues derived directly from application reviews.

2.2 Data source and data collection

This study uses user reviews posted on the Google Play Store as the primary data source, focusing on feedback related to the use of the Tring! by Pegadaian application. The data collection and extraction process were carried out manually with the identification process focusing on users' usernames, the content of the comments, and the time of publication. The selection of comments was based on their relevance to the research topic with the inclusion and exclusion criteria applied during the selection process. The analysis only includes comments containing opinions, experiences, reviews, or reactions related to the application. Comments unrelated to the use of the application, lacking sufficient detail, or appearing to be duplicates (i.e., identical comments posted by the same user) were excluded from the analysis.

The collected comments were then examined to identify key themes reflecting the implementation of the application, the technical issues experienced by users, and the impact of these issues on the overall user experience. This study acknowledges that online user reviews may contain potential biases because the reviews are voluntarily submitted by users and may disproportionately reflect negative experiences or stronger emotional reactions. As a result, the findings may not fully represent the perceptions of all users of the Tring! by Pegadaian application. Nevertheless, online reviews remain valuable sources of user-generated feedback because they reflect direct experiences encountered during actual application usage and provide insights into recurring issues experienced by users.

2.3 Unit of analysis

The selected comments were organized into a structured dataset to support systematic coding and comparison. Each unit of analysis consists of individual statements or sentences within user comments that express specific service-related issues or experiences, allowing patterns and gaps to be examined consistently.

2.4 Categorization and coding process

This study applies a systematic process of categorization and coding to ensure that content analysis is conducted in a methodical and structured manner. The coding process treats user review text as the unit of analysis, where individual segments are identified and linked to predefined categories or criteria. This step aims to group content segments into specific categories so that the analysis can be carried out consistently and in a focused manner (Wijaya, 2024; Erstiawan, 2025). To maintain coding reliability, the coding process was conducted manually through repeated review to ensure consistency in interpreting user reviews and assigning categories.

Table 1. Categorization and codification criteria

Categorization	Codification
Technical or system performance issues (TSP)	The app is really slow, the app came with errors, poor performance, can't use the feature, the app always crashes, so many bugs, can't top up, can't add bank account, network problem.
Access and login problems (ALP)	Unnavigable with TalkBack, stuck on the first page, can't login, can't be opened, bug in the password registration.
Complexity of use or usability issues (COMPLX)	Feels like never ending forms and pages, the process of registering is so confusing.
Comparison with the previous digital service application (COMPA)	The old app is far more useful, having a very bad experience with this new app.
Criticism of the application's service (CRITIC)	CS can only suggest to wait, app doesn't have a copy of the contractual agreement, i try to call CS but it doesn't work,
Suggestions, feedback, and user expectations (SUGGEST)	Please add other payment and sales methods, i hope Pegadaian digital can improve their performance, please fix the menu navigation.

(Adapted and modified from Erstiawan, 2025)

In this study, the analytical categories were adapted and modified based on prior research conducted by Erstiawan (2025), which examines system quality, service quality, and user perceptions in digital service applications. The context of the referenced study is highly comparable to this research, as both focus on applications that provide digital services to users.

Based on these predefined categories, the coding process was conducted using a combination of directed and inductive approaches. The directed approach was applied by using analytical categories adapted from previous studies (Erstiawan, 2025) and theoretical dimensions related to digital service quality as the initial coding framework. At the same time, inductive coding was employed to identify specific issues and complaint patterns that emerged directly from user reviews of the Tring! by Pegadaian application. Through this process, new contextual variations of complaints were incorporated into the existing framework. This combination allowed the analysis to remain theoretically grounded while still capturing context-specific user experiences and emerging issues reflected in the review data. The resulting coding structure provides a systematic framework for identifying and interpreting the various aspects of user complaints and opinions expressed in the reviews.

2.5 Data analysis technique

Microsoft Excel was used to organize and summarize the coded data following the coding and categorization process. Each code and category was tabulated to calculate the frequency of occurrence, allowing the distribution of user complaints to be examined descriptively. Excel was also used to generate visual representations to illustrate the dominance and relative importance of specific complaint categories. This descriptive

analysis supports the qualitative findings by providing a clear overview of the recurring issues and patterns identified through the directed qualitative content analysis.

3. Results and Discussion

This study presents an overview of users' perceptions and reactions toward the Tring! by Pegadaian application, one of PT Pegadaian's digital service innovations designed to reach a broader segment of society. A total of 300 user reviews collected from the Google Play Store were analyzed. The reviews were selected based on their relevance to actual user experiences with the data indicating a tendency for users to report negative experiences related to application usage. Using content analysis, the reviews were classified into six main categories (as presented in Table 1): TSP, ALP, COMPLX, COMPA, CRITIC, and SUGGEST. Each category was further refined into specific codes to capture recurring issues and concerns frequently expressed by users of the Tring! by Pegadaian application.

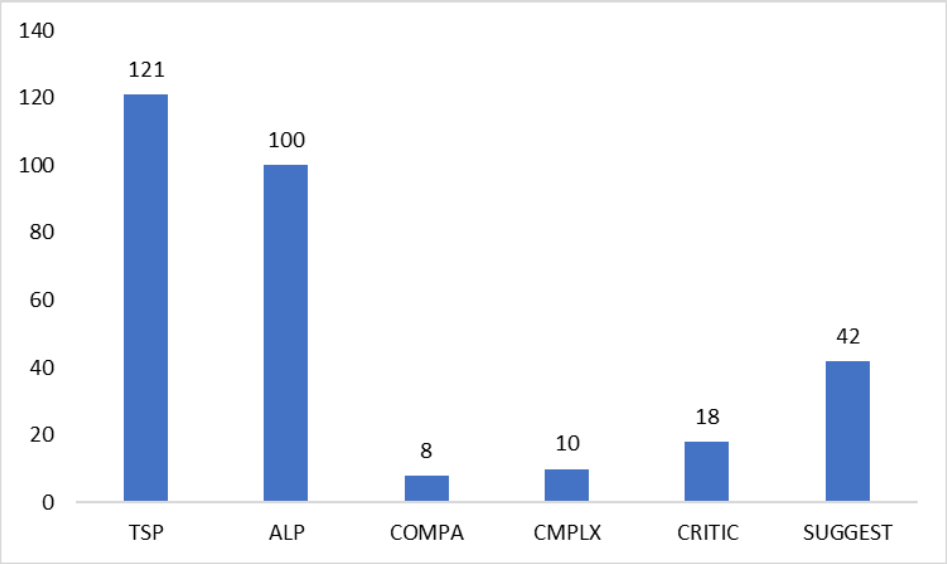

Fig. 1. User perception of the application

Based on the analyzed reviews, users generally perceive the Tring! application as lacking smooth and reliable operation. The results indicate that TSP issues constitute the most dominant category with a total of 121 reviews, followed by ALP which account for 100 reviews. This dominance suggests that technical and system performance issues are the primary concerns most frequently raised by users in their reviews.

Beyond these two most dominant categories, the remaining user reviews are distributed unevenly across the other categories, with noticeably lower frequencies. The SUGGEST category which appears in 42 reviews indicating that a smaller portion of users provided constructive input or expressed hopes for future improvements. Meanwhile, the CRITIC category which accounts for 18 reviews reflects user dissatisfaction with the application's development and introduction, including concerns about service readiness and design decisions. These complaints also reflect weaknesses in the service quality dimension, particularly in terms of responsiveness, support effectiveness, and service readiness. User concerns regarding customer support and unresolved technical problems suggest that the quality of service delivery may not yet meet users' expectations during the digital transition process.

The categories related to CMPLX and COMPA showed the lowest number of reviews with 10 and 8 reviews respectively. This pattern suggests that issues related to ease of use or comparisons with earlier applications are not the primary focus of user feedback. Instead, user attention is primarily centered on whether the application is accessible and functions

reliably, highlighting the critical importance of basic system performance in shaping overall user perceptions of the Tring! application.

The dominance of TSP and ALP indicates the effectiveness of the Tring! application is currently constrained by foundational system performance rather than by advanced features or usability design. When users encounter frequent system errors or difficulties logging in, their ability to engage with the application's services is disrupted which can undermine trust and satisfaction with the digital platform. This pattern suggests that users prioritize basic functionality and reliability as essential requirements prior to considering other aspects of the digital service experience.

These findings primarily reflect weaknesses in the system quality dimension of the DeLone & McLean (2003) IS Success Model, particularly in terms of reliability, accessibility, response time, and system availability. This interpretation is consistent with previous studies applying the IS Success Model in digital financial services, which show that system reliability, ease of access, and technical performance significantly influence user satisfaction and continued usage intentions (Kim & Yang, 2025; Nandy et al., 2025). Frequent system errors and login failures indicate that users experience difficulties in accessing and using the application consistently, which may reduce user satisfaction and continued system use. Similar findings have also been reported in mobile banking studies where weaknesses in system quality were found to negatively affect users' perceptions of service effectiveness and overall digital experience (Mariana et al., 2023).

Furthermore, the relatively low number of complaints related to the CMPLX and COMPA categories implies that users are not primarily concerned with learning how to use the application or evaluating it against earlier platforms. However, complaints related to registration complexity and confusing navigation may still indicate weaknesses in the information quality dimension of the DeLone & McLean (2003) IS Success Model, particularly regarding the clarity, understandability, and completeness of information presented within the application. Previous study applying the IS Success Model in digital financial services shows that information quality significantly influences users' perceptions of usefulness, satisfaction, and overall digital service experience (Nandy et al., 2025). These findings suggest that although usability-related complaints are less dominant, users still expect the application to provide clear guidance and accessible information while functioning consistently without technical barriers. The presence of the SUGGEST category also indicates that a portion of users remain engaged and willing to provide constructive input for improvement, despite experiencing technical challenges. These findings highlight that the importance of strengthening system stability and access reliability is a critical step toward improving the user experience and supporting Pegadaian's broader digital service objectives.

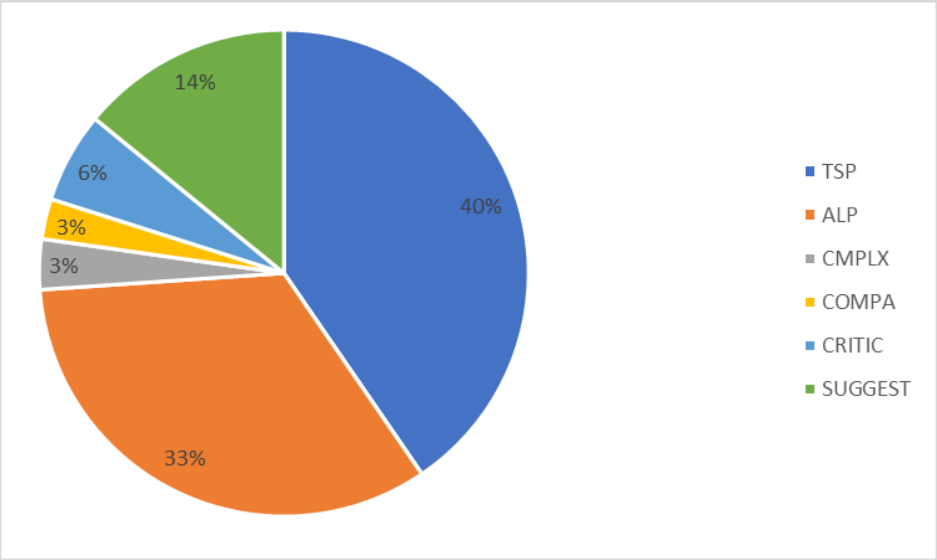

Fig. 2. Percentage of each categorization

The pie chart presents the proportional distribution of user complaints across the main analytical categories related to the Tring! application. TSP issues account for the largest share of complaints at 40%, followed by ALP at 33%. Together, these two categories represent more than two-thirds of all user feedback, indicating that the vast majority of complaints are concentrated on core system functionality and accessibility.

The remaining categories contribute a significantly lower proportion of reviews. The SUGGEST category comprises 14%of the total, while criticism of the application's service accounts for 6%. Issues related to CMPLX and COMPA each represent only 3%of user complaints. This distribution highlights a clear disparity between the prevalence of technical concerns and other types of user feedback.

The dominance of TSP and ALP issues reinforces the previous findings that system reliability and ease of access are the primary factors shaping user experiences with the Tring! application. When basic functions such as system stability and login access are disrupted, users are more likely to express dissatisfaction, regardless of other service features. This suggests that foundational technical performance plays a decisive role in users' overall evaluation of the application. Moreover, the relatively small proportion of complaints related to CMPLX and COMPA indicates that users do not perceive the application as particularly difficult to use or inferior in design. Instead, their concerns are largely practical and operational in nature. The presence of the SUGGEST category, although less dominant, indicates that some users remain engaged and willing to contribute constructively, which signals potential for improvement if technical issues are addressed effectively. These results further emphasize the importance of prioritizing system stability and access reliability to improve user satisfaction and support the long-term adoption of the Tring! by Pegadaian application.

Table 2. Top ten use keywords

Keywords	Percentage
App/apps/application	41%
Login/log	13%
Account	12%
Pegadaian	7%
Bad	6%
Password	5%
Update	5%
Slow	4%
Transaction	4%
User	3%

The table presents the ten most frequently used keywords extracted from user reviews of the Tring! by Pegadaian application. The analysis is intentionally restricted to nouns and adjectives, as these word types are more representative of user experiences and evaluative statements. The percentages shown are calculated only from these ten keywords rather than from all words appearing in the reviews, since many other frequently occurring terms consist of conjunctions, determiners, or prepositions that do not convey substantive meaning.

The most dominant keyword is *"app/application"* accounting for 41% of occurrences (299 mentions), which indicates that most user comments directly focus on the application itself. This is followed by *"login/log"* (13%; 95 mentions) and *"account"* (12%; 88 mentions), suggesting that access-related aspects are frequently discussed in user feedback. Other commonly used keywords include *"Pegadaian"* (7%), *"bad"* (6%), and *"password"* (5%), reflecting negative evaluations and authentication-related concerns. Keywords such as *"update"*, *"slow"*, and *"transaction"* further highlight issues related to system performance and transactional processes.

The concentration of keywords related to the application functionality and access-related functions suggests that users primarily frame their experiences around whether the Tring! application operates as expected at a basic operational level. The frequent

appearance of terms such as *"app/application"* indicates that user dissatisfaction is not limited to isolated features but often reflects overall evaluations of the platform. This pattern implies that users perceive technical problems as systemic rather than incidental, thereby shaping their broader judgment of the application's quality.

The prominence of access-related keywords, including *"login"*, *"account"*, and *"password"* highlights persistent challenges associated with authentication and account management. These issues are particularly critical in financial service applications where secure and reliable access is fundamental to user trust. Repeated difficulties in logging in or accessing accounts can generate significant frustration and reduce users' confidence in the application's reliability and security, even if the underlying financial services remain intact.

The presence of evaluative and performance-related keywords such as *"bad"*, *"slow"*, and *"update"* further indicates that users often associate negative experiences with system responsiveness and the changes introduced through application updates. This suggests that updates, while intended to improve functionality or security, may unintentionally introduce new technical issues or performance instability. Such experiences can amplify negative perceptions, especially when users are unable to complete essential transactions smoothly. Additionally, the appearance of the keyword *"transaction"* signals that technical and access problems have direct implications for core service functions. Difficulties during transaction processes may have a stronger emotional impact on users as they involve financial activities that require accuracy and timeliness. Consequently, even relatively minor system disruptions can significantly compromise overall user satisfaction.

This keyword analysis complements the categorical content analysis by providing empirical textual evidence of how users articulate their complaints. The findings suggest that improving system stability, access reliability, and the performance impact of application updates should be prioritized as these elements are central to users' experiences and evaluations of the Tring! application.

The dominance of technical and access-related issues shown in the graphical results demonstrates users' interactions with the Tring! applications are frequently disrupted at critical touchpoints, particularly during login and navigation. From a CRM perspective, digital applications function as relational interfaces that mediate continuous interactions between an organization and its customers. CRM theory emphasizes that relationship quality is built through repeated, positive interactions that foster trust, satisfaction, and commitment over time (Payne & Frow, 2005). When users repeatedly encounter system instability or access failures, these interactions are interrupted, limiting the application's ability to support sustained customer engagement. Such disruptions may negatively affect CRM performance outcomes, including customer satisfaction, trust, continued usage intention, and long-term relationship quality. Previous studies on electronic customer relationship management (E-CRM) in digital financial services demonstrate that customer satisfaction and trust are critical determinants of customer loyalty, retention, and long-term engagement (Dehghanpouri et al., 2020; Padmavathy & Sivakumar, 2012). Similarly, research in digital banking contexts shows that repeated negative service experiences and weak system performance can reduce customers' willingness to continue using digital platforms for future transactions and interactions (Fayek & Khalil, 2025; Indriastuti et al., 2022). In digital financial services, repeated negative experiences may reduce customers' willingness to rely on the platform for future transactions and interactions. Furthermore, CRM is not solely concerned with managing customer data or transactions, but also with delivering consistent service experiences across all customer contact channels (Sin et al., 2005). In the case of Tring! The application serves as a central digital channel through which users access financial products, conduct transactions, and communicate indirectly with the company. The high frequency of complaints related to system errors and login failures suggests that this channel is not functioning optimally, thereby undermining the effectiveness of CRM implementation. As a result, customers may perceive the company as unreliable, even if the underlying financial products remain competitive.

This relationship can be further explained using the IS Success Model developed by DeLone & McLean (2003) which identifies system quality as a foundational determinant of

user satisfaction and net benefits. System quality encompasses attributes such as reliability, availability, response time, and ease of access which are directly reflected in the dominant complaint categories identified in this study. When system quality is perceived as low, the user satisfaction declines which in turn reduces intention for continued system use and weakens the potential benefits derived from the system, including effective customer relationship management. In addition to system quality, the findings also suggest the presence of information quality and service quality issues. Difficulties related to unclear procedures and navigation indicate limitations in how information is communicated within the application, while complaints regarding customer support and service responsiveness reflect weaknesses in service quality. Together, these dimensions influence users' perceptions of the application and contribute to overall satisfaction and trust toward the digital service platform.

The keyword analysis reinforces this interpretation by highlighting frequent references to terms such as *"login"*, *"account"*, *"password"*, and *"slow"*. This indicates that users experience problems at the most basic functional level of the application. These access-related barriers may prevent users from completing essential transactions, thereby increasing frustration and diminishing trust. In CRM literature, trust is a core component of long-term customer relationships, particularly in financial services where security and reliability are paramount (Payne & Frow, 2005). Persistent technical issues may therefore decrease trust and discourage users from fully engaging with the application. The findings suggest the effectiveness of CRM in the Tring! application is closely tied to system quality and technical performance. While digital platforms offer significant opportunities for strengthening customer relationships, these benefits cannot be realized if foundational system functions fail to meet user expectations. Improving system stability, access reliability, and performance consistency should therefore be viewed not only as technical improvements, but as strategic CRM initiatives that support user satisfaction, trust, and long-term relationship development.

From a managerial perspective, these findings suggest that Pegadaian should strengthen proactive CRM and service recovery strategies to minimize the negative impact of technical disruptions on customer relationships. In digital financial services, proactive service recovery may include faster identification of recurring system failures, transparent communication regarding system maintenance or updates, and more responsive customer support mechanisms to address user complaints before dissatisfaction escalates. Previous studies indicate that timely responses and effective recovery efforts can reduce customer frustration and help rebuild trust following service failures (Kau & Loh, 2006; Tax et al., 1998). In addition, the findings imply that system redesign efforts should prioritize foundational aspects of system quality, particularly reliability, login accessibility, transaction stability, and navigation clarity. Rather than focusing primarily on expanding application features, organizations should ensure that core system functions operate consistently and efficiently to support positive user experiences and long-term customer engagement.

4. Conclusions

This study was conducted to examine user complaints related to the Tring! application, a digital service innovation developed by PT Pegadaian as part of its strategic role in supporting financial inclusion in Indonesia. As a non-bank financial institution (NBFI), Pegadaian plays a strategic role in expanding access to financing for underserved segments of society, particularly through collateral-based financing and the integration of digital technologies. The introduction of Tring! by Pegadaian reflects Pegadaian's commitment to enhancing service accessibility, efficiency, and customer convenience in line with national financial inclusion objectives.

This study used directed qualitative content analysis to evaluate 300 user reviews collected from the Google Play Store. The findings indicate that user experiences with the Tring! applications are mainly shaped by technical and system-related issues, especially

problems related to system stability, access, and login functionality. These issues emerged as the most dominant categories in the analysis, supported by both categorical distributions and keyword frequency results. In contrast, complaints related to usability complexity or comparisons with previous digital services were relatively limited, suggesting that users prioritize reliable access and stable performance over interface design or feature variety.

From a theoretical perspective, this study contributes to the application of the DeLone & McLean (2003) IS Success Model and Customer Relationship Management in the context of digital financial services provided by state-owned enterprises. The findings reinforce the importance of system quality as a critical determinant of user satisfaction and system effectiveness, particularly regarding reliability, accessibility, and system stability. Weaknesses in system reliability and accessibility were shown to negatively affect users' experiences, limiting the perceived benefits of the digital platform. This study also demonstrates how user-generated reviews can provide empirical insights into the relationship between system quality and customer relationship outcomes in digital financial platforms. Furthermore, the findings suggest that technical shortcomings in digital applications may weaken trust, satisfaction, and long-term engagement, thereby reducing the effectiveness of CRM implementation through digital channels.

This study highlights that the success of digital financial service applications is not solely determined by the range of features offered, but rather by the reliability and stability that underpin the user experience. For Pegadaian, improving system performance and access reliability should be considered a strategic priority that not only enhances user experience but also strengthens customer relationships and supports broader financial inclusion objectives. Future improvements in these areas are likely to enhance user satisfaction, increase adoption, and reinforce the application's role as an effective digital interface between the company and its customers.

This study is limited to user reviews collected from the Google Play Store and primarily reflects users who voluntarily expressed their experiences online, which may not fully represent the perceptions of all application users. Future research may expand the scope of analysis by incorporating data from multiple digital platforms, conducting interviews or surveys with users, or applying quantitative approaches to examine the relationships between system quality, trust, satisfaction, and continued usage intentions more comprehensively. Further studies may also explore the effectiveness of service recovery strategies and system improvement initiatives in strengthening customer relationship management outcomes within state-owned digital financial service platforms.

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Author Contribution

Conceptualization, David Dick., and M. Fikri Eka Saputra; Methodology, David Dick., M. Fikri Eka Saputra., Andrian Haro; Software, David Dick., and M. Fikri Eka Saputra; Validation, Andrian Haro; Formal Analysis, David Dick., and M. Fikri Eka Saputra; Investigation, David Dick., and M. Fikri Eka Saputra; Resources, David Dick., and M. Fikri Eka Saputra; Data Curation, David Dick.; Writing – Original Draft Preparation, David Dick., and M. Fikri Eka Saputra; Writing – Review & Editing, David Dick., M. Fikri Eka Saputra., Andrian Haro; Visualization, David Dick., and M. Fikri Eka Saputra; Supervision, Andrian Haro; Project Administration, David Dick.

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Not available.

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Not available.

Data Availability Statement
The data presented in this study are publicly available on the Google Play Store reviews.

Conflicts of Interest
The authors declare no conflict of interest.

Declaration of Generative AI Use
During the preparation of this work, the authors used ChatGPT to assist in language clarity. After using this tool, the authors reviewed and edited the content as needed and took full responsibility for the content of the publication.

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Biographies of Authors

David Dick, Department of Management, Faculty of Economics and Business, Universitas Negeri Jakarta, Jakarta, DKI Jakarta 13220, Indonesia.
- Email: dickdavid217@gmail.com
- ORCID: N/A
- Web of Science ResearcherID: N/A
- Scopus Author ID: N/A
- Homepage: N/A

Muhammad Fikri Eka Saputra, Department of Management, Faculty of Economics and Business, Universitas Negeri Jakarta, Jakarta, DKI Jakarta 13220, Indonesia.
- Email: fikrieka125@gmail.com
- ORCID: N/A
- Web of Science ResearcherID: N/A
- Scopus Author ID: N/A
- Homepage: N/A

Andrian Haro, Department of Management, Faculty of Economics and Business, Universitas Negeri Jakarta, Jakarta, DKI Jakarta 13220, Indonesia.
- Email: andrian.haro@unj.ac.id
- ORCID: N/A
- Web of Science ResearcherID: N/A
- Scopus Author ID: N/A
- Homepage: N/A