



The role of pawnshops service digitalization through the Tring application in increasing financial inclusion for Generation Z in the digital economy era

Zanuba Ainindya El Fanani^{1,*}

¹ Independent Researcher, Indonesia.

*Correspondence: ainindyazanuba1@gmail.com

Received Date: 12 February, 2026

Revised Date: 20 April, 2026

Accepted Date: 24 August, 2026

ABSTRACT

Background: The financial industry has been making significant investments in financial technology, especially in developing countries such as Indonesia, to achieve national financial inclusion goals. PT Pegadaian has responded to this transformation by digitizing its services through the launch of the Tring application, which resulted from the transformation of the Pegadaian Digital Service. This study aims to analyze the role of Pegadaian's service digitalization through the Tring application in promoting financial inclusion among Generation Z in the era of the digital economy. **Methods:** The research method used is descriptive qualitative, with data collected through interviews, observations, and documentation involving employees and Generation Z customers who use the Tring by Pegadaian application. **Findings:** This study found that the digitalization of services through the Tring application plays a significant role in increasing ease of access, transaction efficiency, and Generation Z's trust in formal financial products at Pegadaian. **Conclusion:** These findings also indicate that the use of the Tring application is driving an increase in the number of Generation Z users and strengthening PT Pegadaian's role in supporting national financial inclusion through more adaptive and accessible digital services. However, challenges remain, including gaps in digital financial literacy, limited educational features, and a lack of understanding of data security. This study recommends implementing a hybrid service strategy that integrates online and offline systems to expand financial inclusion. **Novelty/Originality of this article:** This study provides new insights into non-bank digital financial inclusion by specifically analyzing how the transformation of a traditional microfinance institution into a dedicated mobile app (Tring by Pegadaian) affects financial access, trust, and adoption behavior among Generation Z in the context of a rapidly evolving digital economy.

KEYWORDS: digitalization of services; financial inclusion; Generation Z; PT Pegadaian.

1. Introduction

The economic or financial sector is one of the most important sectors for a country and its population. In Indonesia, a system is required to meet daily living needs, including savings, loans, debt, pawning, and related services. Regarding pawning, the non-bank financial institution responsible is the State-Owned Pawnshop Company, PT Pegadaian (Safitri & Wati, 2023). As one of the oldest non-bank financial institutions in Indonesia, PT Pegadaian plays a vital role in promoting financial inclusion through various financing products and services (Arifa, 2023). In response to the digital era, Pegadaian has been

Cite This Article:

El Fanani, Z. A. (2026). The role of pawnshops service digitalization through the Tring application in increasing financial inclusion for Generation Z in the digital economy era. *Journal of Entrepreneurial Economics*, 3(2), 121-137. <https://doi.org/10.61511/jane.v3i2.2026.3552>

Copyright: © 2026 by the authors. This article is distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>)



adapting to changes in consumer behavior, which increasingly rely on technology. One example of this innovation is the launch of the Tring application, which officially replaced Pegadaian Digital Service (PDS) on October 8, 2025 (Sahabat Pegadaian, 2025).

A study by Makhmudov et al. (2025) found that consistent investment in strategies involving digital and technological capabilities enhances a company's ability to innovate in services, acquire customers, and build competitiveness in the digital economy. Therefore, it can be concluded that the digitalization of services plays a significant role in influencing investment interest, even among Generation Z. This study provides new company-level evidence for the digital transformation literature, as it demonstrates that marketing and mobile technology work together to drive service innovation in developed countries.

Financial technology (Fintech) is an emerging innovation in the financial industry that provides users with easier and more affordable financial services. Its goal is to reach a larger customer base by offering financial services that are more efficient, cost-effective, and user-friendly than traditional alternatives (Menza et al., 2024). The development of digital technology has brought significant changes to various aspects of life, including the financial sector (Ardianto et al., 2024). Currently, the financial sector is undergoing a transformation toward the digital era in response to advances in financial technology and the broader digital technology revolution.

According to Ardianto et al. (2024), this transformation encourages financial institutions, including Pegadaian, to shift to digital-based services with the goal of expanding financial inclusion and providing public access without time or location constraints, thereby offering fast, efficient, and inclusive services to customers. This approach represents an important strategy for increasing transaction efficiency and digitally expanding market reach. The Tring application is a web- and mobile-based digital service designed to facilitate customer transactions across various Pegadaian products, such as gold savings, gold installments, and pawn services. This transformation is part of Pegadaian's efforts to extend the reach of formal financial services and enhance customer convenience in the digital era (Nurhayati et al., 2025).

However, this transformation is not without challenges, including the low level of digital financial literacy among the public, particularly Generation Z, and the limited educational features available in the application. Pegadaian's digital services currently focus primarily on transaction functions, while the financial education component has not yet been fully developed (Ovianda et al., 2025). Therefore, the digitization of services is not merely a response to trends but represents a strategic initiative by Pegadaian to expand public access especially for Generation Z to formal financial services and support the achievement of national financial inclusion. The Tring application is particularly relevant to the characteristics of Generation Z, a generation that has grown up amid the rapid development of digital technology (Sari, 2023). While this generation is known as active users of the internet and social media, they continue to face challenges in financial literacy and the utilization of formal financial products (Nurohman, 2025). Consequently, the digitization of Pegadaian services through the Tring application is expected to serve as an effective mechanism for promoting financial inclusion among Generation Z in the digital economy era.

Based on this, the present study introduces a novel analysis of Pegadaian's digital service transformation from the PDS application to Tring, a recent innovation aimed at supporting financial inclusion. Furthermore, this study focuses on the role of service digitalization in enhancing financial inclusion among Generation Z, a topic that has been rarely explored in previous research. In addition, the study contributes uniquely by identifying gaps in financial literacy and proposing the development of digital financial literacy content to support sustainable financial inclusion.

1.1 Digitalization of services

The systems responsible for innovation and corporate value creation have been substantially altered as a result of digital transformation. The integration of digital technology into strategic business practices has led to significant organizational restructuring and new approaches to market competition (Verhoef et al., 2021). Digital

transformation is now considered a complex system encompassing organizational elements, technological aspects, and strategic components that work together to generate new service innovations (Nylén & Holmström, 2015). To achieve a significant competitive advantage in the modern digital marketplace, companies must develop new services and enhance their service delivery systems.

The digitalization of financial services refers to the process of transforming conventional systems into digital technology-based platforms that enable online transactions, payments, financing, and investments (Qothrunnada et al., 2023). Through digitalization, financial institutions can improve transaction efficiency, expand service coverage, and reduce transaction costs for customers. According to Pratama et al. (2025), financial digitalization is a crucial factor in accelerating national financial inclusion, as it provides financial services to communities that were previously inaccessible to formal financial institutions. Pegadaian's digitalization is implemented through the Tring application, a digital platform that facilitates various customer transactions for Pegadaian products, such as gold savings, gold installments, pawn services, bill payments, and purchases. This transformation represents a form of innovation adopted by Pegadaian in response to technological advances and the changing behaviors of modern society, which is increasingly dependent on digital technology, including Generation Z (Zis et al., 2021).

1.2 Financial inclusion

Financial inclusion refers to efforts aimed at increasing public access to financial services provided by financial institutions by eliminating both price and non-price barriers (Bank Indonesia, 2014). Research on the impact of financial inclusion on poverty conducted by Social & Indonesia (2019) indicates that providing access to financial services can help individuals living in poverty by fostering a culture of investment, saving, and prudence, as well as by enabling the creation of efficient and low-cost payment mechanisms. Consequently, it can be argued that service innovation enables Generation Z to contribute to poverty reduction, as they are increasingly aware of these financial practices. Financial inclusion is defined as a condition in which every individual has access to a variety of affordable, high-quality formal financial services tailored to the needs of the community, with the goal of improving economic well-being (Putri et al., 2021). Importantly, financial inclusion encompasses not only access but also the effective utilization of financial services and financial literacy (Fig. 1).

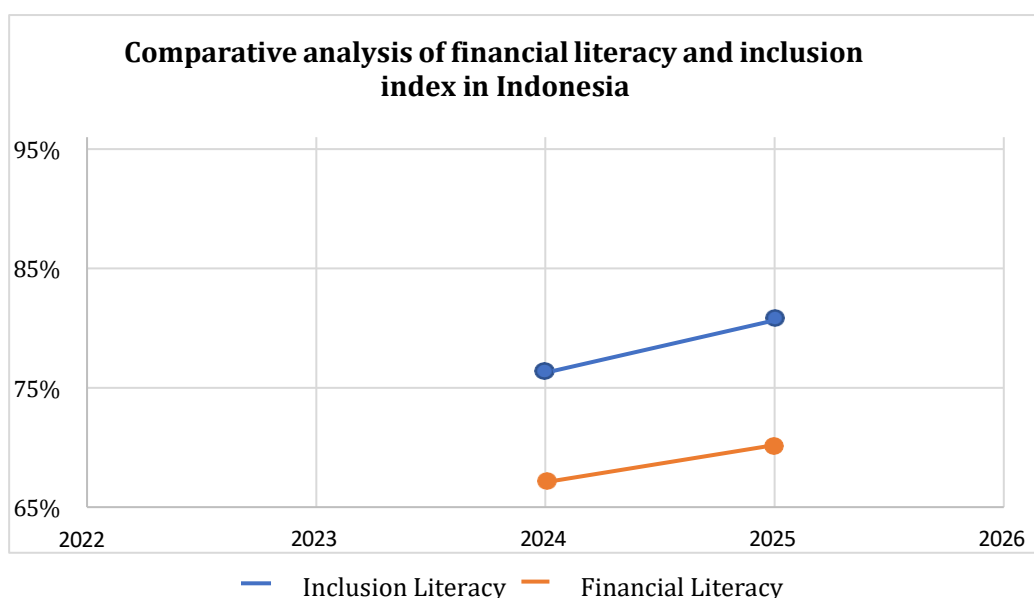


Fig. 1. Comparative analysis of financial literacy and inclusion index in Indonesia (Financial Services Authority, 2025)

According to data cited in SP 69/OJK/GKPB/V/2025, Indonesia's financial literacy and inclusion indices increased in 2025, with financial inclusion rising from 75.02% in 2024 to 80.51% in 2025—higher than financial literacy, which increased from 65.43% in 2024 to 66.46% in 2025. This indicates that public access to financial services is expanding faster than public financial understanding. Meanwhile, the comparison of financial literacy and financial inclusion for Generation Z in 2025 is as follows:

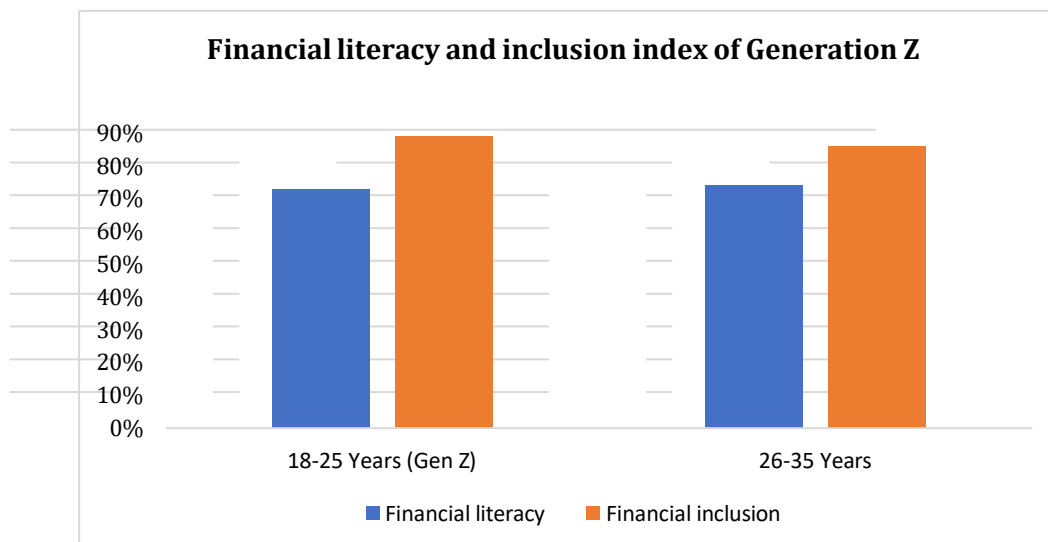


Fig. 2. Financial literacy and inclusion index of Generation Z
(Financial Services Authority, 2025)

Generation Z, aged approximately 18–25 years, has a very high level of financial inclusion at 89.96%, compared to a financial literacy rate of 73.22%. In contrast, the preceding generation, aged approximately 26–35 years, has a financial inclusion rate of 86.10% and a financial literacy rate of 74.04%. This indicates that Generation Z is more active in using financial services, but their engagement is not yet fully matched by sufficient financial understanding. These data present a promising opportunity for PT Pegadaian, through the Tring application, to not only provide digital transaction services such as Gold Savings and Gold Installments, but also to serve as a platform for digital financial education targeting Generation Z, who are highly dependent on technology in the digital era.

1.3 PT Pegadaian: A non-bank financial institution

PT Pegadaian is a non-bank financial institution engaged in pawn-based financing services. According to Article 1150 of the Civil Code, Book II, Chapter XX, a pawn is a right granted to a creditor over an item delivered by a debtor or another person on the debtor's behalf, which gives the creditor priority in repayment over other debtors, except for costs incurred for auctioning or securing the item (Adawiyah, 2018). According to research by Adila et al. (2023), as a non-bank financial institution, Pegadaian plays a vital role in expanding access to formal finance, particularly for lower-middle-class communities that have not yet received banking services. This aligns with Pegadaian's mission to support the national financial inclusion program by providing financial products and services that are easily accessible to all segments of society.

In response to the current digital economy, Pegadaian has been innovating its services, including the launch of the Pegadaian Digital Service (PDS), which was later transformed into the Tring application on October 8, 2025. This web- and mobile-based application enables customers to conduct various transactions, such as pawning, gold savings, gold installments, and bill payments, online and securely. This digital transformation not only aims to increase transaction efficiency and customer convenience but also serves as an adaptation to changing consumer behaviors, which are increasingly dependent on technology. Through the digitalization of services, Pegadaian contributes to the expansion of digital financial inclusion in Indonesia (Qothrunnada et al., 2023).

1.4 Digital financial literacy among Generation Z

Generation Z refers to individuals born between 1997 and 2012, following the millennial generation (Generation Y). This generation grew up amid the rapid development of information technology and is characterized by a high dependence on digital devices. Consequently, Generation Z is often referred to as the iGeneration, or more commonly, the Net Generation (the Internet Generation) (Arum et al., 2023). Members of this generation tend to use digital applications and platforms to meet their daily needs, including financial needs. Fig. 3.

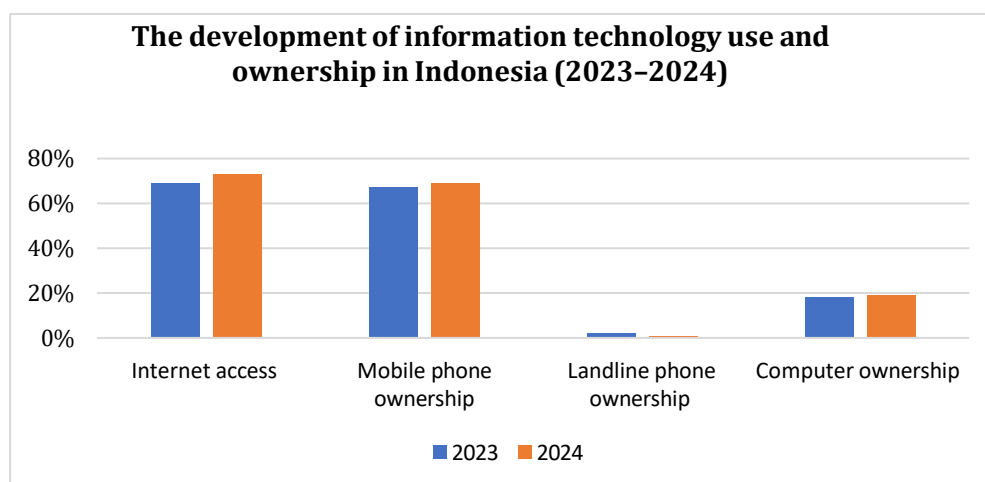


Fig. 3. The development of information technology use (Statistics Indonesia, 2025)

The diagram shows that internet usage and mobile phone ownership in Indonesia are expected to continue increasing in 2024, with 72.78% of the population having internet access and 68.65% owning a mobile phone. These percentages represent an increase compared to 2023, indicating the expanding digital reach of society. Conversely, landline telephone usage continues to decline by 0.99%, reflecting a complete shift toward digital communication. Meanwhile, computer ownership increased only slightly, from 18.06% to 18.52%, suggesting that people are increasingly relying on mobile devices for digital access. Therefore, it can be concluded that Indonesians are progressively prepared for digital transformation, particularly in the context of technology-based financial services such as Pegadaian Tring, which leverages this digitalization trend to expand national financial inclusion, as stated by Statistics Indonesia (*Badan Pusat Statistik*, BPS, 2025).

Despite the high level of digital technology use among Generation Z, their digital financial literacy remains relatively low. As a result, a large portion of Generation Z does not fully understand the risks, benefits, and financial management of digital platforms. Given these characteristics, Generation Z represents a potential target for financial institutions like Pegadaian to introduce digital-based financial products while simultaneously improving financial literacy (Arum et al., 2023). Digitizing services through the Tring application can be an effective means of educating and encouraging Generation Z to participate more actively in the formal financial system.

1.5 Relationship between variables

Based on the theoretical study above, it can be concluded that the digitalization of financial services plays a crucial role in enhancing national financial inclusion, particularly by improving accessibility, transaction efficiency, and digital financial literacy through innovation. As a non-bank financial institution, Pegadaian plays a key role in developing the Tring application, which primarily targets Generation Z users. Accordingly, the relationship between variables in this study can be described as follows: the digitalization of Pegadaian services through the Tring application enhances the accessibility and efficiency of formal financial services, which in turn contributes to the increase of national financial inclusion

among Generation Z.

2. Methods

The research method used in this study is qualitative with a descriptive approach. The purpose of this study is to analyze the role of Pegadaian's digitalization of services through the Tring application in increasing financial inclusion among Generation Z in today's digital economy. This method was chosen because it allows for an in-depth understanding of service digitalization issues, particularly in the context of Generation Z customer behavior and experiences in using Pegadaian's digital financial services. Data was collected through in-depth interviews, participant observation, and document analysis. Data collection focused on direct interactions with Pegadaian employees and Generation Z customers who have used the Tring application as key informants. The purpose of this method was to gain a comprehensive understanding of the service digitalization process and its contribution to increasing national financial inclusion. In this study, participant observation was conducted using a structured protocol to ensure a systematic and in-depth observation process. Observations focused on direct interactions with Generation Z users of the Tring application. Researchers observed how customers accessed key features, such as logging in, navigating menus, and processing service transactions. Furthermore, special attention was paid to customer features related to data security, such as account verification, password usage, and understanding system notifications or warnings.

To strengthen the observation process, several indicators were used, namely: (1) the level of ease of using the application, (2) customer behavior patterns in completing transactions, (3) response to security features, and (4) the level of customer understanding of the importance of personal data protection. Researchers also noted several obstacles, such as confusion in using features or neglect of data security aspects. Observation data was documented through field notes under certain conditions, confirmed through brief interviews to strengthen interpretations of customer behavior. The collected data was then analyzed qualitatively through three stages: data reduction, data presentation, and conclusion drawing. This process was carried out to identify patterns, organize the data systematically, and derive meaning relevant to the research objectives. Through this analysis, researchers were able to examine the relationship between the use of digital-based services and the level of user literacy and understanding of data security. This qualitative approach was chosen because it captures the subjective aspects and complexities of service digitalization that cannot be measured quantitatively. Therefore, the findings of this study are expected to provide an empirical and contextual basis for developing strategies to improve Pegadaian's digital services and support sustainable national financial inclusion.

3. Results and Discussion

3.1 Digital transformation of Pegadaian services through the Tring application

PT Pegadaian has undertaken a digital transformation in response to the development of the digital economy, which demands faster, easier, more efficient, and more inclusive financial services. This transformation was realized through the launch of the Tring application, which replaced the Pegadaian Digital Service (PDS) on October 8, 2025. The application is designed with key features such as gold savings, gold installments, bill payments, mobile phone credit purchases, and digital pawn services, allowing customers to conduct transactions without visiting a PT Pegadaian office in person. In addition to reducing costs and saving time, this digital transformation can enhance financial inclusion, particularly for individuals in remote areas that are difficult to access or far from PT Pegadaian offices. Based on field interviews with Pegadaian CP Boyolali employees and several Generation Z customers using the Tring application, various perspectives were obtained that support the effectiveness of Pegadaian's digital service transformation.

According to Mr. X from CP Boyolali Branch:

"I have been at PT Pegadaian for a long time, starting from manual operations to the current application. I joined in 2007. I believe this innovation is very helpful. The cashiers at the branch and in my unit now focus on transactions through the application, assisted by magenta and security guards. Why? Because it is safer and also supports digital development at PT Pegadaian. It is particularly influential for young people who have never used PT Pegadaian and only knew about pawning goods, even though there are other features such as gold savings. This innovation is very efficient for customer service and satisfaction, and now many of our customers are using the Tring application." (Informant, Mr. X)

A similar opinion was expressed by Ms. X, Business Manager, who stated:

"The features available in the Tring application are now quite comprehensive and can be used anywhere without having to queue at a PT Pegadaian office. The Tring application is one of PT Pegadaian's innovations, formerly known as PDS, and is very helpful in terms of digital services. Unfortunately, it still does not have Gcash like PDS, so you still have to pay Rp 2,500 for each transaction, even if you are saving gold." (Informant, Ms. X)

This statement indicates that online digital services are currently considered effective, efficient, and flexible for customers, particularly Generation Z. Another perspective came from Mr. Y, a collateral custodian:

"Now many customers redeem through the Tring application. They only need to show the Pawn Letter and ID card at the PT Pegadaian office, so the queues are shorter. Younger people often make transactions digitally, while older customers still conduct them manually through the cashier." (Informant, Mr. Y)

Meanwhile, Ms. Y, an Intern from Pegadaian digital representative, stated:

"I started my internship using the PDS App yesterday, but now I have switched to the Tring application by Pegadaian. Although many features are not yet available due to its relatively recent launch, the old PDS features are still useful for saving time for customers, especially our generation (Generation Z), who prefer digital technology where everything can be transferred, as many do not carry cash." (Informant, Ms. Y)

From a security perspective, Mr. Z stated:

"I often help customers open the Tring application when the branch office is busy. Although there are challenges such as poor signal and email verification, it is quite helpful for certain groups, mostly young people." (Informant, Mr. Z)

From a user perspective, Mr. A, a Pegadaian customer, shared his experience:

"Initially, I was not interested in using this app because I did not have a BRI ATM, but I ended up using it after the teller created a BRI ATM for me through Pegadaian. After using the app, it turned out to be much easier. I have a pawn here and often forget the due date, especially when I have to go to the office, which is quite busy. Now I can renew my loan myself through the app and add to my loan without having to visit the Pegadaian office." (Informant, Mr. A)

Ms. Z, another customer, stated:

"I use the Tring application to open a savings account and pay off gold installments because it is for investment purposes. Using this app is indeed more effective, as sometimes I am too lazy to leave the house, let alone go to work. I also occasionally buy tokens

through Tring, so it is not just for pawn transactions. I think Pegadaian is very innovative and up to date." (Informant, Ms. Z)

Mr. B, also a customer, added:

"Yesterday, I did not want to open the application because the registration was really complicated. However, since I also work at another place (Deliboy), which requires going back and forth, and I have very little time to go to the pawnshop, the app is very helpful. When I pick up a pawned item, I can do it immediately without queuing. I think the Tring application is worth it, as it allows me to manage my time and energy better." (Informant, Mr. B)

Next, Ms. A, a customer, stated:

"I often go to Pegadaian to pawn, and the disbursement has to be transferred to BRI. I also conduct other transactions directly through Tring, as I can simply transfer funds. It saves me quite a bit of time. It functions like a typical mobile banking system." (Informant, Ms. A)

Meanwhile, Mr. C, another customer, said:

"I have several gold installments at Pegadaian, and my husband often transfers them to me, so I use a virtual account to transfer remotely. The Tring application is really helpful. Without this app, having to go to a Pegadaian office would be a hassle." (Informant, Mr. C)

Finally, Mr. D, a customer, added:

"I use the Tring application to invest in gold savings, so I can invest without having to go to a bank or Pegadaian. Additionally, as I work abroad in Sumatra, it is very helpful for managing my finances. Of the several institutions that offer gold savings, I trust Pegadaian more because it was the first institution to offer digital gold savings." (Informant, Mr. D)

The interviews indicate that the Tring application effectively meets the needs of the digital community, particularly Generation Z, who value convenience, speed, and flexibility in financial services. This transformation is not only focused on transaction efficiency but also responds to the needs of the younger generation, especially Generation Z, who are highly dependent on technological developments and digital devices. These findings align with Tarigan (2025), who stated that the adoption of digital technology in financial institutions can enhance financial inclusion by providing easy access and flexible services to the public.

Furthermore, Mawang & Sieng (2024) emphasized that the advancement of the digital economy contributes to economic growth, with the most significant impact observed in developing countries, particularly Indonesia. The substantial positive influence of fintech usage on digital transformation and the sustainable performance of financial institutions suggests that customer loyalty to fintech services drives digital progress, sustainability in the financial sector, and the expansion of financial inclusion (Aldaarmi, 2024). Therefore, the digitalization of services at PT Pegadaian through the Tring application represents not only a technological innovation but also a strategic approach to strengthening national financial inclusion, particularly among Generation Z, who have grown up in the current digital economy era.

3.2 The Role of digitalization in increasing financial inclusion of Generation Z

The goal of financial inclusion is to empower Generation Z with an understanding of formal financial services, which can be accessed and transacted through various channels,

including financial digitalization. Financial inclusion is defined as a comprehensive implementation of financial services aimed at individuals at the bottom of the pyramid, enabling them to utilize the products and services of financial institutions (Setyaningrat et al., 2023). The digitalization of financial services serves as a strategic instrument in achieving financial inclusion, particularly for Generation Z, who are characterized by their adaptability to current digital technologies.

In line with this, interviews with several Generation Z customers of PT Pegadaian CP Boyolali revealed that the majority of respondents indicated that the Tring application significantly assisted them in understanding and utilizing various PT Pegadaian financial products. Prior to the digitalization of services, products such as Gold Savings, Gold Installments, and digital payment services (e.g., purchasing mobile phone credit, electricity tokens, and other services) were rarely accessed by young people, especially Generation Z.

In line with this theory, interviews with several Generation Z customers of PT Pegadaian CP Boyolali indicate that the Tring application plays a significant role in enhancing their understanding and utilization of Pegadaian's financial products and services. The majority of respondents reported that the app facilitates access to information and transactions for various financial products. Prior to the implementation of service digitalization, products such as Gold Savings, Gold Installments, and digital payment services—including purchasing mobile phone credit, electricity tokens, and similar services—were relatively unpopular among Generation Z. However, through the Tring application, these services have become more familiar, easily accessible, and aligned with the digital preferences of Generation Z. This finding suggests that the digitalization of financial services has positively contributed to increasing financial inclusion among the younger generation.

The simplicity of account opening, which requires only a mobile phone number and active email verification, combined with a security system based on uploading an ID card and a selfie, enhances user confidence and trust in the Tring application. Additionally, upon registration with the Tring application, customers automatically receive a gold savings account that allows them to save gold starting from a small amount, namely IDR 10,000. This feature is particularly attractive to Generation Z, who are just beginning to develop habits of saving and investing for the long term. The availability of diverse digital transaction features is also considered to broaden the reach of PT Pegadaian's services, making them more practical, efficient, and consistent with the digital lifestyle of Generation Z in the modern economic era.

This demonstrates the crucial role of digitalization in enhancing financial inclusion, particularly in terms of accessibility, usage, and financial understanding. Generation Z, previously more familiar with digital wallets and e-commerce, is now beginning to utilize the Pegadaian App as part of their personal financial management. According to Regulation No. 12/POJK.03/2018 issued by the Financial Services Authority (*Otoritas Jasa Keuangan*, OJK) concerning the Provision of Digital Banking Services by Commercial Banks (*Peraturan Otoritas Jasa Keuangan-Lembaga Perkreditan Desa*, POJK-LPD), digital financial services are defined as electronic financial services that leverage customer data to provide faster, easier, and more tailored services according to individual needs. These services can be accessed independently while ensuring ongoing security (Nurhikmah et al., 2025).

The implementation of digital financial services not only improves the efficiency and quality of financial services but also plays a critical role in strengthening competitiveness among companies. Digitalization is driving various innovations in product development, services, and business models that are more adaptive to the needs of modern customers, especially Generation Z. This has created a dynamic business environment oriented towards the use of technology. The growing role of financial digitalization is reflected in the value of Indonesia's digital economy, which was estimated at IDR 714.4 trillion in 2022, representing a growth rate of 27.6% compared to the previous year. This achievement demonstrates that digitalization has become a key pillar in driving national economic growth and has significant potential for further development through synergy between government policies and private sector initiatives, thereby boosting national financial inclusion (Gultom et al., 2024).

This finding aligns with the research of Metawa et al. (2023), which highlighted that financial inclusion must be a fundamental goal of the global economic system. This underscores the importance of digital transformation in supporting financial inclusion in the digital era. According to the International Federation of Accountants (IFAC, 2021), it is anticipated that by 2030, more than 95% of the world's population will have internet access via mobile phones. Furthermore, Setyaningrat et al. (2023) emphasized that expanding the reach of financial services positively impacts customer financial inclusion by enabling transactions anytime and anywhere.

Although the Tring application demonstrates a high level of efficiency in accelerating transaction processes and increasing customer convenience, the findings of this study also indicate that a digital approach cannot completely replace human interaction. In practice, many customers, especially those with limited digital literacy, still require assistance from Pegadaian employees, both during the download process, registration, account verification, and using features within the app. This demonstrates the importance of a hybrid strategy that combines digital services with direct support from officers as facilitators. This approach is crucial in the context of regional development, where gaps in digital literacy and understanding regarding data security remain major challenges. Thus, the success of service digitalization is determined not only by technological sophistication, but also by the company's ability to integrate the human element to increase user trust and understanding of digital financial services.

3.3 Challenges of implementing digital services

Although the digitalization of services through the Tring application has positively impacted financial inclusion, this study also identified several challenges in its implementation, such as low digital financial literacy among some Generation Z users. Many users do not fully understand the risks, benefits, and procedures for the optimal use of digital financial services. This condition results in low levels of trust in formal financial products and increases the potential for errors in using the app (Meliana & Supriyadi, 2025).

Limited educational features in the Tring application. Currently, the app primarily focuses on transaction functions, such as gold savings, gold installments, and purchasing mobile phone credit or electricity tokens. Interactive financial education features such as short learning videos, financial literacy quizzes, and concise articles explaining PT Pegadaian products are not yet fully available. These features could serve as an effective means of improving user understanding of the digital financial products provided.

Technical issues, system stability, and customer data security. Some PT Pegadaian users have experienced technical problems, including server disruptions during Tring application registration, delays in email and One-Time Password (OTP) verification, difficulty locating PT Pegadaian offices, lengthy procedures for updating customer data that require submission to the head office, limited payment methods (e.g., the unavailability of GCash), and concerns about data security. These issues negatively affect user convenience, efficiency, and trust, particularly among Generation Z, who demand fast, convenient, and secure services.

Overall, these challenges demonstrate that the success of service digitalization depends not only on technological innovation but also on user readiness, system quality, data protection, and continuous digital education support to optimally achieve financial inclusion goals. One strategy to mitigate these challenges is to ensure that the application passes Bank Indonesia's (BI) digital banking service trial evaluation, including assessments related to the company's information systems, network availability, and consumer data education and protection (Dz, 2018).

3.4 The impact of digitalization on the reputation and efficiency of pawnshop services

Financial digitalization has had a significant impact on the conventional financial industry in Indonesia, particularly by increasing institutional profitability. One of the main

effects of digitalization is enhanced operational efficiency. With innovations in digital technology, such as mobile banking, internet banking, and FinTech platforms, financial institutions can substantially reduce operational costs (Megananda et al., 2025).

The digitalization of services at PT Pegadaian through the Tring application simplifies transaction processes that were previously conducted manually via cashiers. Digital services enable faster, more accurate, and more accessible transactions for Generation Z, eliminating the need to visit a Pegadaian office in person. This has significantly reduced queues, accelerated service times, and optimized human resource utilization. Such operational efficiency not only improves service quality but also reduces long-term operational costs. Therefore, digitalization directly contributes to enhancing PT Pegadaian's internal performance.

In addition to improving service efficiency, digitalization also plays a crucial role in shaping and strengthening PT Pegadaian's reputation. The relationship between digitalization and reputation, including reputational risk, is closely interconnected and cyclical. Digital financial services present both opportunities and risks that can directly affect the reputation of financial institutions. Poorly managed digital transformation may increase risk exposure, such as system disruptions, customer data breaches, and declines in service quality, negatively impacting the company's reputation. Conversely, a strong and well-managed reputation enhances customer trust in digital services, thereby accelerating technology adoption and reinforcing the success of the digital transformation itself (Bernini et al., 2025).

The transformation from conventional to digital services positions PT Pegadaian as a modern, innovative, and technologically adaptive financial institution. This positive perception is particularly important for attracting Generation Z, who demonstrate a strong preference for digital-based services. A strong corporate reputation is also reflected in increased customer trust in the security and credibility of PT Pegadaian as a formal financial institution (Fernanda et al., 2024). Therefore, the Tring application serves a dual purpose: expanding financial inclusion while strengthening PT Pegadaian's position within Indonesia's national digital economy ecosystem, enabling it to compete effectively with other financial companies.

Research by Widiani et al. (2024) indicates that digitalization provides broader access to communities previously excluded from formal financial services. This creates an opportunity to advance financial inclusion, allowing individuals to manage their finances, conduct transactions, and invest more easily. Meanwhile, Apriani (2025) notes that customer expectations regarding the speed, convenience, and security of digital services are rising, making the digital transaction experience a critical factor in maintaining customer loyalty. The relationship between service digitalization and reputation, grounded in resource-based theory, demonstrates that digital financial services can enhance a company's reputation (Bernini et al., 2025).

3.5 Implications for increasing national financial inclusion

Data on the growth of financial inclusion in developing countries, particularly Indonesia, indicates rapid expansion in recent years. In 2022, the financial inclusion rate reached 85.10%, compared to 76.19% in 2021, representing a significant increase. Digital transformation is one of the key drivers of this growth, as evidenced by the rise in the use of financial applications, particularly among Generation Z, from 575,323,419 users in 2021 to 772,565,666 in 2022, with a total transaction value of IDR 1,034,830.65 billion. This data demonstrates that digital technology is a major contributor to the overall increase in financial inclusion in Indonesia (Ceasario & Nisa, 2024).

Other findings suggest that service digitalization is not merely a business strategy but also significantly contributes to the growth of national financial inclusion in Indonesia. Through the Tring application, individuals, especially Generation Z, can access formal financial services easily, affordably, and flexibly, reflecting the digital preferences of this generation. Bakhsh et al. (2024) also emphasize the crucial role of technological innovation in the financial sector in promoting sustainable development in developing

countries. Overall, these findings indicate that financial inclusion, supported by advanced digital technology, is essential for strengthening sustainable economic growth and development. Research by Ruhliandini (2025) supports the theory that the use of financial applications, often referred to as fintech, can enhance financial inclusion and foster a collective motivation to achieve the sustainable development goals (SDGs). Fintech serves as a third-party tool that facilitates digital access for the public, particularly Generation Z, thereby contributing to increased national financial inclusion.

Data published by the Indonesia Fintech Association (*Asosiasi Fintech Indonesia*, AFTECH) and Indonesian Sharia Fintech Association (*Asosiasi Fintech Syariah Indonesia*, AFSI) indicate that the number of fintech companies in Indonesia has grown significantly, with more than 382 registered members. Meanwhile, the transaction value generated through digital commerce and fintech usage is estimated to exceed IDR 500 trillion by 2023 (OJK, 2024). The digitalization of Pegadaian services through the Tring application has played a pivotal role in increasing national financial inclusion among Generation Z by simplifying transactions and enhancing trust in formal financial institutions. To sustain this growth, PT Pegadaian must continue to improve digital financial education and enhance the customer experience, ensuring that this digital transformation remains both effective and appealing to Generation Z.

4. Conclusions

This study found that the digitalization of Pegadaian services through the Tring application plays a crucial role in increasing national financial inclusion among Generation Z. The transformation from Pegadaian Digital Service (PDS) to Tring has provided easier access to financial services such as gold savings, gold installment plans, bill payments, mobile phone credit purchases, and pawn transactions. This innovation enables transaction processes to be faster, more efficient, and more inclusive, without time or location constraints, reflecting the characteristics of today's Generation Z. This finding is supported by data from the BPS in 2024, which show that 72.78% of Indonesians have internet access and 68.65% own mobile phones. These figures are expected to continue increasing in line with the growing sophistication of the digital era. Pegadaian's digitalization therefore represents a relevant strategy for improving service efficiency, strengthening Generation Z's trust, and encouraging their participation in national financial inclusion.

The novelty of this research lies in its focus on the digitalization of Pegadaian through the Tring application, an innovation that has not been widely examined by previous studies, particularly in relation to enhancing financial inclusion among Generation Z. This study not only analyzes transaction efficiency but also explains the relationship between digital financial literacy, application usage behavior, and Generation Z's trust in Pegadaian. Furthermore, this research contributes additional novelty by emphasizing the importance of developing digital-based educational features within the Tring application as an instrument for improving financial literacy and promoting sustainable financial inclusion in the digital economy era, so that the application is not used solely for transactional purposes. Despite its positive impact, the digitalization of Pegadaian's services still faces several challenges, including low levels of digital financial literacy among some Generation Z users, limited educational features, and technical constraints within the application that affect the user experience. These issues remain common weaknesses of the Tring application. Therefore, this study recommends that PT Pegadaian develop interactive digital financial literacy features, such as educational videos, interactive guides to help users understand the functions and benefits of each Pegadaian service, and investment simulation tools while also improving system stability and simplifying the user verification process. These efforts will strengthen PT Pegadaian's role as a non-bank financial institution that is adapting to technological developments and contributing significantly to the sustainable enhancement of national financial inclusion in the digital economy era.

Based on the findings of this study, it is expected that the results can provide recommendations and directions for future research. Further studies are encouraged to incorporate additional variables that may influence Generation Z's financial inclusion, such as digital financial literacy levels, the adoption of other financial technologies, demographic

factors, and trust in digital financial services, in order to achieve a more comprehensive understanding of financial inclusion dynamics among Generation Z.

Acknowledgement

The author would like to express his gratitude to the branch manager, the manager, and the staff of PT Pegadaian CP Boyolali for providing permission, support, and cooperation during the data collection process. The author also thanks the customers of PT Pegadaian CP Boyolali who willingly took the time to participate as respondents and provide the information required for this research. The entire research process and the writing of this article were conducted independently by the author without any assistance from parties other than the respondents mentioned.

Author Contribution

The author is fully responsible for all aspects of this research, including conceptualization, research design, data collection and processing, data analysis, interpretation of results, initial and final drafting, revision and editing, data visualization, self-supervision, and project management. The entire research process and the writing of this article were conducted independently by the author.

Funding

PT Pegadaian acted as the funder for the publication of this article. However, this research did not receive any funding or financial support from any external institution.

Ethical Review Board Statement

Formal ethics approval from an ethics committee was not required for this study. All respondents, including customers, the branch manager, managers, and staff of PT Pegadaian CP Boyolali, voluntarily provided their consent to participate. The study was conducted in accordance with ethical research principles, including maintaining data confidentiality, respecting respondents' right to withdraw at any time, and using the data solely for research purposes.

Informed Consent Statement

Informed consent was obtained from all respondents who participated in this study. Each participant was informed of the study's purpose, the procedures involved, and their right to withdraw at any time without consequence. All data collected will be used solely for research purposes.

Data Availability Statement

The data used in this study are not publicly available due to confidentiality and the privacy of respondents. Data may be accessed upon request from the author and will only be used for further research purposes with the author's consent.

Conflicts of Interest

The author declares no conflicts of interest related to the research and publication of this article. This research received no external funding, and no other parties were involved in the study design, data collection, data analysis and interpretation, manuscript writing, or the decision to publish the results.

Declaration of Generative AI Use

During the preparation of this work, the author used Grammarly to assist in improving grammar, clarity, and academic tone of the manuscript, and Turnitin to assist in checking text similarity and ensuring academic integrity. After using these tools, the author reviewed and edited the content as needed and took full responsibility for the content of the publication.

Open Access

©2026. The authors. This article is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0), which permits use, sharing, adaptation, distribution, and reproduction in any medium or format, as long as appropriate credit is given to the original authors and the source, a link to the Creative Commons license is provided, and it is indicated if changes were made. Images or other third-party material in this article are included in the article's Creative Commons license, unless otherwise indicated in a credit line to the material. If material is not included in the article's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this license, visit: <http://creativecommons.org/licenses/by/4.0/>

References

- Adawiyah, S. R. (2018). The implementation of Sharia gold pawning as an alternative financing in Bandar Lampung. *Pactum Law*, 1(2), 155–163. <https://doi.org/10.36987/jumsi.v1i4.2701>
- Adila, F. I. S., Ompusunggu, D. P., & Hukom, A. (2023). Analysis of the role of financial institutions (Pegadaian) in the development of the general public economy (MSMEs). *Gema Ekonomi*, 12(2), 487–497. <https://doi.org/10.36418/gemaekonomi.v12i2.2600>
- Aldaarmi, A. A. (2024). Fintech service quality of Saudi banks: Digital transformation and awareness in satisfaction, re-use intentions, and the sustainable performance of firms. *Sustainability*, 16(6), 2261. <https://doi.org/10.3390/su16062261>
- Apriani, T. T. (2025). Analysis of the impact of digitalization on banking customer loyalty. *Jurnal Bisnis dan Manajemen (JURBISMAN)*, 3(1), 151–166. <https://doi.org/10.61930/jurbisman.v3i1.1013>
- Ardianto, R., Ramdhani, R. F., Apriliana Dewi, L. O., Prabowo, A., Saputri, Y. W., Lestari, A. S., & Hadi, N. (2024). Digital transformation and anticipation of global economic changes in the banking world. *MARAS: Jurnal Penelitian Multidisiplin*, 2(1), 80–88. <https://doi.org/10.60126/maras.v2i1.114>
- Arifa, M. N. (2023). Development of Islamic non-bank financial institutions in Indonesia. *Journal of Educational and Cultural Studies*, 2(1), 132–137. <https://money-id.com/index.php/jfb/article/view/29/26>
- Arum, L. S., Zahrani, A., & Duha, N. A. (2023). Characteristics of Generation Z and its readiness in facing the 2030 demographic bonus. *Accounting Student Research Journal*, 2(1), 59–72. <https://doi.org/10.62108/asrj.v2i1.5812>
- Badan Pusat Statistik (BPS). (2025, August 29). *Indonesian telecommunications statistics 2024*. <https://www.bps.go.id/id/publication/2025/08/29/beaa2be400eda6ce6c636ef8/statistik-telekomunikasi-indonesia-2024.html>
- Bakhsh, S., Zhang, W., Ali, K., & Anas, M. (2024). Transition towards environmental sustainability through financial inclusion and digitalization in China: Evidence from novel quantile-on-quantile regression and wavelet coherence approach. *Technological Forecasting and Social Change*, 198, 123013. <https://doi.org/10.1016/j.techfore.2023.123013>
- Bernini, F., Ferretti, P., & Angelini, A. (2022). The digitalization-reputation link: A multiple case-study on Italian banking groups. *Meditari Accountancy Research*, 30(4), 1210–1240. <https://doi.org/10.1108/MEDAR-02-2021-1201>
- Ceasario, A. F., & Nisa, F. L. (2024). Digital finance transformation in the perspective of Islamic economics: Opportunities, challenges, and impacts on financial inclusion. *Al Rikaz: Jurnal Ekonomi Syariah*, 3(1), 102–114. <https://doi.org/10.35905/rikaz.v3i2.9596>
- Dz, A. S. (2018). Digital banking-based financial inclusion in Islamic banking: Optimization and challenges. *Jurnal Ekonomi dan Perbankan Syariah*, 10(1). <https://doi.org/10.24235/amwal.v10i1.2813>
- Fernanda, W. A., Nasution, J., & Silalahi, P. R. (2024). The influence of service quality,

- company reputation, and biometric technology on customer trust at Bank Syariah Indonesia. *Jurnal Multidisiplin Ilmu Akademik*, 1(4), 679–689. <https://doi.org/10.61722/jmia.v1i4.2402>
- Gultom, D., Stefanus, G., Dirgantara, M., Pratama, R., & Hidayah, A. (2024). Positive impact of digitalization on the Indonesian economy. *Jurnal Konstanta*, 3(1), 107–116. <https://doi.org/10.29303/konstanta.v3i1.1078>
- International Federation of Accountants. (2021). *Financial inclusion through digital inclusion*. IFAC. <https://www.ifac.org/knowledge-gateway/discussion/financial-inclusion-through-digital-inclusion>
- Mawang, Z., & Sieng, L. W. (2024). Digital economy's transformative impact on regional growth: Evidence from ASEAN countries. *Jurnal Ekonomi Malaysia*, 58(2). <https://doi.org/10.17576/JEM-2024-5802-1>
- Megananda, T. B., Afrizal, S. H., & Padjadjaran, U. (2025). Profitability of conventional banks in Indonesia: The impact of banking digitalization on profitability. *Jurnal Intelek Insan Cendekia*, 2(2), 2923–2928. <https://jicnusantara.com/index.php/jiic/article/view/2542>
- Meliana, J. A., & Supriyadi, S. G. (2025). The effect of digital financial literacy, ease of use, and trust on Gen Z's interest in using digital banks in Indonesia. *Biznesa Ekonomika: Economic and Business Journal*, 1(2), 147–162. <https://doi.org/10.2024/y24k1q28>
- Menza, M., Jerene, W., & Oumer, M. (2024). The effect of financial technology on financial inclusion in Ethiopia during the digital economy era. *Cogent Social Sciences*, 10(1), 2309000. <https://doi.org/10.1080/23311886.2024.2309000>
- Metawa, N., Itani, R., Metawa, S., & Elgayar, A. (2023). The impact of digitalization on credit risk: The mediating role of financial inclusion (National Bank of Egypt case study). *Economic Research-Ekonomska Istraživanja*, 36(2), 2178018. <https://doi.org/10.1080/1331677X.2023.2178018>
- Muhammad Fauzan Pratama, Bakhtiar Efendi, & Lia Nazliana Nasution. (2025). Digital economic transformation in supporting financial inclusion in Indonesia. *MUQADDIMAH: Jurnal Ekonomi, Manajemen, Akuntansi dan Bisnis*, 3(1), 65–85. <https://doi.org/10.59246/muqaddimah.v3i1.1184>
- Makhmudov, S., Otakhonova, D., Kulmanov, T., Shamshiyeva, N., Juraev, U., Ruziev, G., & Sabirova, U. (2025). The impact of digital marketing and mobile applications on service innovation in German companies. *International Review of Management and Marketing*, 16(1), 210–217. <https://doi.org/10.32479/irmm.22052>
- Nurhayati, F., Yandi, L., Sausan, N. S. Q., & Malik, A. (2025). Inovasi produk dan digitalisasi layanan pada Pegadaian Syariah di era ekonomi digital. *Jurnal Ilmiah Ekonomi dan Manajemen*, 3(5), 175–186. <https://doi.org/10.61722/jiem.v3i5.4632>
- Nurhikmah, A. H., Fitri, A. O., & Bahrudin, M. (2025). Inflation: The role of digitalization in increasing Sharia financial inclusion in Indonesia. *Inflasi: Jurnal Ekonomi, Manajemen dan Perbankan*, 2, 70–76.
- Nurohman, D. (2025). Building awareness of Sukuk investment: Digital challenges for Generation Z. *10(204)*, 3056–3074.
- Nylén, D., & Holmström, J. (2015). Digital innovation strategy: A framework for diagnosing and improving digital product and service innovation. *Business Horizons*, 58(1), 57–67. <https://doi.org/10.1016/j.bushor.2014.09.001>
- Financial Services Authority. (2024, October 12). *Press release: Development of digital financial innovation to enhance financial inclusion and economic growth, OJK holds South Sumatra Digital Financial Innovation (Digination) in Palembang*. <https://ojk.go.id/id/berita-dan-kegiatan/siaran-pers/Pages/OJK-Gelar-Sumsel-Digital-Financial-Innovation-Digination-di-Palembang.aspx>
- Financial Services Authority. (2025, May 2). *OJK and BPS announce the results of the 2025 National Financial Literacy and Inclusion Survey (SNLIK)*. Financial Services Authority. <https://ojk.go.id/id/berita-dan-kegiatan/siaran-pers/Pages/OJK-dan-BPS-Umumkan-Hasil-Survei-Nasional-Literasi-Dan-Inklusi-Kuangan-SNLIK-Tahun-2025.aspx>
- Ovianda, M. R., Suhaety, Y., & Asmawati, A. (2025). Efficiency and effectiveness of the

- Pegadaian Digital Service (PDS) and Agent applications in achieving excellent service. *Paradoks: Jurnal Ilmu Ekonomi*, 8(4), 609–625. <https://doi.org/10.57178/paradoks.v8i4.1878>
- Putri, R. E., Goso, Hamid, R. S., & Imran Ukkas. (2021). The effect of financial literacy, financial technology, and financial inclusion on MSME performance in Kupang City. 6, 1–15. <https://ojs.unik-kediri.ac.id/index.php/ekonika/article/download/7578/4894/32497>
- Qothrunnada, N. A., Iswanto, J., Fitrotus, D., Hendrarti, B. G., & Subekan, S. (2023). Digital transformation of Islamic financial institutions: Opportunities and implementations in the 4.0 industrial era. *Indonesian Journal of Humanities and Social Sciences*, 4(3), 741–756. <https://doi.org/10.33367/ijhass.v4i3.4585>
- Ruhliandini, P. Z. (2025). The role of Islamic fintech in promoting digital financial inclusion. *Jurnal Dimamu*, 4(3), 514–524. <https://doi.org/10.32627/dimamu.v4i3.1551>
- Safitri, N. D., & Wati, A. (2023). Analysis of the development of Islamic pawning in Indonesia. *Muṣṣarah: Jurnal Kajian Islam Kontemporer*, 5(1), 22–32. <https://doi.org/10.18592/msr.v5i1.9375>
- Sahabat Pegadaian. (2025, October 9). *What is Tring! by Pegadaian? Recognize its features and benefits*. <https://sahabat.pegadaian.co.id/artikel/edukasi/apa-itu-tring-by-pegadaian>
- Sari, W. P. E. (2023). Exploring digital threads: A study of Generation Z's interest and interaction with digital technology. *Jurnal Pendidikan dan Pembelajaran*, 3(1), 73–86.
- Setyaningrat, D., Annas Mushlihin, I., & Zunaidi, A. (2023). Digitalization strategy to encourage financial inclusion in Islamic bank customers: A Technology Acceptance Model (TAM) approach. *Proceedings of Islamic Economics, Business, and Philanthropy*, 2(1), 54–76. <https://jurnalfebi.iainkediri.ac.id/index.php/proceedings>
- Kementerian Sosial Republik Indonesia. (2019). Financial inclusion and poverty reduction: A study of non-cash social assistance distribution. <https://ejournal.kemensos.go.id/index.php/Sosioinforma/article/download/1657/937>
- Tarigan, I. F. (2025). The role of fintech in improving financial inclusion amid economic recession. *Al-Kharaj: Jurnal Ekonomi, Keuangan & Bisnis Syariah*, 7(5), 238–243. <https://doi.org/10.47467/alkharaj.v7i5.7384>
- Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J. Q., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, 122, 889–901. <https://doi.org/10.1016/j.jbusres.2019.09.022>
- Widiana, A. (2024). The impact of financial digitalization on global financial system stability. *General Ledger: Jurnal Studi Ilmu Akuntansi dan Keuangan*, 3(2). <https://jurnalgrahakirana.ac.id/index.php/GeneralLedger/article/download/97/69>
- Zis, S. F., Effendi, N., & Roem, E. R. (2021). Changes in communication behavior of Millennials and Generation Z in the digital era. *Satwika: Kajian Ilmu Budaya dan Perubahan Sosial*, 5(1), 69–87. <https://doi.org/10.22219/satwika.v5i1.15550>

Biographies of Author

Zanuba Ainindya El Fanani, an independent researcher from Indonesia. She holds a Bachelor's degree in Economics from the Islamic Banking Study Program at UIN Raden Mas Said Surakarta. She has completed her higher education and is currently not affiliated with any specific institution or workplace. Her interests include writing, and she actively develops her writing skills for both academic and non-academic purposes. With a background in economics and Islamic banking, she has published two articles in nationally accredited journals.

- Email: ainindyazanuba1@gmail.com
- ORCID: 0000-0002-8158-5121
- Web of Science ResearcherID: N/A
- Scopus Author ID: N/A
- Homepage: N/A