



# Building public trust: Evaluating the effectiveness of digital governance and regulatory policies pawnbroking business

Sarinah<sup>1,\*</sup>

<sup>1</sup> Department of Administrative Sciences, Faculty of Social Sciences and Political Science, Halu Oleo University, Kendari City, Southeast Sulawesi, 93561, Indonesia.

\*Correspondence: sarinah@uho.ac.id

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## ABSTRACT

**Background:** Digital transformation in Indonesia's pawnshop industry has driven significant changes in financial service patterns, ranging from accelerated transaction processes to expanded service inclusion through platforms such as Pegadaian Digital Service and Pegadaian Syariah Digital Service. However, this acceleration has also been accompanied by challenges in the form of regulatory uncertainty, increased digital risks, and variability in public trust influenced by system quality and data protection. This study aims to analyze the interaction between the digitization of pawnshop services, the dynamics of public trust, and the effectiveness of regulations by reviewing previous research developments that show a gap between technological innovation and governance readiness. **Methods:** This study applies a systematic literature review method with structured searches on a number of national and international academic databases, article selection using identification, screening, and eligibility stages, and thematic analysis to formulate conceptual patterns related to digital service quality, user behavior, and regulatory effectiveness. **Findings:** The synthesis results show that the reliability of digital systems is the strongest determinant in driving adoption and shaping user trust, while digital literacy acts as a moderating variable that explains differences in acceptance levels between demographic groups. In addition, the current regulatory framework does not adequately regulate remote appraisal practices, data security, guarantee delivery mechanisms, and digital operational standards, resulting in legal uncertainty and weak consumer protection. These findings confirm that the success of digital pawnbroking services is highly dependent on the harmonization of technology quality, user readiness, and regulatory capacity. **Conclusion:** This study concludes that strengthening digital governance, modernizing regulations, and improving digital literacy are key prerequisites for creating a secure, inclusive, and sustainable digital pawnbroking ecosystem. **Novelty/Originality of this article:** The uniqueness of this research lies in the development of an integrative conceptual model that combines digitization, public trust, and regulatory effectiveness in a holistic analytical framework, thereby enriching the literature and supporting evidence-based policy formulation in the digital pawnbroking sector.

**KEYWORDS:** digital financial services; digital governance; pawnbroking digitalization; public trust; regulatory effectiveness.

## 1. Introduction

The digital transformation in Indonesia's pawnshop industry has brought about major changes in the way people access financial services. PT. Pegadaian (Persero) together with private pawnbroking companies continue to develop Pegadaian Digital Service (PDS) and

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Pegadaian Syariah Digital Service (PSDS) to expand their reach and improve the speed and efficiency of their services (Alfian & Siregar, 2024; Azmi & Dharma, 2023). This digitalization is not only a technological modernization, but also changes the governance patterns, supervisory mechanisms, and interactions between service providers and customers. This development provides a great opportunity for increasing financial inclusion, especially for groups that have been underserved by formal financial institutions (Cendana et al., 2024).

As digital literacy increases and user preferences shift toward fast, flexible, and practical financial services, the national pawnshop industry faces pressure to ensure that its services are increasingly responsive and integrated with the digital economy ecosystem (Saputra & Santiago, 2023). The growth in the adoption of Digital Pawnshop Services (PDS) from 2021 to 2024, as shown in Figure 1, shows a significant upward trend. This growth rate reflects a shift in consumer behavior, with more consumers choosing app-based services over conventional services.

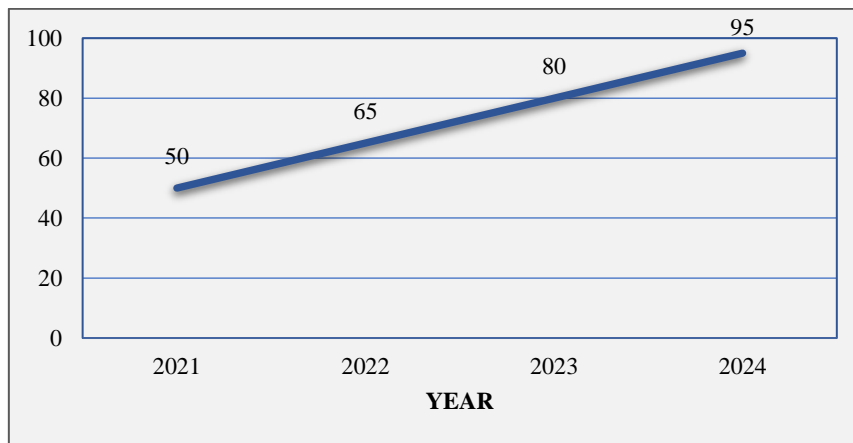


Figure 1. Trends in the adoption of Digital Pawnshop Services (PDS). OJK (2021-2024)

The upward trend in Fig. 1 shows a consistent change in public preference for digital financial services. People increasingly want fast, efficient transactions that can be carried out at any time. This shift is not only the result of increased digital literacy and technology availability, but also a reflection of changes in economic and social structures, where people demand adaptive, real-time services with minimal physical barriers. In this context, PDS and PSDS are strategic instruments for strengthening Pegadaian's position in the digital financial services competition (Saputra & Santiago, 2023). At the same time, the number of online pawnshops in Indonesia is also growing rapidly, as shown in Fig. 2.

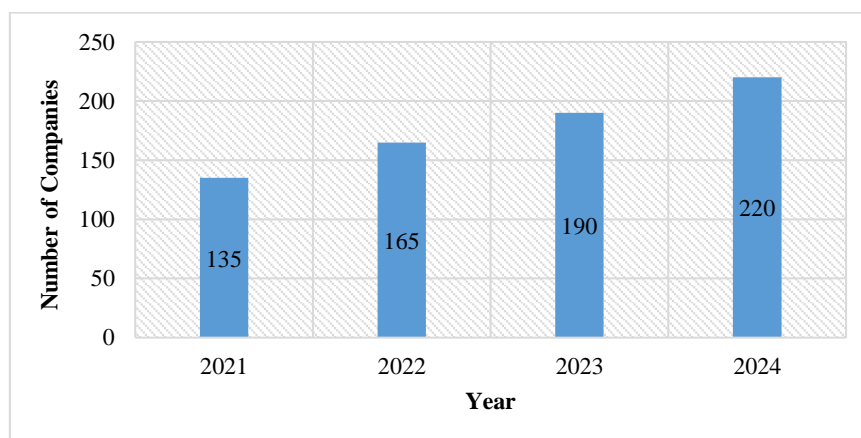


Figure 2. The growth of online pawnbroking companies in Indonesia OJK (2021-2024)

The increase in the number of digital pawnshops from 135 in 2021 to 220 in 2024 shows that this sector is becoming increasingly competitive and attractive to technology-based businesses. This growth is driven by the development of financial technology, more open regulations in the pawnshop sector, and the public's need for fast and easily accessible financial services. However, the growth of these new players also poses challenges for supervision. Private non-bank pawnbroking companies often have varying operational standards, levels of technological readiness, and risk mitigation mechanisms, which ultimately affect service quality and public trust.

Although the adoption of digital services has increased, public trust in technology-based financial services is fluctuating. This trend reflects growing concerns over data security, privacy protection, and service reliability among users. This is illustrated in Fig. 3, which contains data on the risks and complaints regarding digital services that have continued to increase from year to year.

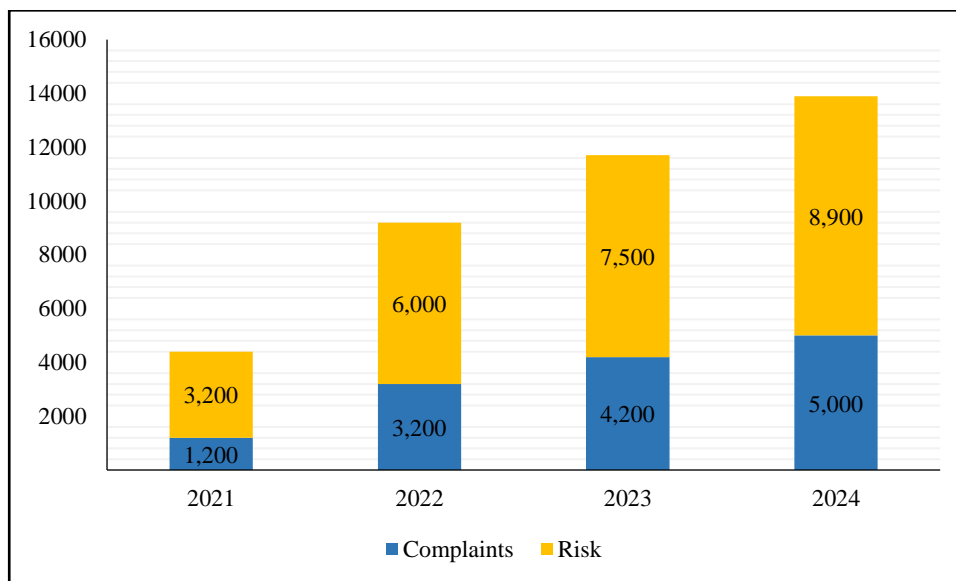


Fig. 3. Digital service complaints/risks trend OJK (2021-2024)

Fig. 3 shows an increase in complaints related to technical disruptions, data security, and user dissatisfaction. The increasing risk of digital services indicates that digitization does not necessarily improve service quality without adequate infrastructure and governance. This finding is in line with Pratama's (2024) concept of the trust paradox, which is the phenomenon where digitization increases convenience on the one hand, but on the other hand creates new vulnerabilities that can actually reduce public trust if not managed properly (Pratama, 2025).

On the other hand, the contribution of digital services to Pegadaian's total transactions continues to increase (Avrianto & Murwenie, 2024; Meilani et al., 2022; Setyawan, 2022). This trend confirms that digitization is no longer a complement but has become the main foundation in driving the growth of the national pawn industry (Saputra & Santiago, 2023). Digitalization is now a key element in the context of corporate transformation, business process innovation, and the creation of superior customer experiences (Saputra & Santiago, 2023).

However, regulatory readiness has not fully kept pace with technological developments. The applicable legal framework, particularly POJK 31/POJK.05/2016, was not designed with modern digital services in mind. These regulations do not cover remote appraisal procedures, digital collateral delivery mechanisms, digital consumer protection, or supervision of non-bank private pawnbrokers (Hanifah et al., 2018; Machmud et al., 2024). These regulatory limitations have a direct impact on the effectiveness of OJK

supervision and the quality of digital services, which in turn can affect public trust (Oktania et al., 2025).

The urgency of regulatory reform is even more apparent when looking at global data. In ASEAN countries, digital pawning models are growing rapidly, but most face similar problems, particularly those related to data security risks, digital appraisal integrity, and technological literacy gaps (PwC Singapore, 2024). In fact, the ASEAN Financial Innovation Network report (2023) shows that around 48% of digital pawn service providers in Southeast Asia have experienced system disruptions and 34% have faced issues with the inaccuracy of digital item assessments. This shows that the issue of digital service governance and regulation is not only a local challenge, but also a regional phenomenon that demands systemic solutions.

From a digital financial services governance perspective, the digitization of pawnbroking has significant implications for risk structure, service transparency, and service provider accountability (Ahmad, 2025). Digital governance requires data integration, system interoperability, stronger verification mechanisms, and measurable security standards (Sun, 2024). However, research shows that most private pawnshops do not yet have adequate information systems to support full digitization, thereby increasing vulnerability to transaction errors, data manipulation, and moral hazard risks (Machmud et al., 2024).

This condition reveals a research gap. Most existing studies are still fragmented and focus on narrow issues, such as digital customer satisfaction, information system quality, or digital marketing effectiveness (Azmi & Dharmas, 2023; Setiawan et al., 2023). There is still very little research that simultaneously integrates the three main issues, namely the digitization of pawnshop services, public trust in digital services, and the effectiveness of digital regulation and governance. Furthermore, there is no conceptual model that simultaneously links digitization with the level of public trust and regulatory effectiveness. These three aspects are interrelated: digitization without adaptive regulation increases risk; regulation without digital adoption makes services uncompetitive; and digitization without public trust hinders user adoption.

This is where the novelty of this research becomes significant. This research offers an original contribution by presenting a comprehensive mapping of the dynamics of pawnshop digitalization based on graphical data and empirical literature; identifying the determinants of public trust in the context of digital pawnshop services; evaluating regulatory gaps based on a critical analysis of POJK 31/POJK.05/2016 and market dynamics; and formulating an integrative conceptual model that explains the relationship between digitization, public trust, digital service quality, risk, and regulatory effectiveness. Based on this context, dynamics, and gaps, this study aims to: analyze the dynamics of pawnshop digitalization in Indonesia, identify determinants of public trust, evaluate regulatory effectiveness, and formulate an integrative conceptual model to strengthen digital pawnshop governance.

## 2. Method

### 2.1 Research design

This study uses a Systematic Literature Review (SLR) design as the main methodological approach to analyze the development of pawnshop digitalization, public trust dynamics, regulatory effectiveness, and to formulate a conceptual model integrating these variables. The SLR approach was selected because it enables a comprehensive, transparent, and replicable synthesis of knowledge through a structured literature search procedure. Ontologically, this study assumes that pawnshop digitalization is a social phenomenon that can be analyzed through empirical evidence and theoretical documentation. Epistemologically, the study relies on critical interpretation of prior research to construct an integrated scientific understanding. The use of SLR is also justified by the limited availability of primary studies on digital pawnshops in Indonesia, making

literature synthesis the most appropriate approach for identifying patterns, gaps, and conceptual contributions.

## *2.2 Data sources and search strategy*

This SLR was conducted through online databases covering national and international literature. The literature search was carried out in September 2025, focusing on indexed publications related to digital pawnbroking in Indonesia. The selected period reflects the increasing digital transformation of financial institutions and regulatory updates after 2020 that influence pawnshop operations. The study uses secondary data in the form of scientific articles, proceedings, regulatory reports, and academic documents retrieved from SciSpace, SciSpace Full Text Search, Google Scholar, and PubMed. The search strategy combined English and Indonesian keywords using Boolean operators, including terms such as “digital governance,” “pawnbroking,” “public trust,” “regulatory policy,” and “Indonesia,” to ensure comprehensive literature coverage.

## *2.3 Inclusion and exclusion criteria*

The inclusion criteria consist of studies that (1) discuss pawnshop digitization or related financial digital services; (2) include empirical or theoretical analysis on governance, regulation, or public trust; (3) are published in peer-reviewed journals or conference proceedings; (4) are available in full text; and (5) are relevant to the Indonesian context or have strong implications for it. The exclusion criteria include non-academic publications (such as opinion articles or blogs), studies without clear methodology, inaccessible full-text sources, and duplicate records across databases.

## *2.4 Study selection process*

The selection process was conducted in three stages. First, the initial search identified 121 articles from four databases. Second, duplicate records were removed using an automatic duplication checker, resulting in 48 unique articles. Third, the remaining articles were screened based on titles, abstracts, and full-text relevance to the research objectives. To ensure quality, the articles were further ranked using a semantic relevance algorithm, and only high-relevance studies were selected for in-depth analysis. This procedure follows the systematic review guidelines proposed by Kitchenham & Charters (2007).

## *2.5 Data extraction and analysis*

Data extraction was conducted using a structured worksheet capturing publication metadata (author, year, journal), research design, main findings, theoretical foundations, geographical context, and recommendations. Data analysis employed thematic synthesis (Thomas & Harden, 2008), consisting of initial coding, descriptive theme development, and analytical theme formation aligned with research questions. The coding process was conducted manually using clustering techniques to identify patterns, relationships among themes, and theoretical gaps. Triangulation across legal, service management, and digital technology literature was used to enhance analytical depth.

## *2.6 Validity, reliability, and limitations*

Methodological validity was ensured through a transparency protocol that documents the entire literature search, selection, and synthesis process in a structured and replicable manner. Reproducibility is supported by the use of open-access databases and clearly defined search strings. However, this study has limitations, including potential publication bias, methodological heterogeneity across studies, and temporal restrictions limited to

publications up to September 2025. Despite these limitations, the findings remain valid and provide a strong foundation for further research using primary data approaches.

### 3. Results and Discussion

#### 3.1 Dynamics of pawnshop digitalization

A literature review shows that digitalization through the Digital Pawnshop Service (PDS) and Sharia Digital Pawnshop Service (PSDS) has transformed PT. Pegadaian's financial services by increasing service speed, transaction efficiency, and access for people who previously had limited access to conventional services (Alfian & Siregar, 2024; Azmi & Dharma, 2023). Empirical evidence from the Kupang Branch shows that digital services significantly increase productivity, efficiency, and transaction volume (Cendana et al., 2024). The integration of Pegadaian agents has also been proven to strengthen digital adoption among groups with low digital literacy, so that digitization functions not only as a technological innovation but also as an instrument of financial inclusion.

System reliability has emerged as a major factor in the success of digitization. A study in Pondok Labu confirms that application stability, response speed, and minimal errors are determinants of digital user satisfaction (Setyawan, 2022), in line with the DeLone & McLean model. However, various technical obstacles such as application disruptions, imperfect offline-online integration, and slow loading processes still hamper the service experience (Alfian & Siregar, 2024; Azmi & Dharma, 2023). Digital literacy barriers among the elderly, low-educated users, or communities with limited internet access also weaken the effectiveness of digital adoption (Meilani et al., 2022). In addition, Pegadaian's internal transformation requires procedural adjustments, increased employee capacity, and stronger digital data integration. Overall, the dynamics of pawnshop digitalization emphasize the importance of three main pillars: technology quality, organizational readiness, and user capabilities. Successful digitalization requires systemic improvements and regulatory support that can guarantee security, procedural certainty, and a consistent service experience.

#### 3.2 Public trust patterns

Literature findings indicate that public trust patterns in digital pawnbroking services are formed through complex interactions between user experience, perceptions of security, system stability, and clarity of the regulatory framework protecting consumers (Pratama, 2025; Setyawan, 2022; Wibowo & Warka, 2022). This trust is not linear, but rather fluctuates, as it is influenced by the dynamics of satisfaction and uncertainty that arise during the use of digital services. Pratama's (2024) ethnographic study identifies the concept of "trust coexists with mistrust," a condition in which digitization can increase trust in some groups while simultaneously decreasing it in other groups (Pratama, 2025).

This phenomenon also appears in Indonesia's digital pawn ecosystem. Young users with high digital literacy, especially millennials and Gen Z, report higher levels of comfort and efficiency when using the Pegadaian Digital Service (PDS) and Pegadaian Syariah Digital Service (PSDS) (Hasibuan & Afandi, 2025). They consider faster transaction processes, transparency of collateral status, and ease of digital tracking as the main factors in increasing trust. Conversely, user groups with low digital literacy or limited access to technology tend to experience technical barriers, difficulties navigating the application, and concerns regarding data security and the risk of transaction errors (Alfian & Siregar, 2024; Azmi & Dharma, 2023). These negative experiences have the potential to reduce trust and cause some users to continue to choose face-to-face services.

Various studies also show that public trust in digital services is influenced by regulatory clarity and legal protection. Legal uncertainty, particularly regarding remote appraisal mechanisms, data security, and guarantees against potential online transaction risks, affects the public's perception of risk in digital pawnbroking services (Wibowo & Warka, 2022).

Thus, patterns of public trust in the digital context are not only determined by technical factors of the application, but also by the social framework, technological readiness, and perceptions of legal protection provided by regulators such as the OJK.

These patterns show that digital trust in the pawn industry is a multidimensional construct that is highly dependent on the quality of technology, user capabilities, legal perceptions, and empirical experience in using digital services.

Table 1. Factors shaping public trust in digital pawnbroking

Trust-building factor	Key literature findings	Impact on trust
User experience	Millennial users perceive digital services as faster and more efficient (Hasibuan & Afandi, 2025)	Increases trust
Digital literacy	Users with low digital literacy face difficulties (Alfian & Siregar, 2024; Azmi & Dharma, 2023)	Decreases trust
Application stability	System disruptions cause frustration and doubt	Decreases trust
Security perception	Concerns about data loss and transaction security risks (Wibowo & Warka, 2022)	Fluctuating
Legal certainty	Unclear digital regulations reduce perceived security (Wibowo & Warka, 2022)	Decreases trust
Service transparency	Real-time updates on collateral status and transactions increase assurance (Setyawan, 2022)	Increases trust
Technical support	Easy access to support from application operators (Pratama, 2025)	Increases trust

Table 1 shows that application stability and perceived security are the two technical factors that most influence public trust. Empirical literature shows that users who experience application disruptions, login errors, or process delays tend to lose their sense of security in digital services. Conversely, stable and fast applications reinforce the perception of service provider professionalism, thereby increasing trust levels.

In addition to technical factors, social variables such as digital literacy and user experience also play a significant role. Users with low literacy are more prone to confusion, operational errors, or misunderstanding of transaction information (Anand, 2024). Institutional factors such as transparency of collateral status, clarity of digital procedures, and responsive technical support have been shown to increase security and strengthen user loyalty (Peikari, 2010; Ramesh & Hariharan, 2025). Thus, public trust is a multidimensional construct influenced by the interaction between technology, people, and institutions.

### 3.3 Digital challenges and risks

Literature analysis shows that the digitization of pawnshops not only brings opportunities for efficiency but also presents various challenges and risks that must be managed through strong governance and adaptive regulations. The first prominent risk is technical issues, particularly application disruptions, system instability, data integration errors, and limitations in digital infrastructure in some regions that affect service speed and reliability (Alfian & Siregar, 2024; Azmi & Dharma, 2023; Setiawan et al., 2023). This technical instability has the potential to reduce user experience, hinder smooth transactions, and lower public trust, especially among users who have just switched from conventional to digital services. A quantitative overview of the level of digital risk in several main categories can be seen in Fig. 4, which shows that data security risks and application disruptions have the highest risk index compared to other components.

Fig 4 shows the digital risk index consisting of five main categories: application disruption, data security, remote assessment, goods delivery, and digital literacy. The data shows that data security received the highest risk score (90), followed by application disruption (85), making these two components the most vulnerable factors in triggering a loss of public trust. Remote assessment and goods delivery risks also show a medium risk level (70–75), indicating the potential for moral hazard, damage to goods, and uncertainty in guarantee value. Meanwhile, the risk of digital literacy (80) illustrates the imbalance in

user capabilities that can affect the effectiveness of application use. Thus, the graph provides a comprehensive overview of the critical risk points that should be the focus of mitigation for service providers and regulators.

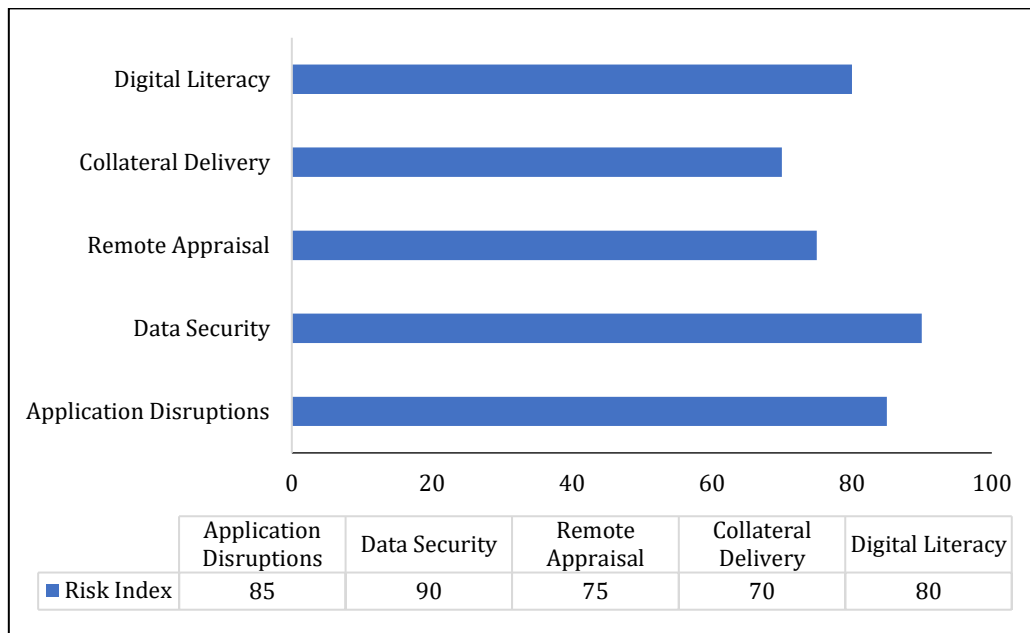


Fig. 4. Digital risk index in pawnshop services

The second risk relates to data security and consumer protection issues. The absence of comprehensive regulations on personal data protection in the context of digital pawnbroking services, mainly because POJK 31/POJK.05/2016 was not designed with digital transformation in mind, raises concerns about personal information leaks, data manipulation, and digital identity theft (Wibowo & Warka, 2022). Amidst increasing incidents of cybercrime in the financial sector, the absence of explicit data protection rules is a significant loophole that threatens public trust in digital services.

In addition, the mechanism of remote appraisal of collateral carries a high risk of moral hazard. Discrepancies between the condition of the goods reported through the application and the actual physical condition can lead to disputes between customers and pawnbroking companies. A study by Machmud et al. (2024) also confirms that digital documentation-based appraisal of goods has the potential to produce information bias and increase uncertainty in the value of collateral (Machmud et al., 2024). This risk is even greater for items that are sensitive to physical conditions, such as precious metals, gadgets, or electronic goods.

The process of shipping collateral items through logistics services also poses its own risks. Legal literature highlights that, to date, there are no standard regulations regarding collateral insurance, risk mitigation for damage, or dispute resolution procedures in the event of loss or damage during shipping (Hanifah et al., 2018). The absence of such digital operational standards puts customers in a vulnerable position, while also opening up the possibility of unclear legal liability for pawnshops and third parties such as logistics services.

Overall, the digital challenges and risks in the pawn industry are closely related to technological readiness, organizational capacity, user digital literacy, and the strength of regulations that protect online transactions. On the one hand, digitization creates opportunities for increased efficiency and accessibility, but on the other hand, it gives rise to new complexities that require serious regulatory and operational attention so that digital innovation does not actually reduce service quality or public trust. Thus, the readiness of the digital ecosystem and the clarity of the legal framework are key factors in ensuring that digital transformation truly benefits all stakeholders.

### 3.4 Regulatory effectiveness

A review of the literature shows that the effectiveness of regulations governing digital pawnbroking services is still in a transitional phase and has not been able to keep pace with the complexity of rapidly evolving digital business models. The main legal framework, namely POJK 31/POJK.05/2016 concerning Pawnbroking Companies, was drafted when digitalization was not yet mainstream, so many important provisions for online transactions have not been clearly and operationally accommodated (Abubakar & Handayani, 2017; Hanifah et al., 2018). This weakness is evident in the absence of rules regarding remote appraisal mechanisms, limits on the authority of application-based service areas, operational procedures for sending collateral, digital identity verification (digital KYC), and personal data protection standards in digital pawnbroking transactions (Hanifah et al., 2018; Machmud et al., 2024; Wibowo & Warka, 2022). This legal vacuum creates potential uncertainty in consumer protection and opens up room for diverse interpretations among pawnbroking companies.

Regulatory limitations also impact the effectiveness of supervision by the Financial Services Authority (OJK). The literature shows that the OJK faces institutional capacity challenges, particularly related to limited human resources, technical capabilities in understanding digital processes, and the adaptation of conventional supervisory systems to real-time, algorithm-based digital operations (Oktania et al., 2025; Tri Astuti Andayani, 2025). This makes it increasingly difficult to supervise private non-bank pawnshops, given that these types of companies are growing rapidly and their operations are widespread without uniform digital service standards.

Although POJK 31/2016 is the main framework for pawnbroking regulation, a review of the literature shows that these regulations do not yet accommodate digital operational needs such as digital KYC, data security standards, and remote assessment mechanisms. This legal vacuum has led to differences in standards between companies and opened up room for diverse interpretations. The supervision of the Financial Services Authority has also become uneven due to the absence of a real-time digital supervision system capable of consistently monitoring digital platform operations.

The fragmentation of regulations between the ITE Law, Government Regulations on Electronic Transactions, and consumer protection regulations further reinforces the inefficiency of the legal framework. These weaknesses are evident in the slow handling of digital disputes, the absence of standards for resolving delivery issues, and the lack of clarity regarding sanctions for companies that violate data security procedures. These conditions demonstrate the need for more holistic regulatory reforms so that the digitization of pawnbroking can proceed in tandem with consumer protection and legal certainty.

In addition, the fragmentation of the legal framework reinforces the problem of regulatory effectiveness. Regulations on electronic transactions are scattered between POJK 31/2016, the ITE Law, the Government Regulation on Electronic Systems and Transactions, and consumer protection provisions in the financial services sector. The absence of a single regulatory framework covering all aspects of digital pawnbroking services has led to overlapping authorities, unclear supervisory powers, and weak enforcement mechanisms for violations in the digital sector (Tri Astuti Andayani, 2025; Wibowo & Warka, 2022). In this context, the Financial Services Authority finds it difficult to provide clear legal certainty, while the public needs comprehensive protection given the increasing risks of data security, moral hazard in valuation, and potential identity theft in digital services.

Overall, the effectiveness of digital pawnbroking regulations is still inadequate to oversee the acceleration of digital transformation. Adaptive, integrative, and responsive regulations to technological dynamics are urgently needed so that digital innovation can go hand in hand with consumer protection and legal certainty. This literature review emphasizes the importance of reformulating holistic regulations, including updating Financial Services Authority (POJK) regulations, harmonizing cross-sectoral rules, and strengthening the supervisory capacity of the Financial Services Authority to ensure the sustainability of the digital pawnbroking ecosystem in Indonesia.

### 3.5 Synthesis of empirical findings

A synthesis of all empirical studies shows a strong and interrelated pattern between the digitization of pawnshop services, public trust levels, and regulatory effectiveness as the main pillars of the digital pawnshop ecosystem in Indonesia. First, the most consistent finding is that the reliability of digital systems is the most dominant determinant in shaping user satisfaction and trust. Studies in various regions such as Pondok Labu and Rantau Prapat show that application reliability, feature stability, and consistency of user experience directly influence public perception of digital service quality (Avrianto & Murwenie, 2024; Setyawan, 2022). The lower the technical disruptions and the more stable the service, the higher the tendency for users to adopt and trust digital pawnshop services.

Second, the variables of facilitation, trialability, and efficiency were found to be the main drivers of digital adoption, especially among the more digitally savvy millennial generation (Radiany, 2025; Velankar, 2025). Research by Hasibuan et al. (2025) and UTAUT-based studies show that the ease of trying digital services, perceptions of time efficiency, and user-friendly application support make younger user groups more likely to accept digital-based pawnbroking services (Hasibuan & Afandi, 2025). This reinforces the theory of technology adoption, which states that perceived ease of use and performance expectancy are the strongest drivers of adoption.

Third, digital literacy acts as a mediating variable that determines the direction of the impact of digitization on public trust. Early studies such as Azmi & Dharma (2023) and related research on Digital Pawnshop Services and Digital Sharia Pawnshop Services show that for groups with high digital literacy, the adoption of digital services tends to strengthen trust because the services are considered efficient, secure, and easily accessible (Alfian & Siregar, 2024; Azmi & Dharma, 2023). Conversely, for groups with low digital literacy, digitization actually causes confusion, transaction errors, and higher risk perceptions, thereby potentially weakening trust (Meilani et al., 2022). This confirms the importance of digital literacy programs as a prerequisite for the success of pawnshop digital transformation.

Fourth, the synthesis results confirm Pratama's (2024) ethnographic findings regarding the phenomenon of trust coexisting with mistrust in the context of digitalization (Pratama, 2025). In digital pawnshop services, this phenomenon is reflected in the emergence of segmented trust patterns: on the one hand, digitization increases convenience and a sense of security for young users and groups exposed to technology, but on the other hand, it raises new doubts for vulnerable groups, such as people with low literacy, users in non-urban areas, or those who have experienced application disruptions.

Fifth, the effectiveness of regulations emerges as a catalytic factor that influences the extent to which digitization can strengthen governance and public trust. However, legal and policy studies show that current regulations still have substantial gaps, particularly regarding remote appraisal, collateral delivery, data protection, and digital identity verification (Hanifah et al., 2018; Machmud et al., 2024; Wibowo & Warka, 2022). These gaps create legal uncertainty that can undermine public trust, while also hindering the development of secure and accountable digital services.

Overall, empirical findings from various studies show that the relationship between digitization, regulation, and public trust is not linear, but complex, interdependent, and bidirectional. Digitalization increases efficiency and access, but requires strong regulation and equitable digital literacy to truly generate increased public trust. Thus, the sustainability of the digital pawn ecosystem is highly dependent on the consistency between the elements of technology, regulation, and social readiness working in harmony.

A cross-study synthesis shows that the reliability of digital systems is consistently the strongest determinant in shaping adoption and trust. Studies based on system quality models (DeLone & McLean, 2003) show that application performance consistency and minimal errors are the most influential factors on user trust perceptions (Nailul Hikmi & Hidayati, 2025). This finding is reinforced by the increasing pattern of national digital complaints related to application disruptions, as shown in Fig. 3.

Furthermore, moderating variables such as digital literacy differentiate the acceptance of digital services across user groups. Millennial users show high adoption rates due to facilitation and trialability, while older or less educated groups experience difficulties that reduce trust. At the same time, regulatory gaps in remote assessment and data security reveal systemic risks that require a faster and more comprehensive policy response.

### 3.6 Discussion

Discussion of the research results shows that the digitization of pawnshops in Indonesia is a rapidly moving institutional transformation process, but not entirely linear. The findings in the results section show that digitization provides significant benefits in terms of efficiency, process automation, ease of access, and improved service quality. However, these benefits have not been evenly distributed due to technical barriers, digital literacy gaps, and regulatory limitations. From the perspective of e-government transformation and digital governance theory, these conditions reinforce the understanding that the success of digital innovation in public institutions and semi-public financial institutions such as pawnshops is not only determined by technological aspects, but also by organizational capacity, user readiness, and regulatory support (Thomas & Harden, 2008; Van Dijk, 2020). Thus, the digitization of pawnshops needs to be understood as a multidimensional structural change that requires a mature regulatory and social ecosystem in order to produce efficient and reliable services.

System reliability emerges as the strongest determinant in influencing user satisfaction and trust, which is in line with the Digital Service Quality Theory that emphasizes that system function consistency, access speed, and application stability are the main foundations of service value perception. The results of research by Setyawan (2022) and Avrianto & Murwenie (2024) show that reliability is a key factor that determines the sustainability of digital service use (Avrianto & Murwenie, 2024; Setyawan, 2022). From the perspective of institutional trust theory, users will place their trust in an institution only if that institution demonstrates predictability, technical competence, and integrity through stable services with minimal disruptions. These findings explain why millennial customers who are accustomed to digital services show high levels of trust, while groups with low digital literacy experience digital anxiety or even a decline in trust a condition consistent with the concept of “trust coexists with mistrust” (Pratama, 2025).

These findings can be further explored through the Technology Acceptance Model 3 (TAM3), which emphasizes that perceptions of usefulness and ease of use are influenced by cognitive determinants such as computer self-efficacy, perceived enjoyment, and objective usability (Barzegari et al., 2023; Nikolopoulos & Likothanassis, 2018). In the context of digital pawnbroking, these factors are evident in the findings of Cendana et al. (2024), which show that millennials have high adoption rates due to their high digital efficacy and perceived comfort in using PDS/PSDS (Cendana et al., 2024). Conversely, older adults or users with low literacy experience barriers in the form of computer anxiety and perceived effort, which result in lower intentions to use digital services (Kim et al., 2023). Thus, digitalization requires a segmented approach based on demographics and digital literacy to ensure more equitable user acceptance.

The dynamics of public trust can also be clarified through the Theory of Trust in Technology (Mcknight et al., 2011), which distinguishes three main dimensions: institution-based trust, trusting beliefs, and trusting intentions (Bruckes et al., 2019). In the context of digital pawnbroking services, institution-based trust depends on the existence of strong regulations and clear consumer protection; trusting beliefs are formed from perceptions of reliability, security, and transparency; and trusting intentions reflect users' readiness to continue using digital services in the future. When regulations are weak or unresponsive, institution-based trust becomes low, thereby reducing trusting beliefs and ultimately reducing trusting intentions. This explains why regulatory gaps in remote appraisal and data security can undermine public trust even when digital applications have good service features.

Furthermore, the structure of these research findings is also relevant to analyze using the Digital Governance framework (Eggink, 2023), which emphasizes four pillars: inclusiveness, accountability, transparency, and security. In digital pawnbroking services, inclusiveness is still hampered by uneven digital literacy; accountability is disrupted by unclear digital appraisal standards; transparency is increasing through the collateral tracking feature on PDS/PSDS; while security remains a major weakness, as reflected in the increase in public complaints related to cyber risks (OJK, 2025). The imbalance between these pillars indicates that the digitization of pawnbroking is still in a transitional phase and requires more mature and standardized digital governance.

The digital risks and challenges that emerge in this study become even clearer when viewed through the lens of Risk Society theory (Beck, 1992). Beck explains that technological modernization actually produces new risks that are systemic, invisible, and often more complex than traditional risks. This phenomenon is evident in digital pawnbroking services: remote appraisal risks create information asymmetry, data security risks create the potential for cybercrime, and collateral delivery risks reveal dependence on third parties. These risks are not merely technical consequences, but structural risks arising from dependence on digital systems that do not yet have an adequate regulatory framework.

The suboptimal regulation of digital services can be analyzed using the Regulatory Governance theory (Lodge & Wegrich, 2012), which emphasizes the importance of responsiveness, adaptability, and institutional capacity. In the context of digital pawnbroking in Indonesia, regulatory responsiveness is low because POJK 31/2016 does not yet regulate core features of digital services such as digital KYC, collateral delivery standards, and data protection. Adaptability is also low because regulatory updates do not keep pace with technological developments. Meanwhile, the institutional capacity of the OJK is limited in terms of human resources and digital monitoring facilities. These three aspects explain why digital risks are increasing and public trust is fluctuating, as shown in Figure 3.

Synthesis of all findings within the global theoretical framework shows that the relationship between digitization, public trust, and regulatory effectiveness is non-linear and interdependent. Digitization can only improve efficiency and user experience if it is supported by stable and predictable service quality. Public trust will only increase if digital risks can be minimized and legal protection is adequate. Meanwhile, regulatory effectiveness is greatly influenced by the ability of authorities to develop a legal framework that is adaptive and responsive to innovation. The conceptual model formulated in this study, which positions service quality, transparency, and accountability as mediators, and digital literacy and user experience as moderators, is in line with international digital governance theory, which places the success of digital transformation as the result of interactions between technology, institutions, and users.

#### 4. Conclusions

This research confirms that the digitization of pawnshops in Indonesia is a strategic transformation process that can expand service access and improve operational efficiency, but at the same time poses new challenges that require a more adaptive regulatory and institutional response. The results of the analysis show that technology quality, system stability, and data security are the main factors that shape public trust in digital pawnshop services. On the other hand, limited digital literacy and regulatory uncertainty are significant obstacles that reduce the effectiveness of digital transformation. Existing regulations are not yet fully capable of responding to the complexity of digital transactions, especially those related to remote appraisal, delivery of collateral, and personal data protection. The relationship between digitization, trust, and regulation has proven to be interrelated, indicating that the success of digital innovation is not only determined by technology but also by governance and ecosystem readiness.

The theoretical contribution of this research lies in the formulation of an integrative conceptual model that combines aspects of service digitization, regulatory effectiveness,

and determinants of public trust in the context of the pawn industry, an area that has been minimally discussed in the literature on public administration and non-bank financial services. This model broadens the understanding of how technology quality, transparency, digital literacy, and regulatory responses work as mediators and moderators in shaping user behavior. In terms of practical contributions, this study provides a strong policy basis for the government and regulators to update the regulatory framework for digital pawnbroking services, strengthen supervision, and develop more consistent operational standards for online appraisal and data security. These findings also provide operational guidance for pawnshop companies in improving system quality, strengthening consumer protection mechanisms, and developing more structured digital literacy programs. Methodologically, this study contributes through the integration of systematic literature analysis, national data mapping, and the development of a replicable digital risk index for use in future studies to assess digital readiness and risk in other non-bank financial sectors.

The overall findings indicate that the success of pawnshop digital transformation depends on the ability of all stakeholders, namely service providers, users, and regulators, to build a secure, inclusive, and trustworthy digital ecosystem. By strengthening digital governance, improving technological capacity, and refining the regulatory framework, the digitization of pawnshops has the potential to not only improve service quality but also contribute to the national agenda of financial inclusion and modernization of the non-bank financial sector in Indonesia.

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### **Author Contribution**

As the sole author, all research contributions in this article were carried out entirely by the author, including conceptualization, methodology, analysis, data collection and interpretation, initial manuscript writing, revision, editing, and manuscript finalization. All stages of research and writing were carried out independently by the author in accordance with the CRediT (Contributor Roles Taxonomy) principles. The author is also fully responsible for the scientific integrity, accuracy, and originality of this work.

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This study is a systematic literature review that did not involve human participants, interviews, experiments, or primary data collection requiring written consent. Therefore, informed consent does not apply to this study.

### **Data Availability Statement**

This research uses secondary data obtained from journal articles, proceedings, official reports, and other academic sources that have been published openly. No new datasets were generated during this research. All data sources used are listed in full in the reference

list, and additional data can be accessed through the relevant public sources. Therefore, no new data can be shared.

### Conflicts of Interest

The authors declare no conflict of interest. The financial support received from PT Pegadaian (Persero) was solely for publication purposes and had no influence on the study design, data collection, analysis, interpretation, or the writing of this manuscript.

### Declaration of Generative AI Use

The author used ChatGPT (OpenAI) and SciSpace as supportive tools for language refinement, literature assistance, and improving academic clarity. All interpretations, analyses, and conclusions remain solely the responsibility of the author.

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### References

- Abubakar L., & Handayani T.. (2017). *Juridical review of regulatory development and pawnshop business as a material security institution*. Jurnal Bina Mulia Hukum, 2(1), 80–92. <https://doi.org/10.23920/jbhm.v2n1.7>
- Ahmad S.. (2025). *Strengthening consumer protection through enhanced risk governance in financial services*. <https://doi.org/10.20944/preprints202509.2210.v1>
- Alfian I. I., & Siregar E.. (2024). *Effectiveness of digital Sharia pawnshop services in increasing the number of customers at Pegadaian Syariah*. Journal of Islamic Financial Technology, 2(2). <https://doi.org/10.24952/jiftech.v2i2.11040>
- Anand D.. (2024). *Customer perception towards digital transaction*. International Journal of Scientific Research in Engineering and Management, 8(5), 1–5. <https://doi.org/10.55041/IJSREM34339>
- ASEAN Financial Innovation Network. (2023). *Digital lending and digital pawning risk landscape in Southeast Asia*. AFIN. <https://afin.tech>
- Avrianto A., & Murwenie I.. (2024). *Martin Fishbein's multiattribute analysis on the use of Pegadaian digital services at PT Pegadaian (Indonesian Pawnshop)*. Sainteks: Jurnal Sain dan Teknik, 6(2), 310–321. <https://doi.org/10.37577/sainteks.v6i02.783>
- Azmi S. A. R. N., & Dharma B.. (2023). *Application of Pegadaian digital service applications in pawn transactions at PT Pegadaian (Persero) UPC Katamsa Medan*. AMK: Abdi Masyarakat UIKA, 2(4), 67. <https://doi.org/10.32832/amk.v2i4.2145>
- Barzegari S., Arpaci I., & Marznaki Z. H.. (2023). *Determining factors affecting nurses' acceptance of a hospital information system using a modified Technology Acceptance Model 3*. In *Lecture Notes in Networks and Systems* (pp. 449–456). [https://doi.org/10.1007/978-3-031-16865-9\\_35](https://doi.org/10.1007/978-3-031-16865-9_35)
- Beck U.. (1992). *From industrial society to the risk society: Questions of survival, social structure and ecological enlightenment*. Theory, Culture & Society, 9(1), 97–123. <https://doi.org/10.1177/026327692009001006>
- Bruckes M., Grotenhermen J.-G., Cramer F., & Schewe G.. (2019). *Paving the way for the adoption of autonomous driving: Institution-based trust as a critical success factor*.
- Cendana R. J. P., Makatita R. F., & Tiwu M. I. H.. (2024). *The influence of Pegadaian agent*

- services and digital services on the performance of PT Pegadaian Kupang Branch.* Journal of Business, Finance, and Economics (JBFE), 5(2), 144–155. <https://doi.org/10.32585/jbfe.v5i2.5714>
- DeLone W. H., & McLean E. R.. (2003). *The DeLone and McLean model of information systems success: A ten-year update.* Journal of Management Information Systems, 19(4), 9–30. <https://doi.org/10.1080/07421222.2003.11045748>
- Eggink W.. (2023). *United Nations Development Programme annual report 2022: The future is...* UNDP, 30(1), 4–4. <https://www.undp.org/sites/g/files/zskgke326/files/2023-04/Annual-Report-2022.pdf>
- Hanifah A., Santoso B. S., & Navianto I.. (2018). *The urgency of regulating private pawnshop companies with an online system.* Al-Mustashfa: Jurnal Penelitian Hukum Ekonomi Syariah, 3(1), 30. <https://doi.org/10.24235/jm.v3i1.2935>
- Hasibuan A. N., & Afandi A.. (2025). *Is there a proclivity among Muslim millennials to engage with Sharia digital pawnbroking services?* International Journal of Islamic Economics and Finance (IJIEF), 8(1), 37–57. <https://doi.org/10.18196/ijief.v8i1.22219>
- Kim H.-N., Freddolino P. P., & Greenhow C.. (2023). *Older adults' technology anxiety as a barrier to digital inclusion: A scoping review.* Educational Gerontology, 49(12), 1021–1038. <https://doi.org/10.1080/03601277.2023.2202080>
- Kitchenham B., & Charters S.. (2007). *Guidelines for performing systematic literature reviews in software engineering.*
- Lodge M., & Wegrich K.. (2012). *Managing regulation: Regulatory analysis, politics and policy.* Bloomsbury Publishing.
- Machmud A., Hidayat Y., & Ghifari R.. (2024). *Is Sharia pawnshop important for Indonesian society: A quadruple helix analysis.* Pena Justisia: Media Komunikasi dan Kajian Hukum, 22(2). <https://doi.org/10.31941/pj.v22i2.5031>
- McKnight D. H., Carter M., Thatcher J. B., & Clay P. F.. (2011). *Trust in a specific technology: An investigation of its components and measures.* ACM Transactions on Management Information Systems (TMIS), 2(2), 1–25. <https://doi.org/10.1145/1985347.1985353>
- Meilani A. R., Hasibuan N. M., & Nasution M. L. I.. (2022). *Service strategy and implementation of digital Sharia pawnshops in increasing the number of customers in Rantau Prapat.* Jurnal Ekonomi, Manajemen, Akuntansi dan Keuangan, 3(3). <https://doi.org/10.53697/emak.v3i3.579>
- Nailul Hikmi., & Hidayati F.. (2025). *System quality and the impact of the use of the Flo application on free association within the community in Padang City using the DeLone and McLean method.* Professional Evidence-Based Research and Advances in Wellness and Treatment, 2(1), 12–22. <https://doi.org/10.69855/perawat.v2i1.113>
- Nikolopoulos F., & Likothanassis S.. (2018). *A complete evaluation of the TAM3 model for cloud computing technology acceptance.* In *Lecture Notes in Computer Science* (pp. 289–296). [https://doi.org/10.1007/978-3-030-02671-4\\_17](https://doi.org/10.1007/978-3-030-02671-4_17)
- Oktania A., Silfani F. D., Irsyad F. R., & Purba B.. (2025). *Analysis of the role of the Financial Services Authority (OJK) in ensuring law enforcement of non-bank private pawnshop companies.* Jurnal Publikasi Ekonomi dan Akuntansi, 5(3), 416–428. <https://doi.org/10.51903/jupea.v5i3.4189>
- Peikari H. R.. (2010). *The influence of security statement, technical protection, and privacy on satisfaction and loyalty: A structural equation modeling approach.* In *Lecture Notes in Computer Science* (pp. 223–231). [https://doi.org/10.1007/978-3-642-15717-2\\_24](https://doi.org/10.1007/978-3-642-15717-2_24)
- Pratama A. B.. (2025). *When trust coexists with mistrust: An ethnographic account of the consequences of digitalization project.* International Journal of Public Administration, 48(7), 474–484. <https://doi.org/10.1080/01900692.2024.2368253>
- PwC Singapore. (2024). *FinTech in ASEAN 2024: A decade of innovation.* <https://www.pwc.com/sg/en/publications/fintech-in-asean-2024.html>
- Radiany M. A.. (2025). *Predicting user adoption of digital payment platforms: A quantitative analysis based on UTAUT.* KINDAI, 21(2). <https://doi.org/10.35972/kindai.v21i2.2437>
- Ramesh D. K., & Hariharan A.. (2025). *Trust, security, and ease of use in e-banking: A conceptual approach to customer loyalty.* International Scientific Journal of Engineering

- and Management, 4(9), 1–9. <https://doi.org/10.55041/ISJEM05023>
- Saputra D., & Santiago F.. (2023). *The urgency of regulating digital pawn innovation in increasing business and efficiency of the pawn industry in Indonesia*. In *Proceedings of the 2nd Multidisciplinary International Conference (MIC 2022), Semarang, Indonesia*. <https://doi.org/10.4108/eai.12-11-2022.2327297>
- Setiawan I., Rusmani., & Nurhaeti. (2023). *Implementation of the compilation of Islamic economic law in Sharia pawn in Indonesia*. *International Journal of Science and Society*, 5(4), 910–921. <https://doi.org/10.54783/ijssoc.v5i4.1349>
- Setyawan A.. (2022). *Pawnshop digital service quality and its implication on customer satisfaction at PT Pegadaian (Persero) Pondok Labu Branch*. *Jurnal Indonesia Sosial Sains*, 3(8), 1186–1197. <https://doi.org/10.59141/jiss.v3i08.665>
- Sun W.. (2024). *The development and challenges of digital government in the intelligent era*. *International Journal of Social Sciences and Public Administration*, 3(1), 51–59. <https://doi.org/10.62051/ijsspa.v3n1.08>
- Thomas J., & Harden A. (2008). *Methods for the thematic synthesis of qualitative research in systematic reviews*. *BMC Medical Research Methodology*, 8(1), 45. <https://doi.org/10.1186/1471-2288-8-45>
- Tri Astuti Andayani. (2025). *Supervision of online lending transactions by the Financial Services Authority (OJK) based on POJK Number 77/POJK.01/2016 concerning information technology-based lending and borrowing services*. *Consensus: Jurnal Ilmu Hukum*, 4(1), 29–38. <https://doi.org/10.46839/consensus.v4i1.1454>
- Van Dijk J.. (2020). *The digital divide*. Polity Press.
- Velankar S.. (2025). *Decoding millennial preferences: Drivers of OTT platform adoption in the digital era*. *International Journal of Advanced Research*, 13(8), 480–484. <https://doi.org/10.21474/IJAR01/21537>
- Wibowo U. Y., & Warka M.. (2022). *Legal protection of consumers in gold buying and selling through electronic information and transactions*. *Bureaucracy Journal: Indonesia Journal of Law and Social-Political Governance*, 2(3), 858–867. <https://doi.org/10.53363/bureau.v2i3.68>

### Biographie of Author

**Sarinah**, is a lecturer in the Department of Administrative Science, Faculty of Social and Political Sciences, Halu Oleo University. The author obtained a master's degree in Public Administration and has expertise in public policy, governance, public service innovation, and digital governance. The author's research focuses on digital financial service transformation, public trust, consumer protection, and regulatory effectiveness, which form the basis of her academic contributions to research on the digitization of pawnshop services in Indonesia.

- Email: [sarinah@uho.ac.id](mailto:sarinah@uho.ac.id)
- ORCID: 0009-0003-1783-6824
- Web of Science ResearcherID: N/A
- Scopus Author ID: N/A
- Homepage: <https://scholar.google.com/citations?user=CAasMMgAAAAJ&hl=id>