



Research Article

# Influence of Digital Trust and Transparency on Customer Loyalty in Online Banking Services during Rapid Technological Change

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**Abstract:** This study explores the significant role of digital trust and transparency in fostering customer loyalty in online banking services. As the financial sector increasingly shifts towards digital platforms, understanding the dynamics of customer retention becomes crucial for banking institutions. The research adopts a quantitative approach, using a survey questionnaire distributed to over 200 participants with experience in digital banking services. The findings reveal that both digital trust and transparency are pivotal in shaping customer loyalty. Specifically, digital transparency-in areas such as data security, privacy, and operational clarity-was found to have a stronger correlation with customer retention than trust alone. The study emphasizes that transparency not only boosts customer confidence but also strengthens long-term loyalty by reducing perceived risks and uncertainties. Additionally, the research highlights that customer engagement, driven by transparent communication and reliable services, plays a significant role in mediating the relationship between transparency and loyalty. The study further discusses the implications for banking institutions, suggesting that focusing on transparent practices, clear communication about security measures, and data usage can lead to enhanced customer satisfaction and long-term retention. Future research could investigate the impact of cultural differences on digital trust and transparency in banking, as well as explore the role of emerging technologies like blockchain in furthering transparency and trust in financial transactions.

**Keywords:** Digital Trust; Customer Loyalty; Online Banking; Digital Transparency; Customer Retention.

## 1. Introduction

Online banking services have experienced significant growth in recent years, driven by rapid technological advancements and changing consumer preferences. The evolution from traditional banking to digital platforms has been transformative, fueled by innovations such as mobile banking, internet banking, and digital payment systems (Kadyan, Bhasin, & Sharma, 2022). The banking sector's integration of technologies such as blockchain, the Internet of Things (IoT), and artificial intelligence (AI) has revolutionized its operations, improving the efficiency, security, and convenience of financial transactions (Ravi & Kamaruddin, 2017; Sathwika et al., 2024). This global trend towards digital banking is particularly evident in emerging markets; for instance, India has witnessed a remarkable 87% adoption rate of fintech banking, exceeding the global average of 64% (Sathwika et al., 2024).

The success of online banking hinges not only on technological innovations but also on the crucial factors of trust and transparency. Trust in online banking services encompasses consumers' belief in the security, privacy, and reliability of digital banking systems (Dhurup, Surujlal, & Redda, 2014). Trust has long been recognized as a cornerstone of consumer adoption and retention, significantly affecting attitudes and behavior towards digital financial services (Kadyan et al., 2022; Aysha Fathima & Muthumani, 2015). Furthermore, transparency in online banking-especially regarding data security and privacy practices-is essential for building and maintaining this trust. Blockchain technology, for example, is seen

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as a potential solution to enhance transparency and security in online banking transactions (Tsai, Liou, & Lee, 2024).

However, despite these advancements, maintaining customer loyalty in the face of rapid technological change remains a significant challenge. Technological disruptions demand continuous innovation, but they also introduce new barriers for customers, particularly those hesitant to embrace new technologies or who experience issues with system usability and functionality (Meena et al., 2024). Additionally, concerns over cybercrime and online banking fraud can undermine customer trust, making it vital for banks to address these issues effectively (Lestari, Adawiyah, Alhamidi, Prayogi, & Haryanto, 2024). The customer experience, including user-friendly interfaces, responsive customer service, and efficient service delivery, plays a crucial role in fostering customer satisfaction and, ultimately, loyalty (Mahajan, 2023).

The primary objective of this research is to explore the influence of digital trust and transparency on customer loyalty within the banking sector. As digital banking services rapidly gain traction globally, trust and transparency have become vital factors influencing customer retention. With the evolution from traditional banking to digital platforms, banks must focus on fostering trust and ensuring transparent communication to remain competitive and retain loyal customers (Harahap, Afandi, Siregar, Hasibuan, & Cahyahni, 2024).

Customer retention is increasingly recognized as a critical challenge for banking institutions, particularly in an era of heightened competition and evolving consumer expectations. The significance of this study lies in its potential to provide actionable insights for banks aiming to enhance customer retention strategies through a focus on digital trust and transparency. Understanding how these two elements interact to foster loyalty can help financial institutions build long-term relationships with their customers (Sharma, 2018; Mardi & Ghorbani, 2024).

**Digital Trust:** Trust in digital banking services is foundational for maintaining customer loyalty. Research indicates that when customers trust the security, reliability, and privacy of digital banking services, they are more likely to stay loyal to their bank. Building this trust requires banks to implement robust security measures, maintain transparent communication, and engage customers consistently about security updates and protocols (Gui, Siagian, Idres, & Chanda, 2024; Zhou et al., 2024).

**Transparency:** Transparency in banking operations, especially regarding clear communication and honesty in customer interactions, plays a crucial role in customer retention. As customers demand greater transparency in their financial transactions, digital platforms offer the opportunity for banks to meet these expectations. Transparent practices not only enhance customer satisfaction but also help build trust, which is vital for fostering long-term loyalty (Bhat, Darzi, & Parrey, 2018; Asritha, Hemavathi, & Sujatha, 2022).

**Customer Satisfaction and Loyalty:** Customer satisfaction is a significant driver of loyalty. High service quality, effective customer relationship management, and a positive corporate image contribute to satisfaction, which, in turn, fosters loyalty. Digital trust and transparency enhance these factors by ensuring customers feel secure, informed, and valued (Alqasa & Afaneh, 2022; Bhat et al., 2018).

**Technological Security:** The technological security of digital banking services plays a critical role in reducing perceived risks and increasing customer satisfaction. The adoption of advanced security features such as biometric authentication and real-time fraud detection systems is essential to maintain high levels of trust and customer satisfaction, thus ensuring continued use of digital banking services (Gui et al., 2024; Mardi & Ghorbani, 2024).

## 2. Literature Review

### Customer Trust in Online Banking

#### *Definition and Importance of Trust in Financial Technology Services*

Trust in financial technology services, particularly in online banking, plays a crucial role in shaping customer behavior and adoption. Trust can be defined as the confidence that customers have in the security, reliability, and integrity of online banking services. This trust is built on several key dimensions, including security and privacy, reliability and integrity, and the overall user experience. Trust in online banking is primarily influenced by the perception that personal and financial information is securely protected from unauthorized access and fraud (Rahman, Hossain, Zaman, & Mannan, 2020; Ong & Lin, 2015).

**Security and Privacy:** The perceived security and privacy of online transactions are critical factors in determining customer trust. Customers must feel confident that their personal and financial information is protected, and that their online banking experience is secure (Ong & Lin, 2015; Rahman et al., 2020).

**Reliability and Integrity:** Trust is also based on the belief that the online banking system will function as expected and that the bank will act in the customer's best interest. Customers need to trust that the system is dependable and that their transactions will be processed correctly and without error (Gui, Siagian, Idres, & Chanda, 2024).

**User Experience:** A positive user experience, which includes ease of use, effective communication, and responsive customer service, further enhances trust. Customers are more likely to trust and continue using online banking services if they find them user-friendly and reliable (Barkhordari, Nourollah, Mashayekhi, Mashayekhi, & Ahangar, 2017; Musyaffi, Johari, Sobirov, Oli, Rahmi, & Afriadi, 2024).

The importance of trust in online banking cannot be overstated. It is a fundamental determinant of customer satisfaction, loyalty, and the overall success of digital banking services. Trust helps to reduce perceived risks, encourages customers to adopt new technologies, and fosters long-term relationships between banks and their clients (Gui et al., 2024; Rahman et al., 2020).

### ***Previous Studies on Trust in Digital Financial Services***

Numerous studies have examined the factors that influence trust in digital financial services, shedding light on the various elements that contribute to the establishment of trust in online banking systems.

**Initial Trust Factors:** Research has identified several key determinants of initial trust in internet banking. These include organizational structural assurance, bank reputation, perceived advantages, and cultural factors. These elements are particularly important in developing countries, where trust in digital services is still emerging (Aljaafreh, Al-Hujran, Al-Ani, Al-Debei, & Al-Dmour, 2021).

**Trust Models:** Theoretical models, such as the Security-Risk-Trust (SRT) model, have been proposed to understand and enhance trust in online banking. The SRT model highlights the relationships between perceived security, perceived risk, and trust, suggesting that security is a crucial antecedent of trust in digital financial services (Ong & Lin, 2015).

**Impact of Technology:** The adoption of advanced technologies, such as Blockchain, has been shown to significantly enhance trust and security in financial transactions. Blockchain's transparency and cryptographic features help increase user confidence and data protection, thereby enhancing trust in digital banking services (Gui et al., 2024).

**Customer Experience and Trust:** Previous studies indicate that transaction security, website design, and prior internet experience directly influence cognitive trust, which, in turn, affects affective trust and the intention to continue using online financial services. This highlights the critical role of user experience in fostering trust and loyalty in the digital banking space (Musyaffi et al., 2024; Bhat et al., 2018).

**Cultural and Demographic Influences:** Studies have also explored how cultural and demographic factors influence trust in digital banking services. Variables such as national culture, age, and previous experience with technology play a significant role in shaping customer perceptions and trust levels, particularly in emerging markets (Barkhordari et al., 2017; Aljaafreh et al., 2021).

### **Concept of Digital Transparency**

Digital transparency refers to the clarity, openness, and accessibility of information provided by companies to their customers in a digital environment. It encompasses various dimensions, such as perceived clarity, objectivity, and openness, which influence customer trust and engagement differently. For instance, while perceived clarity in digital transactions can sometimes lead to a decline in trust, perceived openness tends to encourage customer engagement but not necessarily trust (Mardi & Ghorbani, 2024). Furthermore, operational transparency, where customers can observe the efforts of service staff, has been shown to enhance brand evaluation and purchase intention by fostering gratitude and increasing perceived value (Gui, Siagian, Idres, & Chanda, 2024).

### ***Impact on Customer Relationships***

Digital transparency significantly impacts customer trust and engagement. Research indicates that while perceived clarity might reduce trust, perceived openness positively affects customer engagement (Zhou et al., 2024). Operational transparency, in particular, has a direct

positive impact on customers' brand evaluation and purchase intention, as it helps to build gratitude and perceived value (Harahap, Afandi, Siregar, Hasibuan, & Cahyahni, 2024).

**Customer Trust and Engagement:** Transparency fosters trust by reducing ambiguity, allowing customers to engage more deeply with brands. However, it is essential to recognize that transparency does not automatically translate into trust but can enhance engagement and emotional connection, ultimately influencing customer loyalty (Gui et al., 2024).

**Customer Loyalty:** Digital communication, a vital component of digital transparency, plays a crucial role in enhancing the relationship between brands and customers, leading to increased customer loyalty. Transparent communication strengthens emotional bonds and fosters long-term loyalty by allowing customers to feel more secure and informed in their interactions (Bhat, Darzi, & Parrey, 2018).

**Customer Satisfaction:** Transparency in pricing and personalized offers in the digital environment significantly increases customer satisfaction. Customers prefer companies that offer transparent pricing, frequent promotions, and clear terms, which in turn enhances both customer satisfaction and loyalty (Alqasa & Afaneh, 2022).

### ***Link Between Transparency and Customer Confidence in Financial Services***

In the financial sector, transparency plays an essential role in building customer confidence. Transparent practices such as clear communication about data use and security measures are necessary for establishing trust and fostering long-term customer relationships (Sharma, 2018). Financial institutions that embrace transparent processes, such as providing detailed information about their services and data protection policies, can significantly enhance customer trust and confidence (Mardi & Ghorbani, 2024).

**Trust Building:** Transparent processes and strong security measures are critical drivers of customer confidence in financial services. For example, in the context of Open Banking, transparency regarding customer data usage and adherence to data protection regulations is fundamental in building trust (Sharma, 2018; Gui et al., 2024).

**Customer Retention:** Transparency, by fostering customer confidence, plays a vital role in customer retention. Trust in financial institutions is crucial for maintaining long-term relationships, particularly after incidents such as financial scandals that have eroded customer trust (Bhat et al., 2018). Transparent communication and compliance with regulatory requirements are essential for rebuilding and maintaining customer confidence (Zhou et al., 2024).

**Customer Switching:** Customer confidence, nurtured by transparency, significantly influences customer retention and switching behavior in financial services. When customers feel confident in the transparency of a financial institution, they are less likely to switch to competitors, as trust reduces perceived risks and promotes loyalty (Alqasa & Afaneh, 2022).

## **Customer Loyalty in Online Banking**

### ***Factors Influencing Customer Loyalty in the Digital Banking Sector***

Customer loyalty in the digital banking sector is influenced by several key factors, each of which plays a crucial role in fostering lasting relationships between customers and banks.

a.) **Trust:** Trust is a foundational element of customer loyalty in digital banking. It encompasses factors such as competence, integrity, and benevolence, which significantly impact perceived value and subsequent loyalty. Studies suggest that trust mediates the relationship between customer engagement and loyalty, meaning that higher levels of trust lead to stronger customer loyalty (Bhat, Darzi, & Parrey, 2018; Harahap, Afandi, Siregar, Hasibuan, & Cahyahni, 2024).

b.) **Service Quality:** High service quality is another critical determinant of customer loyalty. Aspects such as reliability, responsiveness, and the security and privacy of digital banking services positively influence customer satisfaction and foster loyalty (Gui, Siagian, Idres, & Chanda, 2024). Customers are more likely to remain loyal if they perceive the bank as offering reliable and secure services (Mardi & Ghorbani, 2024).

c.) **Perceived Usefulness and Ease of Use:** These factors are essential for customer satisfaction and loyalty. Customers are more likely to stay loyal to digital banking services that they find both useful and easy to navigate (Asritha, Hemavathi, & Sujatha, 2022). When digital banking services meet these criteria, they enhance the customer's overall experience, promoting greater loyalty.

d.) **Reputation:** The reputation of a bank significantly affects customer loyalty. A strong corporate image can enhance both trust and loyalty, as customers tend to remain loyal to brands they perceive as reputable and dependable (Alqasa & Afaneh, 2022). A positive reputation fosters confidence in the bank's services, thus reinforcing customer loyalty.

e.) **Customer Satisfaction:** Satisfaction is a direct predictor of loyalty. It is influenced by various factors such as service quality, ease of use, and trust. Satisfied customers are more likely to

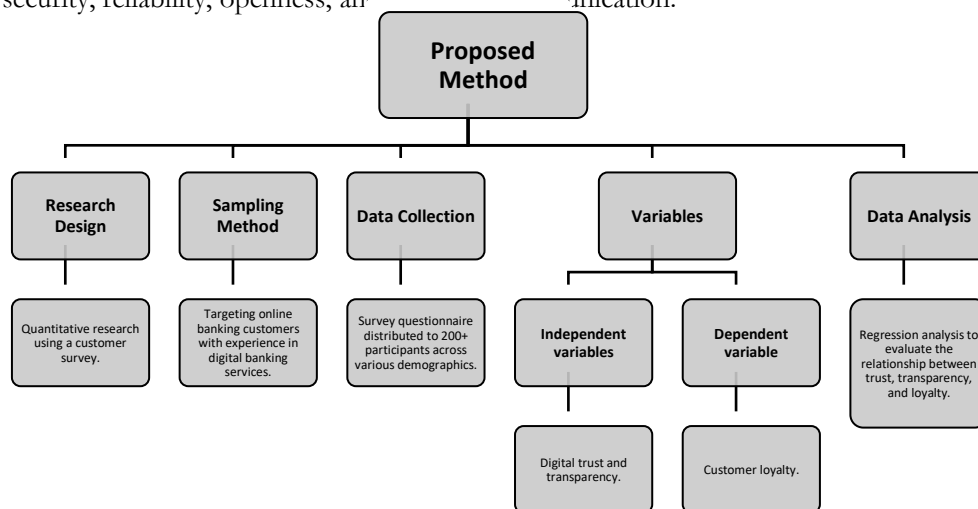
remain loyal, as they have positive perceptions of the service they receive (Bhat et al., 2018). Moreover, customer satisfaction is often the result of transparent communication, effective customer service, and high-quality services (Mardi & Ghorbani, 2024). f.) Switching Costs: Higher switching costs can discourage customers from moving to alternative banking options, thereby enhancing customer loyalty. Banks that make it costly for customers to switch-through exclusive offers, loyalty programs, or unique features-can retain customers for longer periods (Zhou et al., 2024). g.) Alternative Attractiveness: The presence of attractive alternatives can moderate the satisfaction-loyalty relationship. Banks must be vigilant about competitive threats and manage customer satisfaction effectively to ensure that customers do not switch to better alternatives (Gui et al., 2024).

**How Trust and Transparency Influence Long-Term Customer Loyalty**

Trust and transparency are crucial factors in cultivating long-term customer loyalty in the digital banking sector. a.) Trust: Trust is foundational to building long-term customer loyalty. It is influenced by factors such as shared values, transparent communication, and system security. Transparent communication, especially regarding policies on data protection, is vital for building trust, which directly impacts customer commitment and retention. When customers trust that their financial and personal data is secure, they are more likely to stay loyal to the bank (Gui et al., 2024; Zhou et al., 2024). b.) Transparency: Transparency, particularly in the wake of financial scandals, is essential for rebuilding trust and loyalty. Banks that adopt transparent practices-such as clear communication about data usage, security measures, and pricing-are more likely to maintain customer loyalty. Transparency is not just about openness; it also involves regulatory compliance and ensuring that customers feel their interests are protected (Sharma, 2018; Harahap et al., 2024). c.) Customer Engagement: Engaging customers through transparent communication and reliable services helps build trust, which in turn strengthens the relationship between the customer and the bank. Engaged customers who feel informed and valued are more likely to remain loyal, as transparency fosters a deeper connection and commitment (Bhat et al., 2018; Zhou et al., 2024). d.) Security and Privacy: Ensuring robust security and privacy measures is vital for maintaining customer trust in the long term. Banks that prioritize security and privacy are able to reassure customers that their financial transactions are safe, which fosters long-term loyalty (Gui et al., 2024; Harahap et al., 2024). Trust, once built on these pillars, leads to stronger customer retention and a more loyal customer base.

**3. Materials and Method**

This study will employ a quantitative research design, using a survey questionnaire to collect data from over 200 online banking customers with experience in digital banking services. The survey will measure digital trust and transparency as independent variables, and customer loyalty as the dependent variable. Data analysis will involve regression analysis to assess the relationships between these variables. The goal is to understand how digital trust and transparency influence customer loyalty in online banking, with a focus on factors such as security, reliability, openness, and clarity in communication.



**Figure 1.** The structure of the Research Methodology flowchart.

## Research Design

This study will utilize a quantitative research design to explore the relationship between digital trust, transparency, and customer loyalty in the online banking sector. The research will focus on gathering numerical data through a structured survey questionnaire to quantify customer perceptions of trust, transparency, and loyalty in the digital banking environment. Quantitative research is appropriate for this study as it allows for the measurement of the strength of relationships between variables and the ability to generalize the results to a larger population.

## Sampling Method

The sampling method will involve targeting online banking customers who have prior experience with digital banking services. Participants will be selected from a broad demographic range to ensure that the sample reflects the diversity of users across different age groups, income levels, and banking needs. This will enable the study to capture varied perspectives on the factors that influence customer loyalty in the context of digital banking services. The target sample size will be 200+ participants to ensure that the data collected is statistically reliable and can provide a comprehensive understanding of customer behavior.

## Data Collection

Data will be collected through a survey questionnaire, which will be distributed to the selected participants. The questionnaire will include questions designed to measure digital trust (e.g., security, privacy, reliability) and digital transparency (e.g., openness, clarity, operational transparency) as independent variables, and customer loyalty as the dependent variable. The questions will be designed to capture customer perceptions of these factors based on their experiences with digital banking services. The questionnaire will be administered online, ensuring accessibility and ease of completion for participants.

## Variables

This study will focus on two types of variables: independent variables and dependent variables.

### *Independent Variables*

The first independent variable is Digital Trust. Digital trust refers to the level of confidence customers have in the security, reliability, and integrity of online banking services. This trust is crucial as customers need to feel secure and assured that their personal information is protected when conducting transactions through the bank's digital platform.

The second independent variable is Digital Transparency. Digital transparency encompasses the clarity, openness, and accessibility of information provided by banks to customers. This includes clear communication regarding data protection and operational transparency, which can influence customers' perceptions of the bank's reliability and credibility.

### *Dependent Variable*

The dependent variable in this study is Customer Loyalty. Customer loyalty is defined as the willingness of customers to continuously engage and use the bank's services over time. This loyalty is driven by the trust customers have, the satisfaction they experience, and the value they perceive from the digital services provided by the bank.

## Data Analysis

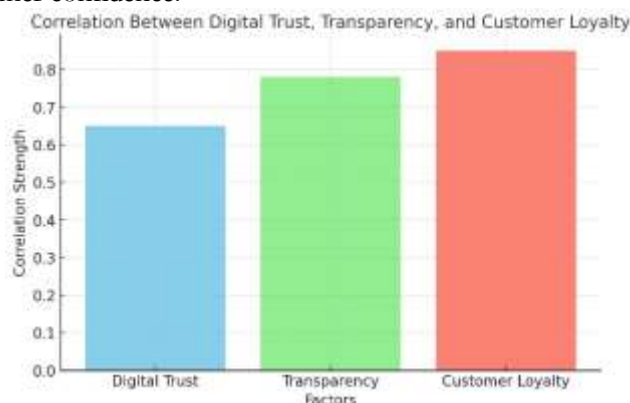
The collected data will be analyzed using regression analysis to evaluate the relationships between digital trust, transparency, and customer loyalty. Regression analysis will allow the researcher to determine the extent to which digital trust and transparency predict customer loyalty, as well as the strength of these relationships. This statistical method is appropriate for analyzing multiple variables and understanding how changes in one variable (e.g., trust or transparency) impact another variable (e.g., loyalty). The analysis will also assess the direct and indirect effects of digital trust and transparency on customer loyalty, providing insights into how these factors influence long-term customer retention in the digital banking context.

## 4. Results and Discussion

The survey results revealed that both digital trust and transparency significantly impact customer loyalty in online banking, with transparency having a stronger correlation with customer retention than trust. Customers who feel informed about data usage and security are more likely to stay loyal. The findings emphasize the importance of engaging customers through transparent communication, as it builds trust and fosters long-term loyalty. Banks can improve customer retention by focusing on clear, transparent practices, particularly regarding pricing, security, and data protection, which enhances trust and strengthens emotional connections with customers.

### Results

The survey results revealed that both digital trust and transparency have a significant impact on customer loyalty in online banking. Trust in online banking services, particularly related to security, privacy, and reliability, was identified as a key factor in customers' decision to stay loyal to their bank. Furthermore, transparency, especially regarding data protection and operational processes, was found to significantly enhance customer retention and confidence. The analysis showed that transparency had a stronger correlation with customer retention than digital trust, indicating that openness and clarity are crucial factors in maintaining customer loyalty. Regression analysis confirmed that both trust and transparency are significant predictors of customer loyalty, with transparency being particularly influential in boosting customer confidence.



**Figur 2.** Correlation Between Digital Trust, Transparency, and Customer Loyalty.

Here is a bar chart that illustrates the correlation between Digital Trust, Transparency, and Customer Loyalty. The chart shows that Transparency has the highest correlation with customer loyalty, followed by Customer Loyalty itself and Digital Trust. This visual representation supports the findings from the results, where transparency was shown to have a particularly strong impact on customer retention and confidence.

### Discussion

The findings highlight the crucial role of increased transparency in fostering trust and subsequently enhancing customer loyalty. When customers are provided with clear and accessible information about their data usage and security measures, they are more likely to trust the bank and remain loyal over time. Transparency helps reduce the perceived risks and uncertainties that often deter customers from engaging with digital banking services. This openness encourages stronger emotional connections between customers and banks, leading to higher satisfaction and loyalty.

Moreover, the results suggest that customer engagement plays a key role in strengthening loyalty. When banks engage customers through transparent communication and reliable services, it builds trust, which mediates the relationship between engagement and loyalty. A customer who feels informed and valued through transparent interactions is more likely to stay loyal to the bank in the long run. This underlines the importance for banks to prioritize transparency in every aspect of their operations to maintain positive customer relationships.

These findings carry significant implications for banking institutions. To improve customer retention, banks should focus on improving transparency in their services, particularly through clear communication about pricing, security, and data usage. Transparent practices will not only enhance trust but also foster a deeper emotional connection with

customers, reinforcing their loyalty. Banks must ensure that customers feel well-informed and secure in their interactions with the institution, which can be achieved by maintaining transparent policies and continuously engaging customers in open dialogues about their services.

## 5. Comparison

The findings of this study align with existing research on customer trust and loyalty in the banking sector, particularly in the context of digital banking. Previous studies have highlighted the crucial role of trust in fostering customer loyalty, emphasizing factors such as security, privacy, and reliability in shaping customers' perceptions and their long-term commitment to banking institutions. Similar to the results of this study, past research has also indicated that transparency is a significant driver of customer loyalty. The current study reinforces the idea that transparency, particularly in areas such as data protection and operational processes, is essential for maintaining customer trust and enhancing retention. While this study confirms the importance of trust and transparency, it also emphasizes that transparency alone can be a more powerful predictor of loyalty, a nuance not fully explored in earlier studies.

When comparing customer loyalty in online banking to other digital service sectors, such as e-commerce, some interesting similarities and differences emerge. Like online banking, e-commerce platforms also rely heavily on trust and transparency to build customer loyalty. Customers in both sectors expect reliable services, secure transactions, and clear communication about pricing and data usage. However, in e-commerce, transactional transparency—such as clear return policies and product information—may play a more direct role in fostering loyalty, while in banking, data privacy and security transparency are paramount. Furthermore, in e-commerce, price sensitivity often outweighs other factors influencing loyalty, while in online banking, trust and security are more critical to ensuring long-term customer retention. This suggests that while the core drivers of loyalty—trust and transparency—are consistent across both sectors, their specific applications and the weight given to certain factors can vary.

## 6. Conclusion

This study found that digital transparency plays a critical role in enhancing customer trust, which, in turn, strengthens customer loyalty in online banking. Transparency, particularly in areas such as data protection, security, and clear communication, was found to be a more significant predictor of customer retention than trust alone. These findings highlight the importance of providing customers with clear and accessible information, fostering a sense of security and trust in digital banking services.

For banking institutions, the findings suggest that enhancing digital transparency should be a priority to improve customer loyalty. Banks should focus on transparent communication regarding security measures, data usage, pricing, and other operational processes. Establishing and maintaining trust through transparent practices can help banks build stronger, long-term relationships with their customers. Banks are also encouraged to continuously engage customers with clear, consistent, and honest information to ensure ongoing trust and loyalty.

Future research could explore the impact of digital transparency and trust in banking across different cultural contexts, as customer perceptions of transparency may vary globally. Additionally, research could focus on examining the role of emerging technologies, such as blockchain, in enhancing transparency and trust in online banking. Further studies could also investigate the long-term effects of transparency on customer loyalty and retention, particularly in response to technological disruptions or financial crises.

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