Digital Transformation in Banking and Its Impact on Customer Experience: A Literature Review on Satisfaction and Loyalty

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Abstract :

Digital transformation in the banking industry has brought significant changes in the way banks interact with customers, but its impact on customer satisfaction and loyalty still requires a deeper understanding. This research aims to analyze the impact of the digitalization of banking services on customer satisfaction and loyalty. The method used is a literature review by analyzing related literature and relevant theoretical approaches to understand the dynamics of change in the banking sector. The research results show that the implementation of digital technologies such as mobile banking applications and artificial intelligence (AI) can enhance customer satisfaction through ease of access, security, and service personalization. Furthermore, customer loyalty is formed through the quality of digital interactions that create comfort and emotional connections. The implications of this research indicate that banks need to focus on digital innovations that prioritize customer experience to build long-term relationships and competitive advantages in the digital era.

Keywords : *Digital transformation, customer satisfaction, customer loyalty, banking technology, AI*

Abstrak :

Transformasi digital dalam industri perbankan telah membawa perubahan signifikan dalam cara bank berinteraksi dengan nasabah, namun dampaknya terhadap kepuasan dan loyalitas nasabah masih memerlukan pemahaman lebih dalam. Penelitian ini bertujuan untuk menganalisis pengaruh digitalisasi layanan perbankan terhadap kepuasan nasabah dan loyalitas mereka. Metode yang digunakan adalah studi pustaka dengan menganalisis literatur terkait serta pendekatan teoritis yang relevan untuk memahami dinamika perubahan di sektor perbankan. Hasil penelitian menunjukkan bahwa penerapan teknologi digital seperti aplikasi perbankan seluler dan kecerdasan buatan (AI) dapat meningkatkan kepuasan nasabah melalui kemudahan akses, keamanan, dan personalisasi layanan. Lebih lanjut, loyalitas nasabah terbentuk melalui kualitas interaksi digital yang menciptakan kenyamanan dan hubungan emosional. Implikasi penelitian ini menunjukkan bahwa bank perlu fokus pada inovasi digital yang berfokus pada pengalaman nasabah untuk membangun hubungan jangka panjang dan keunggulan kompetitif di era digital.

Kata Kunci: *Transformasi digital, kepuasan nasabah, loyalitas nasabah, teknologi perbankan, AI.*

INTRODUCTION

The global banking industry has changed significantly due to advancements in digital technology, particularly digital transformation that affects how banks provide services to customers. Innovations such as internet banking, mobile applications, AI, and data analytics have been integrated into banking operations, enhancing customer engagement and satisfaction (Dr. Varsha Agarwal et al., 2024). Banks can now offer

more personalized and secure services, as well as improve operational efficiency and competitiveness in the global market thanks to this transformation(Chu & Zhan, 2024). The use of digital technology in banking has transformed the way financial services are provided; mobile and internet banking applications have become the primary means of accessing financial services 24 hours a day (Department of Economics, Jamshedpur Co-operative College, Jamshedpur, India & Lugun, 2024). This improves operational efficiency and enhances transaction security and risk management (Kumar & R, 2024)

Conventional banks face significant difficulties in adapting to technological changes and the increasing customer expectations for convenience and speed of service. The rapid development of technology and the emergence of the fintech industry require banks to bridge the gap between their digital products and customer expectations. One way to simplify digital banking operations is by using open APIs; however, banks must collaborate and adopt a customer-centric approach to meet these expectations (Simatupang & Sirait, 2019). Conventional banks face significant difficulties in adapting to technological changes and the increasing customer expectations for convenience and speed of service. The rapid development of technology and the emergence of the fintech industry require banks to bridge the gap between their digital products and customer expectations. One way to simplify digital banking operations is by using open APIs; however, banks must collaborate and adopt a customer-centric approach to meet these expectations (Mbama et al., 2018a). Positive customer experiences increase loyalty, which is important for the bank's financial performance (Chauhan et al., 2022).

Based on the background of the gap analysis that has been outlined, the formulation of the research problem is, How does digital transformation in banking services affect customer satisfaction levels? What is the relationship between customer satisfaction and their loyalty to banks that have adopted digital technology?, Are there certain factors in digital transformation that have a greater impact on customer loyalty?

Explanation of this research in the context of the banking industry increasingly moving towards digitalization. This change must be accompanied by a deep understanding of how customers respond. With the increasing dependence of customers on digital banking services, this research will provide important insights into what influences user experience and how this can be translated into long-term loyalty. Many banks still struggle to measure the extent to which digital transformation impacts customer satisfaction and loyalty, making this research highly relevant.

The quality of digital services, such as convenience, security, and personalization, has a significantly positive impact on customer satisfaction, which is important for banks to maintain competitiveness in the market and retain customer loyalty (Chu & Zhan, 2024). The theory of customer satisfaction and loyalty is closely related to digital innovation in the banking industry. Showing that effective digital transformation enhances customers' perceptions of bank innovations, which in turn increases customer satisfaction. Additionally, banking service innovations, such as e-banking, enhance customer experience and satisfaction, increasing customer loyalty (Carbó-Valverde et al., 2024; Tiwari, 2023). Regulations that encourage digital adoption in the banking sector in many countries significantly influence customer behavior. Bank investments in information technology, for example, have proven to increase the adoption of financial digitalization by customers, who prefer to conduct transactions through digital channels rather than physical branches (Carbó-Valverde et al., 2020).

The purpose of this research is to analyze how digital transformation in banking

affects customer satisfaction levels and its impact on their loyalty. Stating that the purpose of this research is not only to understand the impact of digitalization on customer satisfaction but also to provide recommendations for banks in developing more effective service strategies. Mentioning the expected results, such as a better understanding of the factors influencing customer satisfaction and loyalty in the digital era.

Because emotional relationships and trust are very important in building customer loyalty, previous research on digital transformation in banking often only focused on technical aspects, neglecting the emotional aspects and long-term relationships between banks and customers. Studies show that although digital transformation can enhance operational efficiency, the emotional aspects and long-term relationships between banks and customers still need to be considered (Diener & Špaček, 2021). The quality of banking services and the psychological engagement of customers can enhance customer loyalty towards the bank's brand, according to several studies. However, research on how the digitalization of banking services directly affects customer satisfaction is still limited (Levy, 2022; Shankar & Jebarajakirthy, 2019a). There is no research that studies how digitalization affects consumer behavior and how banks respond to these changes. Studies show that digitalization makes customers more active in managing and planning their finances. By adjusting digital services and enhancing employee-customer interactions, banks can increase customer satisfaction and loyalty (Mbama et al., 2018b)

This research offers a new way to view the impact of digital transformation on customer satisfaction and loyalty. This research focuses on how digital transformation can enhance customer experience and strengthen their loyalty by using empirical data and more modern techniques. This research aids digital transformation and customer relationship management by providing new insights for practitioners and academics on how to use technology to strengthen long-term relationships with clients. In the current digital era, advanced technology has significantly transformed customer relationship management (CRM). Technologies such as artificial intelligence, big data, and predictive analytics are crucial for optimizing CRM strategies because they enable companies to enhance customer satisfaction and loyalty through automated personalization and data analysis. Consumer satisfaction and loyalty theories have undergone significant changes in the digital era. To adapt to technological developments, existing theories must be changed because the digitization of banking has altered the way banks interact with their customers. Studies show that improving the quality of digital services is crucial for enhancing customer experience and satisfaction, which ultimately impacts customer loyalty.

RESEARCH METHOD

This research uses a literature study, which is a data collection method through the review of related literature. Nazir states that this method involves the collection of data from various literature sources, such as books, journals, magazines, and lecture materials related to the research subject (Mardalis, 2006). Additionally, Muhadjir states that library research prioritizes philosophical and theoretical approaches over empirical field tests (Hadi, 1993). This is because the aim of this research is to gain a better understanding of the concepts and theories underlying the problem being studied, as well as to create a strong theoretical framework for this research. The data collected in

this research were gathered by reading and analyzing relevant literature. To ensure the relevance and quality of the data obtained, this process involves the identification, collection, and evaluation of information from carefully selected written sources. Next, the literature data is analyzed descriptively to identify the main themes and patterns. The aim of this research is to gain a comprehensive understanding of the research topic and to develop arguments supported by evidence from the literature. The literature study method used in this research allows the researcher to collect and analyze data from various relevant written sources, with a focus on philosophical and theoretical approaches. This method also provides a strong foundation for understanding and explaining the issues discussed.

FINDINGS AND DISCUSSION

Digital Changes in Banking Services Affect Customer Satisfaction Levels

The digitization of banking services has brought significant changes in customer satisfaction, making transactions easier and faster and allowing customers to conduct transactions anytime and anywhere. This is very important in the modern era where convenience and speed are crucial for customers (Chu & Zhan, 2024). In addition, digitalization allows banks to offer more personalized services tailored to individual needs, which enhances customer satisfaction (Effendi et al., 2024). For example, features like internet banking and mobile banking make it easier for customers to monitor their finances without having to go to the bank in person (Panjaitan et al., 2024). Security is also an important component in enhancing customer satisfaction through digitalization. With continuously evolving technology, banks can offer more secure services, protecting customer data and transactions from cyber attacks, thereby increasing customer confidence and comfort when using digital banking services (Kaur et al., 2021).

Artificial intelligence (AI), data analytics, and open APIs are some of the technologies that have driven the enhancement of personalized banking services. AI, for example, has transformed the banking industry by enhancing operational efficiency and customer experience by leveraging machine learning algorithms to thoroughly analyze customer data and make tailored recommendations for customers (Kumar & R, 2024). Data analytics is crucial for customizing banking services. Banks can create targeted advertisements and predict customer demand using big data. This allows banks to better understand customer attitudes, preferences, and needs, enabling them to create relevant financial services and improve the quality of their services (Mogaji et al., 2022). Additionally, banks can offer a more seamless and integrated customer experience through open APIs, allowing them to build new applications and services that are more personalized and convenient (Saroj Mithra et al., 2023).

The sense of satisfaction generated from high-quality digital services greatly influences customer loyalty. Good service quality in digital banking encompasses various aspects, such as reliability, website design, privacy, and security, as well as customer service and support. According to research, reliability, privacy, and security are the main factors that keep customers loyal to electronic banking platforms (Shankar & Jebarajakirthy, 2019b). This positive experience increases customer satisfaction and enhances their loyalty to the service. Digitalization plays an important role in improving service quality, which in turn affects customer loyalty. It was found through the

SERVQUAL model that digitalization has a positive impact on service quality and customer loyalty, indicating that investment in digitalization can meet customer demands and build a loyal customer base (Shabani et al., 2022). Factors of service quality such as tangibility, reliability, and empathy also influence a good customer experience with digital banking services. These aspects enhance customer trust, which is an important component in building loyalty (Drexel University & Gefen, 2002). Therefore, financial institutions such as banks can leverage these findings to enhance their digital services and improve customer experience. In the end, this will strengthen relationships with existing customers and attract new ones.

The Relationship between Customer Satisfaction and Loyalty Towards Banks that Have Adopted Digital Technology

In the banking industry, digitalization has become key to meeting the ever-increasing customer expectations for fast and secure services. With the advancement of information technology, banks can now offer services that can be accessed anytime and anywhere, significantly increasing customer satisfaction. Bank BRI Sisimangaraja, for example, has developed digital service innovations to enhance customer satisfaction. Studies show that customer satisfaction with banking digitalization services is influenced by four main factors: speed, accuracy, convenience, and security. With the speed of digital services, customers can complete transactions quickly, which directly increases their satisfaction. The accuracy of the service ensures that transactions are carried out correctly, reducing errors, and increasing customer trust. The convenience of digital services allows customers to conduct transactions from anywhere, without having to visit the bank in person. Lastly, security is very important to ensure that customer information and transactions are well protected. This is the most important thing in digital banking services (Panjaitan et al., 2024).

According to the theory of digital transformation in the banking industry, digital service innovations can enhance customers' positive perceptions of the bank's efficiency and reliability. In this case, banks that implement digital technology tend to be viewed as more innovative by customers, especially as the reduction of bank branches has increased since the pandemic, indicating that customers are more satisfied with banks that have a higher level of digitalization (Carbó-Valverde et al., 2024). The use of technologies such as mobile banking applications, peer-to-peer payments, AI-driven chatbots, and blockchain is part of the digital transformation in banking. This technology not only accelerates and enhances transaction efficiency but also enables services to be tailored to customer needs (Nalini & Yuvasri, 2024). In addition, the digital transformation of banks enhances the performance of business innovations that borrow from banks by reducing financial constraints and improving business governance. This indicates that the digital transformation of banks not only impacts customers but also the businesses associated with the bank (Zhou & Xu, 2023). Banks that successfully integrate digital tools into their customer relationship management practices are better prepared to meet the evolving needs of their clients, which will ultimately result in higher levels of customer satisfaction and loyalty (Dr. Varsha Agarwal et al., 2024).

A strong emotional bond has been formed between banks and their clients through personalized technology in digital banking services. This study shows that various digital platforms, such as websites and applications, play an important role in building a deep service experience, which is crucial for retaining customers and

enhancing loyalty to the bank's brand. This study also emphasizes that the psychological engagement of customers with various types of digital platforms can mediate the emotional impact that customers have on their loyalty to the bank (Levy, 2022). In situations like this, service personalization is very important. Banks can tailor services to customer needs using technologies such as AI and big data analytics. This not only makes customers happier but also strengthens their emotional connection with the bank. Research has shown that personalization can enhance performance expectations and reduce effort expectations, which in turn encourages customers to continue using digital banking services (Wang et al., 2017). Therefore, banks that successfully use personalization technology can build stronger emotional connections with customers, which is crucial for maintaining customer loyalty in the long term.

Factors in Digital Transformation that Affect Customer Loyalty

In the current digital era, e-banking has become one of the most important services for banks to enhance customer satisfaction and loyalty. Previous research shows that the quality of e-banking services has a significant impact on customer satisfaction and loyalty. Factors such as transaction security, speed, ease of use, and privacy are the main considerations for customers when choosing a bank. Studies conducted in various countries show that good e-banking services can enhance customer trust and commitment, which in turn increases their loyalty. For example, a study conducted at Bank Sepah in Tehran found that customer satisfaction and trust were greatly influenced by the quality of the website and e-banking services, and perceptions of security and privacy in e-banking were also very important in enhancing customer satisfaction levels. Additional studies in Ethiopia show that customer satisfaction and loyalty are greatly influenced by service quality aspects such as efficiency, responsiveness, and ease of use (Beshir & Zelalem, 2020). This indicates that banks that can provide reliable and secure e-banking services can build a loyal customer base. Therefore, banks must continuously improve the quality of their e-banking services to meet customer expectations and maintain customer loyalty in the long term.

The emotional aspect of building consumer loyalty is becoming increasingly important in the current digital era. Studies show that emotional experiences can regulate the relationship between online shopping experiences and consumer loyalty. These emotional experiences can directly influence loyalty through attitudinal loyalty, especially in situations where there is uncertainty and low trust in the website. Additionally, emotional experiences can also indirectly influence behavioral loyalty (Cachero-Martínez & Vázquez-Casielles, 2021). Emotional marketing is a strategy that has been used by mobile phone companies to attract consumers' inner preferences, proven that brand identity and brand trust act as mediators in the influence of emotional marketing on consumer loyalty (Jiang et al., 2023). Additionally, experiences that trigger emotional attachment, such as passion for the brand, self-connection with the brand, and affection for the brand, can enhance long-lasting consumer loyalty. This shows that marketing managers should enhance marketing practices that focus on emotional experiences if they want to create long-term relationships with their customers (Mostafa & Kasamani, 2020).

Banks around the world are increasingly realizing the importance of investing in digital technology and employee training to enhance customer experience. This has shown that banks' investments in IT have increased the adoption of financial

digitalization by customers, encouraging them to conduct financial transactions more frequently through digital channels rather than physical branches, which has changed the way customers conduct financial transactions (Carbó-Valverde et al., 2020). In addition, the digital transformation of the banking industry has made human resource development more important. Employee development and training are crucial to ensure they have the necessary skills and knowledge to use new technologies. Thus, employees can help achieve the bank's strategic goals such as improved performance, motivation, and job satisfaction. Banks that invest in digital technology and employee training can develop more competitive strategies because they can enhance employee commitment to their work. As a result, investments in digital technology and employee training can lead to increased operational efficiency, stronger relationships with customers, improved customer satisfaction, and ultimately enhanced financial performance (Gjika & Aliko, 2024).

Implication

This study emphasizes the role of digital technology in creating added value for consumers, adding a new element to consumer satisfaction theory. Emotional relationships that support loyalty require a technology-based personality. This study shows that digital transformation enhances operational efficiency and creates better long-term relationships between banks and customers.

Banks must continue to invest in technologies such as artificial intelligence, big data, and predictive analytics to enhance their customer experience. In addition, they must provide training to their employees to effectively utilize technology while still building interpersonal relationships with customers. Regulators and the government should create policies that support an inclusive financial ecosystem to encourage the adoption of digital technology.

CONCLUSION

Digitalization plays an important role in improving service quality, customer satisfaction, and customer loyalty in the banking sector, according to this research. Banks can now offer faster, more accurate, personalized, and secure services thanks to the digitalization of banking services such as AI, big data analytics, and open APIs. Digitalization makes operations more efficient, customer experiences better, and banks have a sustainable competitive advantage. In addition, personalized technology-based services help build strong emotional relationships between banks and customers, which directly enhance customer loyalty. According to this research, the quality of digital services such as convenience, security, and speed are the main factors in creating a positive customer experience. This research, however, has several limitations. This research only focuses on the aspect of digitalization, without considering the difficulties of technology implementation in various geographical or economic contexts. In addition, this research does not present field empirical data that could strengthen the findings. Future research is expected to conduct empirical studies to test these findings in the context of specific banking industries or geographical regions. Additionally, further studies can explore the impact of digital transformation on financial inclusion and its social implications. Banking practitioners are also expected to continue investing in innovative technology and human resource training to ensure the sustainability of banking service improvements in the ever-evolving digital era.

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