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DIGITAL TRANSFORMATION IN THE INDONESIAN BANKING INDUSTRY: A QUALITATIVE SWOT ANALYSIS OF MOBILE BANKING INITIATIVES IN CONVENTIONAL FINANCIAL INSTITUTIONS

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ABSTRACT

Objective: This study aims to analyze the internal and external factors that influence the development of mobile banking in conventional banks in indonesia, as well as formulate sustainable strategies that are able to maximize opportunities and overcome challenges in the era of digital transformation.

Research Design & Methods: The study used a descriptive qualitative approach with SWOT analysis method to identify the strengths, weaknesses, opportunities, and threats faced by conventional banks in the implementation of mobile banking. Data was obtained through the study of current literature, industry reports, and relevant academic publications.

Findings: The analysis shows that reputation, credibility, and customer loyalty are key strengths that can be leveraged to overcome cost constraints, IT infrastructure complexity, and internal resistance to new technologies. Strategic opportunities include expanding financial inclusion in remote areas and improving operational efficiency through automation and analytics technology. Key threats include the digital divide and increased cybersecurity risks.

Implications & Recommendations: Conventional banks should adopt a mobile banking development strategy that emphasizes cross-stakeholder collaboration, relevant product innovation, and digital literacy programs to reduce the access gap. In addition, investment in cybersecurity and IT infrastructure modernization should be prioritized to maintain customer trust.

Contribution & Value Added: This research provides a practical contribution in formulating a sustainable mobile banking strategy in Indonesia by considering local conditions, digital divide, and market dynamics. Academically, this research enriches the literature on the application of SWOT analysis to the development of digital financial services in developing countries.

Keywords: Mobile Banking, Conventional banks, Digital Transformation

JEL codes: G21, O33, L86.
Article type: research paper

INTRODUCTION

Digital transformation in Indonesia has been progressing rapidly in recent years, along with increasing internet penetration that now reaches almost all regions, including remote areas. The significant growth in the use of smartphones as the main device for accessing information has also driven the adoption of digital services in various sectors, ranging from trade, education, to public services, including the banking sector. Banking has even become one of the pioneers in utilizing

digital technology through the development of online banking services, mobile banking, and the integration of financial technology (fintech) to improve operational efficiency and expand the reach of services to the community. However, behind this progress, there are also various challenges, one of which is the increasing complexity of cybersecurity threats that require serious attention so that digital transformation in the banking sector can be optimal and inclusive.

Indonesia recorded a sharp spike in the number of cyberattacks, with incidents increasing from 496 million in 2020 to 1.6 billion in 2021, according to a report from the National Cyber Security Operations Center. This trend shows that the nation's digital infrastructure still faces a high level of vulnerability to various forms of cyber threats, especially in the banking sector which is a prime target due to the potential for huge financial gains. Some of the most frequent types of attacks in this sector include social engineering through social media, OTP (One-Time Password) fraud, security gaps in internal systems, phishing, and SIM swapping practices. Social engineering is a manipulative method that exploits human psychological aspects, such as trust, emotions, and habits, to gain access to confidential information such as passwords or personal data (Chetioui et al., 2022). These techniques generally do not rely on technological loopholes, but rather on weaknesses in user behavior, making the human factor the most vulnerable element in a cybersecurity system.

Cyberattacks targeting the banking sector often utilize an increasingly diverse and sophisticated range of social engineering tricks. Some common methods include fraud through internet banking and online transactions, manipulation through bank customer service centers, and SMS fraud, as described in Hammour et al., (2019) and Jaswal et al., (2022). Social engineering basically aims to gain illegal access to bank information systems to commit crimes such as financial fraud, breaking into internal networks, stealing data, damaging systems, or taking user identities (Junaedi, 2017). These attacks not only have a direct impact on bank operations, but also have the potential to cause wider systemic disruptions to economic stability. Airehrour et al., (2018) state that all types of cyber threats can damage a bank's reputation, weaken the reliability of digital systems, and reduce customer trust, which is critical to the continuity of financial services. In this context, Bidari et al., (2020) emphasized that the banking sector has an important role in the national economy because its business activities are closely related to the lives of the wider community.

Mobile banking has become one of the main pillars of digital transformation in the banking sector, shifting the service paradigm from the conventional financial institution model based on visits to physical branches to the concept of "banking in your pocket" that offers access to financial services anytime and anywhere. This development is driven by the widespread penetration of mobile devices and the internet, enabling transactions to be conducted quickly, efficiently, and without time constraints. As a result, mobile banking contributes significantly to the creation of a cashless society by reducing dependence on cash and facilitating flexible and real-time financial managemen (Joglekar, 2019). Study of Arinze-Emefo and Ibrahim (2023) shows that the adoption of digital banking services, including mobile banking, not only increases transaction convenience and efficiency, but can also strengthen banks' financial performance through increased profitability and operational efficiency. Furthermore, this transformation has changed the relationship between banks and customers, positioning banks as digital service providers capable of competing in the cashless economy (Chilukuri et al., 2025; Kumar, 2020; Ming-Pey Lu, 2022).

The development of digital banking in Indonesia, driven by technological advancements, creates an urgency for conventional financial institutions to comprehensively understand the strengths, weaknesses, opportunities and challenges in mobile banking implementation. Qualitative SWOT analysis becomes an important strategic tool to map the internal and external factors that influence the success of banking digital transformation, especially as mobile banking has become the backbone of modern financial services. This approach not only helps banks identify competitive advantages and areas of improvement, but also formulate adaptation strategies that are relevant to market dynamics and customer needs in the digital age. Despite the increasing adoption of mobile banking, there are limited comprehensive studies that examine conventional banks' responses

through the SWOT framework, even though the findings can provide strategic guidance for future service development.

Research on Digital Transformation in the Indonesian Banking Industry: A Qualitative SWOT Analysis of Mobile Banking Initiatives in Conventional Financial Institutions is necessary because most previous studies have focused more on aspects of technology adoption, customer satisfaction, or technical factors of mobile banking implementation, without delving deeply into the dynamics of the strengths, weaknesses, opportunities, and threats faced by conventional banks in Indonesia in the process of digital transformation. Using a qualitative SWOT approach, this research provides a more comprehensive picture of the strategic position of banks in facing competition from fintech and digital-only banks, while also identifying internal and external factors that influence the success of mobile banking initiatives. This makes this study not only complement existing literature, but also provide practical contributions for policy makers in the banking sector to design more adaptive and competitive digital transformation strategies.

LITERATURE REVIEW

The concept of Digital Transformation

Digital transformation is a strategic step taken by organizations to adopt cutting-edge digital technologies with the aim of significantly improving performance while responding to the dynamics of disruptive innovation. This effort requires comprehensive planning, adaptive organizational structure support, and balanced governance to ensure the transition to digital-based operations is effective (Naimi-Sadigh et al., 2022; Werth et al., 2020). Lebih dari sekadar implementasi teknologi baru, transformasi digital juga menuntut perubahan budaya kerja dan penguatan kapabilitas internal agar mampu beradaptasi dan berinovasi secara berkelanjutan sesuai tuntutan perkembangan teknologi.

Digital transformation in the business world is a process of comprehensive integration of digital technology into every aspect of a company's operations, which drives fundamental changes in the way the organization operates, innovates, and provides added value to customers. This process not only includes technological updates, but also involves restructuring business models, optimizing work processes, and adjusting organizational structures to be more adaptive to the times. With proper implementation, digital transformation can improve operational efficiency, accelerate product and service innovation, and enrich customer experience through a more personalized, responsive, and data-driven approach (Adama & Okeke, 2024; Masoud & Basahel, 2023).

The development of modern technology has had a very significant impact on the service sector, especially in the banking sector, by driving the creation of competitive advantages through the transformation of traditional business models and improving operational capabilities. The utilization of digital technologies in this industry not only directs customer experience strategies, but also spurs innovations in information technology that contribute directly to improving firm performance (Shehadeh et al., 2023; Zhang et al., 2024). The positive impact is seen in the optimization of customer interactions, the improvement of service process efficiency, and the development of more innovative service delivery methods, making it a strategic element in achieving business goals amid increasingly fierce competition in the digital era.

The success of digital transformation can be measured through a number of interrelated key indicators. Improved customer experience, characterized by higher satisfaction and engagement, is a strong signal of the effectiveness of digital transformation (Bieliatynskyi et al., 2024). Operational efficiency is also an important benchmark, where the adoption of digital technologies can speed up processes, lower costs, and increase productivity (Nguyen et al., 2025; Shehadeh et al., 2024). In terms of innovation, digital transformation drives the birth of new business models, product and service innovations that increase competitiveness in the market (Lyu, 2024; Zheng, 2024). Sustainable competitive advantage can be achieved through strategic utilization of digital capabilities, such as the integration of AI, big data, and IoT, which enables product/service differentiation and broader market penetration (Handono et al., 2024).

In the banking industry, digital transformation is characterized by specific trends and strategies that focus on leveraging cutting-edge technology to strengthen competitiveness. The integration of innovations such as artificial intelligence (AI), big data analytics, fintech solutions, and cloud-based services has fundamentally changed the way banks operate and serve customers. The application of these technologies not only improves the efficiency of operational processes, but also enriches the customer experience through faster, personalized services that are responsive to dynamic market needs (Indriasari et al., 2019; Omokhoa et al., 2024). These changes encourage banks to transform into an innovative, adaptive, and integrated digital ecosystem.

Fintech companies play a crucial role in driving digital transformation in the banking sector through the provision of innovative financial products and services, fundamentally changing the traditional banking model. By offering more flexible, personalized, and customer-centric solutions, fintech not only improves service quality, but also triggers intensified competition in the financial industry (A, 2017). The dynamics of this transformation are reinforced by factors such as rising customer expectations for digital services, adjustments to the evolving regulatory framework, and the growing role of the digital ecosystem in business operations. These conditions force banks to continuously adapt, optimize processes, and adopt continuous innovation to remain relevant and competitive in the digital era (Kitsios et al., 2021).

Banking in the Digital Era

The digital era has brought fundamental changes to the banking sector by presenting technological advances and innovations that significantly affect operations, business strategies, and customer interaction patterns. One prominent innovation is the application of artificial intelligence (AI), which is now an important pillar in the transformation of modern banking. Based on a literature review conducted by Fares et al., (2023), there are three main focuses of research related to the use of AI in banking, namely strategy, business processes, and interaction with customers. The implementation of AI allows banks to optimize operational efficiency, accelerate decision-making, strengthen service quality, and design strategic frameworks that are adaptive to industry dynamics and evolving market needs.

In addition to artificial intelligence, blockchain technology is also bringing a revolution in modern business practices, including in the banking sector, by offering a new paradigm that focuses on transparency, security, and decentralization. Although the application of blockchain in the banking industry is still somewhat fragmented and not yet fully integrated into all services. This technology has great potential to strengthen public trust through irreversible recording of transactions, minimizing the risk of data manipulation, and increasing the efficiency of the verification process (Mohammed et al., 2024). Blockchain further opens up opportunities for the development of decentralized finance (DeFi) ecosystems that can reduce dependence on traditional intermediaries, as well as provide a platform for innovations such as central bank digital currencies (CBDCs) and cryptocurrencies. These innovations are increasingly relevant amidst banks' need for service models that are more inclusive, efficient, and adaptive to global technological developments.

Digital transformation has fundamentally changed consumer behavior patterns and the way they interact with service providers. Interactions through digital channels, such as websites, social media, and mobile apps, demand more diverse and complex responses: cognitively (how information is understood and processed), emotionally (feelings that arise during the experience), as well as behaviorally (concrete actions such as purchases, recommendations, or loyalty) (Kacprzak & Hensel, 2023). For example, the quality of experience in e-shopping was shown to trigger customer loyalty not only directly on attitudinal aspects, but also through emotional experience as a mediator between digital experience and consumer behavioral loyalty (Cachero-Martínez & Vázquez-Casielles, 2021).

Digital service quality, which includes three main dimensions, namely system aspects (such as accessibility, reliability, and ease of use), information quality (accuracy, relevance, and completeness), and service (customer support and level of personalization), contributes to the so-called "digital quality," which is a customer assessment formed based on cognitive,

emotional, and behavioral responses when using digital platforms (Kim & Yang, 2025). These findings confirm that digital transformation focuses not only on technology adoption, but also on creating a well-rounded, emotionally satisfying and cognitively valuable user experience. In that context, strategies such as personalization, omnichannel marketing, and digital channel integration have proven to be significant drivers in increasing customer engagement, satisfaction, and loyalty (Pereira et al., 2025).

Conventional Financial Institutions

Conventional financial institutions are institutions that carry out economic and financial activities based on general principles without using sharia rules, with the main function as an intermediary between parties who have excess funds, such as savers or investors, and parties who need funding (debtors) through various products and services, including savings, loans, investments, and payment services. Conventional financial institutions play a strategic role in supporting the global financial system by providing a variety of services that include deposit products such as savings and current accounts, financing facilities in the form of loans, and investment opportunities for individuals and corporations. As entities that are generally profit-oriented, these institutions operate their business activities by relying on interest-based transactions as the main source of income, which is a fundamental distinguishing feature from Islamic financial institutions that apply the principle of profit sharing and avoid usury practices. In addition, conventional financial institutions also play a role in supporting market liquidity, facilitating capital flows across sectors and countries, and contributing to economic growth through lending, financing strategic projects, and providing financial instruments that can increase public access to banking services (Musa et al., 2020).

A crucial aspect of conventional banks lies in their operational efficiency and ability to adapt to various economic dynamics and challenges, both at the national and global levels. Research comparing the efficiency performance between conventional and Islamic banks in Europe shows that although conventional banks face increasing competition from Islamic financial institutions, they have a structural advantage in that they do not require a specific religious-based supervisory hierarchy, such as the existence of a Shariah board which is a mandatory component in Islamic banks. This allows conventional banks to execute a faster, more flexible decision-making process focused on profit optimization, while maintaining competitiveness in a dynamic financial market (Musa et al., 2020; Shabbir & Zeb, 2020).

Conventional financial institutions are currently faced with the challenge of navigating a changing industry landscape, influenced by the emergence of financial technology (fintech) and decentralized finance (DeFi) innovations. Both innovations offer a more inclusive and technology-oriented approach, which not only cuts out the role of intermediaries but also significantly lowers transaction costs, thus shaking up traditional business models. This has prompted conventional banks to undertake strategic transformations, including integrating cutting-edge technologies such as blockchain to ensure transparency and security of transactions, and leveraging artificial intelligence (AI) to improve service quality, personalization of customer experience, and operational efficiency (Bakare et al., 2024; Chen, 2024).

The role of conventional banks in supporting sustainability programs is becoming more prominent, as awareness of the importance of social and environmental responsibility in the financial sector increases. Through active participation in the circular economy, conventional banks not only channel financing to sustainable projects such as renewable energy, waste management, and resource efficiency but also utilize this opportunity to expand loan portfolio diversification, reduce long-term risks, and strengthen positive public image. Such engagement encourages a more ethical, responsible banking model that is aligned with sustainable development goals, while opening up opportunities for banks to gain financial returns in line with achieving broader social benefits (Ozili, 2021). In general, conventional financial institutions now operate in a complex ecosystem, influenced by regulatory dynamics, accelerating technological innovation, and increasing demands for sustainable practices, requiring them to devise adaptive and visionary strategies to maintain relevance and competitive advantage amid rapid global change.

Mobile Banking as a Banking Innovation

Mobile Banking is one of the most influential technological breakthroughs in the banking sector that fundamentally changes the financial service delivery model. By utilizing mobile devices such as smart phones and tablets, customers can access account information, monitor financial activities, and perform various transactions anytime and anywhere without the need to visit a physical branch. The literature confirms that innovation, particularly in the form of mobile banking, plays a strategic role in creating competitive advantage and improving operational efficiency in the banking industry. As explained by Frishammar et al., (2012), this kind of process innovation is a major source of long-term competitive advantage because it allows banks to deliver services that are faster, more effective and responsive to customer needs, while expanding market reach and strengthening customer loyalty in the midst of increasingly fierce competition.

In a developing country like Indonesia, where a large portion of the population is still classified as unbanked, mobile banking comes as a strategic solution to expand the reach of financial services. By utilizing the high penetration of mobile phone usage that has reached various levels of society, including in rural and remote areas, this technology allows people who were previously inaccessible to traditional banking services to carry out various financial activities, ranging from saving money, making transfers, to paying bills easily and safely. Sebayang et al., (2023) emphasized that mobile banking not only functions as a transaction tool, but also as a catalyst for financial inclusion, which in turn can drive economic growth, reduce the financial access gap, and improve the welfare of people in areas that have been underserved by conventional banking infrastructure.

The legal framework governing mobile banking continues to evolve in line with the rapid adoption of this technology, with the main objective of ensuring consumer protection and maintaining data security as the foundation of public trust. Clear and comprehensive regulations regarding the roles, obligations and responsibilities of both banks and non-banking entities involved in the provision of mobile banking services are crucial to creating a safe, transparent and reliable transaction ecosystem. Regulatory clarity not only strengthens the integrity of the financial system, but also provides legal certainty for all stakeholders, thus encouraging service innovation while maintaining stability and trust in the digital banking industry (Weber & Darbellay, 2010).

Trust is a key element in the successful adoption and continued use of mobile banking services, as it directly influences customers' intention to start using and continue utilizing the platform. According to Kang et al., (2012), long-term involvement with mobile banking is determined by a variety of factors, including perceptions of service usability, transaction channel preferences, and assessment of the value offered. Therefore, developing an intuitive, responsive and user-friendly user interface design, along with a competitive fee policy, is an important strategy to increase perceived value and ease of use. Such efforts not only strengthen customer satisfaction, but also build loyalty and encourage active participation in the digital banking ecosystem.

METHODS

Based on the review of relevant literature, the main objective of this research is to analyze the various positive and negative aspects, as well as internal and external factors of online and mobile banking services implemented by conventional financial institutions, using the SWOT analysis approach. The SWOT approach is a strategic framework developed by a group of academics from Harvard namely Learned, Christensen, Andrews, and Guth designed to assist companies in identifying various strategic options that can be taken to improve performance or develop a project. SWOT itself is an acronym for Strengths, Weaknesses, Opportunities, and Threats. This tool allows an organization to conduct a thorough evaluation of its condition by combining two main categories of data, namely internal and external information. Internal data includes elements that are the company's strengths and weaknesses. Meanwhile, external information relates to environmental conditions outside the organization that can be strategic opportunities or potential threats (Kumar & Praveena, 2023; Pickton & Wright, 1998).

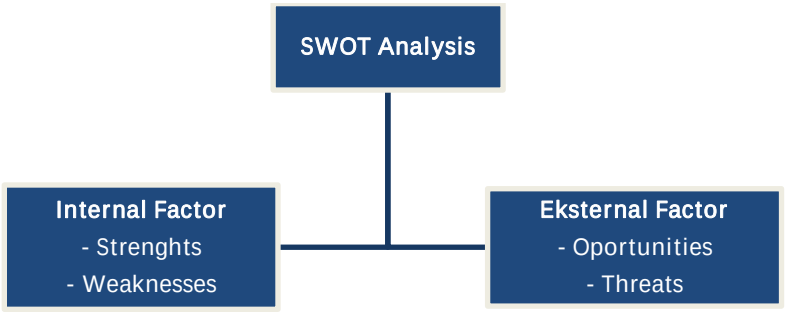

Figure 1. SWOT Analysis Model

RESULT

The SWOT Analysis

To have a comprehensive picture of the strategic positioning of mobile banking initiatives in conventional financial institutions, a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis was conducted. This approach is used to systematically identify various internal factors, such as strengths and weaknesses, as well as external factors in the form of opportunities and threats that can affect the success of digital transformation in the banking sector. Through this analysis, organizations can understand their capacities, challenges, and available development space in the process of implementing mobile banking services. This understanding is an important basis for formulating the right strategy to strengthen competitiveness and improve the quality of banking services in Indonesia.

Table 1. SWOT Analysis

Strenghts	Weaknesses
Utilizing mobile banking technology to increase service reach and customer convenience, strengthening the modern image of financial institutions.	Requires high application development and maintenance costs, and reliance on complex IT infrastructure.
Opportunities	**Threats**
Leverage infrastructure and reputation advantages to compete with fintechs and pure digital banks, retaining loyalty of existing customers.	Cybersecurity and data leakage risks that could damage the bank's reputation, as well as employee resistance to technological change.

Adapted from SWOT analysis model Chermack and Kasshanna (2007)

Analysis and Finding

1. **Internal Analysis**

   a. Strenghts

   - Using mobile banking technology to increase service coverage and customer convenience

     Mobile banking technology allows financial institutions to provide banking services flexibly without being bound by location or time constraints. Customers can perform various banking activities such as fund transfers, bill payments, financial product purchases, balance checking, and credit applications online directly from their mobile devices. This not only reduces the need for visits to physical branches, but also boosts the bank's operational efficiency by reducing queues and operational costs at branch offices. In addition, this service has the potential to expand the customer base to segments of society in remote areas or areas with limited physical access to bank offices. With mobile banking, financial institutions can reach new markets that were previously difficult to serve, while increasing customer satisfaction through ease and speed of transactions.

- Strengthening the modern image of financial institutions

  The implementation of mobile banking reflects that financial institutions are able to adapt to the development of digital technology and trends in consumer behavior today. The presence of this service strengthens public perception that banks are innovative institutions, proactive in providing relevant financial solutions, and ready to compete with fintechs and pure digital banks. This modern image is also a driving factor for increased customer trust, as they see that financial institutions are committed to delivering services that are not only safe and reliable, but also in line with the needs of a generation that prioritizes convenience, speed and digital access.

b. Weakness

- Requires high application development and maintenance costs

  Mobile banking development requires significant investment, from the system planning stage, user interface design, application function development, to rigorous security testing. After launch, the operational costs do not stop-periodic updates, server capacity upgrades, and bug fixes are required to maintain system performance and security. In addition, the need to stay up-to-date with technology and global security standards means that maintenance budgets tend to increase every year. This can be a financial burden especially for financial institutions that are still in the early stages of digital transformation.

- Dependence on complex IT infrastructur

  The success of mobile banking is highly dependent on the reliability of information technology infrastructure, including servers, internet networks, data centers, and cybersecurity systems. Technical disruptions such as server downtime, connectivity issues, or hardware malfunctions can result in sudden service interruptions, ultimately lowering customer satisfaction and trust levels. The complexity of the infrastructure makes the maintenance process more challenging and requires a skilled technical team. If human resources in technology are inadequate, the risk of service disruptions and delays in handling problems will be higher, thus negatively impacting the image and competitiveness of financial institutions.

2. External Analysis

a. Opportunities

- Leveraging infrastructure and reputation advantages to compete with fintechs and pure digital banks

  Conventional financial institutions have strategic assets in the form of extensive physical branch networks and reputations that have been built over the years. These advantages provide a trust factor that is difficult for new fintech players or pure digital banks that generally only operate online. By integrating mobile banking into an established service ecosystem, banks can develop a hybrid service model that combines the convenience of digital transactions with the security and personal touch of in-branch face-to-face services. These offline advantages also enable the provision of specialized services, such as in-person financial consultations or management of complex products (e.g. investments or large business loans) that are difficult to do entirely online. This hybrid model creates strong differentiation value and has the potential to expand market share.

- Retaining the loyalty of existing customers

  Digital transformation provides a great opportunity for banks to improve the retention of customers who have been using conventional services for a long time. By providing mobile banking access that is easy to use, secure, and integrated with physical services, banks can provide a more convenient experience for senior customers and generations that have not previously been accustomed to digital transactions. This strategy also opens up opportunities for cross-selling new products and services. For example,

customers who initially only used conventional savings accounts can be introduced to investment products, insurance, or digital payment services available on the mobile banking platform.

b. Threats

- Cybersecurity and data leakage risks

  Mobile banking services face serious threats from cyber-attacks such as phishing, malware, man-in-the-middle attacks, and system hacks. These attacks can result in the leakage of sensitive data such as personal information, account details, and transaction history. The worst impacts are direct financial losses for customers and banks, as well as reputational damage that can significantly reduce the level of public trust. This threat is growing with the increasing sophistication of attack methods that utilize artificial intelligence (AI-powered cyber attacks) or weaknesses in user devices. Therefore, banks should invest in multi-layered security systems, real-time threat monitoring, and digital security education for customers.

- Employee resistance to technological change

  The shift towards digital-based services often raises resistance from some employees, especially those who have been working with manual procedures or conventional systems for a long time. Fear of job loss due to automation, lack of understanding of new technology, and lack of training can be barriers to effective mobile banking implementation. If these resistances are not managed well, the technology adoption process will be slow, potentially leading to operational errors. To overcome this, a comprehensive change management strategy is needed, including intensive training, clear communication of the benefits of technology to employees, and incentivizing those who adapt quickly.

SWOT Matrix Analysis

Based on the results of the SWOT analysis that has been carried out, strategic steps for developing mobile banking services in conventional financial institutions can be formulated through the TOWS Matrix approach. This approach allows the integration of strengths, weaknesses, opportunities, and threats into four main strategies that can be implemented in a directed manner.

Table 2. Analisis SWOT Matrix

Strategy	Explanation	Example Implementation
SO (Strength–Opportunities)	Utilize internal strengths to seize external opportunities.	a. Optimize mobile banking technology for market penetration in rural areas. b. Add innovative features such as personalized financial advice, QR payment, and integration with e-wallets to strengthen modern image.
WO (Weakness–Opportunities)	Minimize internal weaknesses while capitalizing on opportunities.	a. Reduce application development costs with strategic partnerships with software vendors or fintechs. b. Improve IT infrastructure efficiency through adoption of cloud computing.
ST (Strength–Threats)	Use internal strengths to overcome external threats.	a. trengthen cybersecurity with AI-based multi-layer security system to maintain customer trust. b. Leverage reputation and loyalty of existing customers to compete with fintechs through digital loyalty programs.
WT (Weakness–Threats)	Minimize weaknesses while avoiding threats.	a. Conduct employee training and upskilling to be ready to adapt to new technologies. b. Adopt an international standard cybersecurity framework to reduce the risk of data leakage.

1. **Strategi SO (Strengths – Opportunities)**

SO strategy is focused on leveraging internal strengths to capture and optimize available external opportunities. In this context, financial institutions can rely on an established and sophisticated mobile banking infrastructure to expand service coverage to remote areas or areas that were previously difficult to reach. The bank's reputation as a trustworthy and reliable financial institution is an essential asset in winning the competition with fintech companies and pure digital banks.

Furthermore, the development of the hybrid service concept-which combines digital and face-to-face services-can create unique added value. This model not only provides flexibility to customers, but also delivers a more personalized service experience compared to fully digital competitors. As such, this strategy allows banks to strengthen their position as modern and inclusive financial service providers.

2. **Strategi WO (Weaknesses – Opportunities)**

The WO strategy focuses on reducing internal weaknesses in order to optimally utilize external opportunities. One of the weaknesses often faced is the high cost of developing and maintaining mobile banking applications. This challenge can be overcome by building strategic partnerships with technology providers or fintech companies that have specialized competencies in digital platform development.

In addition, a loyal existing customer base is an important opportunity to obtain internal support, both in terms of funding and strengthening information technology infrastructure. By capitalizing on this loyalty, banks can implement gradual system updates, improve service quality, and maintain customer satisfaction, resulting in sustainable mobile banking development.

3. **Strategi ST (Strengths – Threats)**

ST strategy aims to utilize internal strengths to face and anticipate threats that may arise in the market. Mobile banking infrastructure equipped with modern technology can be synergized with advanced cybersecurity systems. The implementation of advanced encryption technology, multi-factor authentication, and artificial intelligence-based anomaly detection systems can significantly reduce the risk of data leakage and cyberattacks.

On the other hand, the modern image of financial institutions can be maximized to maintain customer trust, especially in a situation of increasing public concern about data security. Regular employee training and competency development is also a crucial factor to reduce resistance to the adoption of new technologies, while ensuring that all staff have high adaptability to changes in the digital environment.

4. **Strategi WT (Weaknesses – Threats)**

The WT strategy is directed at minimizing internal weaknesses while reducing the impact of external threats. One strategic step is to develop a long-term digital transformation roadmap that includes an estimated development budget, regular system updates, and efficient information technology infrastructure governance. This aims to reduce dependence on complex systems that are prone to operational disruptions.

Furthermore, implementing a change management program is a vital instrument to overcome employee resistance to technological change. This program can include effective internal communication, adaptation training, and incentives for employees who play an active role in digital transformation. Thus, the mobile banking adoption process can run more smoothly, the risk of implementation failure can be reduced, and the organization's strategic goals can be achieved sustainably.

DISCUSSION

The increase in internet penetration and smartphone usage in Indonesia has been an important catalyst for the transformation towards digital banking, particularly through mobile banking services, which now serves as one of the key pillars in the national financial inclusion strategy. Study of Makusara et al., (2025) shows that mobile banking and digital wallets have significantly contributed to accelerating financial inclusion during the COVID-19 pandemic, especially in remote areas, with positive impacts on economic sustainability and reducing socio-economic disparities. This accelerated adoption is driven by the widespread penetration of smartphones, the increasingly affordable cost of internet access, and people's need for banking services that are fast, secure, and free of geographical boundaries. In the context of Indonesia as a developing country, where more than 100 million people are still unbanked (Sebayang et al., 2023), mobile banking is a strategic instrument to reach the unbanked segment of the population. In addition, the use of financial technology by conventional banks opens up opportunities to expand the market base, improve operational efficiency, and strengthen competitiveness in the midst of an increasingly digitized financial industry landscape.

The simplicity of use and practical benefits offered by mobile banking-such as instant transaction convenience, 24-hour service access, and flexibility without location restrictions-have proven to be key factors in driving high levels of customer satisfaction (Faisal, 2025). Jahan and Shahria (2022) study revealed that the relative advantage aspect-which includes the ease and speed of making transactions-was the most significant predictor in driving user satisfaction, especially among young people. Although safety and convenience factors are still considered important, their influence on satisfaction levels is relatively smaller than the direct benefits perceived from service speed and efficiency. In this context, the app's ability to facilitate transactions in a fast and responsive manner is a key element that reinforces customer loyalty and positive experiences with digital banking services.

The implementation of mobile banking services with full access for 24 hours a day is proven to have a significant positive relationship with increased usage intention as well as customer satisfaction. This service is considered superior because it combines perceived ease of use and perceived usefulness, which are the main drivers of digital banking technology adoption. The ability to conduct transactions anytime and anywhere provides a high level of flexibility for users, allowing them to manage their financial needs without being restricted by operating hours or branch locations. Such advantages not only increase time efficiency and remove geographical barriers, but also align with the demands of modern customers who expect fast, responsive and real-time accessible services.

From a SWOT analysis perspective, mobile banking has key strengths in its ability to expand the reach of financial inclusion, deliver superior user experience, and provide services that are fast and adaptive to the needs of modern society. However, the weaknesses are still prominent, namely the uneven adoption rate across all levels of society and vulnerability to digital security threats. On the opportunity side, advancing technological developments pave the way for the integration of artificial intelligence, big data analytics, and personalized financial services to enhance the value and relevance of services for customers. However, serious threats remain, such as potential cyberattacks and the digital divide between urban and rural areas. Therefore, an integrated mitigation strategy is needed that includes strengthening cybersecurity, improving people's digital literacy, and building inclusive technology infrastructure so that the benefits of mobile banking can be felt evenly and sustainably.

In this context, the development of a mobile banking strategy must also consider the aspects of sustainability and adaptability to market dynamics. Banks need to design a digital ecosystem that not only focuses on increasing transactions, but also on empowering customers through financial education, service transparency, and product innovation that is relevant to the needs of diverse user segments. Collaboration with technology providers and other stakeholders, such as the government and telecommunications operators, can accelerate the expansion of digital infrastructure and narrow the access gap between regions. With an inclusive, innovative and security-oriented

approach, mobile banking has the potential to be a key driver of digital financial transformation that can create sustainable economic, social and public trust value.

CONCLUSION

Digital transformation in Indonesia's banking sector has undergone significant acceleration as internet penetration and smartphone usage increases, making mobile banking one of the key innovations revolutionizing the way financial services are delivered. It enables customers to access a wide range of banking services anytime and anywhere, thereby improving the convenience, efficiency and competitiveness of financial institutions. However, despite these advancements, conventional financial institutions are still faced with a number of crucial challenges, such as high development costs, reliance on complex IT infrastructure, increasing cybersecurity risks, and internal resistance from employees towards the adoption of new technologies. Based on SWOT analysis, reputation, credibility, and customer loyalty are key strengths that can be leveraged to overcome these weaknesses. Potential opportunities include expanding financial inclusion for people in remote areas that were previously difficult to reach, as well as improving operational efficiency through process automation and the use of smart analytics technology. Threats, such as the digital divide between urban and rural areas, as well as increasing cyber risks, must be anticipated through planned mitigation strategies. Therefore, a sustainable mobile banking development strategy must prioritize cross-stakeholder collaboration, relevant product innovation, and an inclusive approach that ensures equitable access across all levels of society, so as to create added value that not only benefits customers, but also encourages the growth of the national digital economy as a whole.

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