

LITERATURE REVIEW ON ADOPTION OF ICT IN THE MALAYSIAN BANKING SECTOR:
ENHANCING CUSTOMER EASE OF PROCESSES.

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ABSTRACT

The rapid evolution of Information and Communication Technology (ICT) has transformed the banking industry globally, including in Malaysia. This paper explores how Malaysian banks are adopting ICT to streamline processes and improve customer satisfaction. The study draws on a comprehensive thesis and other scholarly references to examine ICT tools used, benefits realized, and challenges faced by banks. It also analyzes customer perspectives through a quantitative approach and proposes recommendations to strengthen ICT integration. The findings affirm that ICT adoption is crucial to operational efficiency and customer engagement, though further investment and strategic planning are essential to address ongoing issues such as cybersecurity, digital divide, and technological readiness.

Keywords: ICT Adoption; Digital Service Accessibility; Customer Satisfaction.

INTRODUCTION

Background

The digital transformation in banking has reshaped the industry's service delivery. ICT offers banks the ability to provide faster, more reliable, and cost-effective services. In Malaysia, banks are increasingly leveraging ICT to offer customer-friendly solutions, automate operations, and meet regulatory expectations (Bank Negara Malaysia, 2021). By understanding the interplay between ICT adoption and customer satisfaction, the study seeks to illuminate the path for banks to streamline their banking processes effectively. This research does not merely scratch the surface but delves into the core of customer-bank interactions, aiming to offer insights that are not only academically enriching but also practically invaluable for the banking industry in Malaysia. Through this in-depth analysis, the study endeavors to contribute to a future where banking services are not just technologically

advanced but also profoundly customer-centric, ensuring that the promises of convenience, efficiency, and accessibility are not just aspirations but lived realities for every customer in the Malaysian banking landscape. Through this in-depth analysis, the study endeavors to contribute to a future where banking services are not just technologically advanced but also profoundly customer-centric, ensuring that the promises of convenience, efficiency, and accessibility are not just aspirations but lived realities for every customer in the Malaysian banking landscape. Information and communication technology (ICT) is becoming increasingly commonplace in many fields because of the modern world's rapidly developing digital world (Basu, & Malik, 2020). When it comes to serving customers and streamlining operations, the banking industry has fully embraced ICT. The use of information and communication technology (ICT) in Malaysian banks has been on the rise in recent years. The widespread implementation of ICT in businesses has resulted in a sea change in the banking sector in recent years (Kyeremeh, et al., 2019). Modern banking has been completely transformed by ICT, with a plethora of digital services now available for customers. The business world of the twenty-first century, and the banking industry, is characterized by a volatile and cutthroat economic climate and a constant flux of external factors. Technology for sharing and exchanging information and ideas (ICT) is at the epicenter of this worldwide shift. Customers can now open accounts online without ever having to interact with a human banker, thanks to self-service facilities made possible by advances in information and communication technology, such as automated customer service machines. The service helps clients verify their account numbers and learn how and when to expect checkbooks, credit cards, and debit cards. When it comes to remaining competitive on a local, national, and international scale, banks cannot afford to ignore the necessity of incorporating ICT-related ideas, methods, policies, and strategies into their service delivery processes. The proliferation of information and communication technologies (ICT) has led to a proliferation of cutting-edge tools that may be used to increase both the efficiency and effectiveness of service delivery in banking institutions all over the world. This study embarks on a comprehensive exploration of the multifaceted aspects of ICT adoption in Malaysian banks. It delves deep into the intricate web of technologies, strategies, and innovations that banks have embraced to enhance their operational efficiency and customer experience. By scrutinizing the adoption of ICT, including digital platforms, mobile applications, and online services, the study aims to uncover the underlying mechanisms that drive customer satisfaction. The focus is not only on the technological aspects but also on the human element - how these technological advancements align with the genuine needs and preferences of customers. One of the pivotal objectives of this research is to identify the nuances of customer satisfaction within the context of these digital transformations.

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effectively. This research does not merely scratch the surface but delves into the core of customer-bank interactions, aiming to offer insights that are not only academically enriching but also practically invaluable for the banking industry in Malaysia. Through this in-depth analysis, the study endeavors to contribute to a future where banking services are not just technologically advanced but also profoundly customer-centric, ensuring that the promises of convenience, efficiency, and accessibility are not just aspirations but lived realities for every customer in the Malaysian banking landscape.

Problem Statement

Traditional banking processes in Malaysia often involved physical paperwork, long queues, and operational inefficiencies. As customers demand faster and more convenient services, banks must adopt ICT to stay competitive. Despite substantial investments, gaps remain in digital inclusivity, system reliability, and customer satisfaction (McKendrick, 2023). This study aims to investigate the relationship between ICT adoption in the banking sector, digital service accessibility, customer awareness of ICT, and its impact on customer satisfaction with the ease of banking processes in Malaysia. Understanding these dynamics is vital in shaping the future of banking services and ensuring customer-centric approaches in the digital age. This misalignment might be attributed to several different circumstances. An insufficiently accessible digital service, which may be characterized by bugs, downtimes, or interfaces that are not user-friendly, may dramatically diminish the quality of the user experience. Inadequate consumer education on ICT services is also a contributing factor, which makes the problem even worse. It's possible that a customer's experience with a digital platform's services won't be as satisfying as it may be if they don't have a complete understanding of the platform's capabilities and functionalities (Wiredu, 2022). This could lead to consumer dissatisfaction. The incorporation of technology into the operations of banking is a complex task. Even while digital solutions are being implemented, there is no guarantee that they will be successful in the contexts in which they will be used. It is possible that instead of improving procedures, these technologies will create bottlenecks and disruptions if they are not integrated smoothly into the framework that is already in place in the banking industry. Customers who are looking for transactions that are seamless and trouble-free may become frustrated because of the mismatch that exists between the digital world and the traditional banking environment (Alla Klimenko, 2023).

Objectives

- Assess the extent of ICT adoption in Malaysian banks.

- Explore the impact of ICT on customer ease of processes.
- Identify barriers to ICT integration.
- Offer actionable recommendations for improving ICT use in banking.

Significance of Study

This study is of the greatest significance when considering the landscape of the banking industry in Malaysia as well as the broader societal implications of its findings. This research acts as a compass for Malaysia's banking institutions and the government as it helps the country rapidly develop into the digital age. To shape the future of banking experiences, it is essential to have a comprehensive understanding of the subtle dynamics of the adoption of ICT, the accessibility of digital services, and customer awareness.

Researching the effect that increased use of information and communications technology has had on customer satisfaction in the banking industry is important because it has the potential to yield useful insights for banks, policymakers, and customers alike. The findings of this study have the potential to help improve the quality of the customer experience, increase operational efficiency, and foster banking inclusion.

Banks can identify significant areas in which information and communication technology can be exploited to improve the customer experience if they first understand the relationship between the adoption of ICT and customer happiness. This involves simplifying banking operations, creating digital interfaces that are easy to use, and providing personalized banking services based on an analysis of consumer data.

The adoption of information and communication technologies has the potential to greatly improve the operational efficiency of the banking sector. Banks can decrease their operational expenses, enhance their productivity, and improve their overall service delivery if they automate routine processes, reduce the number of errors caused by manual labor, and optimize how resources are allocated.

By providing underprivileged groups with greater access to banking services, information and communications technology has the potential to play a pivotal role in the promotion of banking inclusion. Mobile banking, for example, can serve people in outlying regions and give banking services to people who do not have access to conventional bank branches housed in brick-and-mortar buildings.

Limitations of Study

The study will be limited to a sample of bank customers from Kuala Lumpur Malaysia. This may not be representative of the entire Malaysian bank customer population.

The study will rely on self-reported data from customers on their ICT adoption, digital service accessibility, customer awareness of ICT, and customer satisfaction with the ease of banking processes. This data may be subject to bias and recall errors.

The study will use a cross-sectional design, which means that data will be collected at a single point in time. This limits the ability of the study to establish causality between ICT adoption and customer satisfaction with the ease of banking processes.

The findings of the study may not be generalizable to all Malaysian banks. The banking sector in Malaysia is diverse, and there is a wide range of ICT adoption levels among banks.

The study will focus on the banking sector in Kuala Lumpur Malaysia and will not include a comparison with other countries. The study will not focus on the impact of ICT adoption on specific banking services or the long-term impact of ICT adoption on customer satisfaction.

LITERATURE REVIEW

ICT and Banking

ICT tools—such as internet banking, mobile apps, ATMs, and customer relationship management (CRM) systems—have revolutionized banking by providing 24/7 access, reducing human error, and enabling digital transactions (Laudon & Laudon, 2020). According to Davis (1989), technology acceptance is driven by perceived usefulness and ease of use, critical factors in banking technology adoption. According to Jeník, et al., (2020), banks analyze the profitability of their electronic banking delivery channel by looking at both the income they earn from customers' fees and any other ways in which they may reduce costs. Because of the evident reduction in expenses connected with staff, space rental, back-office paperwork, and infrastructure, the adoption of e-banking guarantees operational efficiency. In addition, the traditional model of banking, in which consumers dealt with bank tellers in a physical location, has been supplanted by the electronic banking paradigm.

The above-mentioned definitions and the trend of banks looking elsewhere to save costs rather than bolstering the profitability of e-banking delivery channels share

certain similarities. Jaafar, et al., (2023) claim that e-banking solves problems like traditional banking's inefficiencies. This has led to a widespread trend of banks encouraging their clients to switch to banking online or via mobile device. The rising popularity of online banking among customers allows banks to take advantage of economies of scale (Chaimaa, et al., 2021). Electronic distribution streamlines the service delivery process and improves efficiency, timeliness, and quality of service for customers and service providers alike. Because of these benefits, more than half of all financial transactions are now conducted electronically (Pazarbasioglu, et al., 2020). Numerous academic studies have looked at how the rise of the Internet and mobile phone use has affected Malaysia's banking industry. In-depth research on the several forms of banking automation in Malaysia was undertaken by Festus et al. (2020), which incorporates the following:

(i) Bankers Automated Clearing Services: checks are read using a Magnetic Ink Character Reader (MICR). It can encode, decode, and sort checks and other monetary instruments.

(ii) Automated Payment Systems, which involve the usage of devices like ATMs, plastic cards, and electronic funds transfers.

(iii) Automated delivery channels, such as the World Wide Web and interactive television.

Researchers Halim et al. (2023) found that the banking business in Malaysia is the most reliant on IT and has the largest IT expenditure of any industry in the country. He said that the success of Malaysia's internet system was to blame for the country's growth of banks with online presences. What he also discovered is that consumers can utilize their accounts at any branch, not simply the one where the account was opened.

ICT in Malaysian Banks

Malaysia's banking sector has implemented ICT solutions to support its Financial Sector Blueprint 2022-2026 (Bank Negara Malaysia, 2021). Most major banks offer mobile banking apps, online account management, and AI-based chat support. However, implementation levels vary, especially among smaller banks, due to cost and infrastructure limitations. ICT allows for instantaneous monetary transactions and transfers, as found in a study by Pazarbasioglu et al. (2020). Instantaneous money transfers, bill payments, and online purchases make it easier for customers to conduct business with financial institutions. Faster payment processing, inventory management, and order fulfilment are further benefits of real-time transactions for organizations. ICT has facilitated the growth of cutting-edge security protocols such as encryption methods, biometric authentication, and multi-factor authentication,

which has improved the safety of banking operations, according to studies (Balkan, 2021). Customers can have more faith in their bank because these safeguards are in place to keep their personal information safe, stop fraud, and keep their financial transactions honest.

Customer Benefits

ICT allows customers to conduct transactions remotely, check balances, pay bills, and request services with ease. Mobile and internet banking are praised for their speed and convenience (COMPLETE THESIS, 2025). CRM and data analytics enhance service personalization, fostering deeper customer relationships (Goh, 2020). Alsmadi et al. (2023) conducted a similar study and found that the widespread use of ICT in Malaysian banks has led to greater cooperation between traditional and nontraditional banking methods. This syncing makes it easy for clients to manage their finances whenever and wherever they choose. By embracing digitalization through ICT adoption, Malaysian banks have been able to provide their customers with 24/7 accessibility and flexibility, thus enhancing customer satisfaction. The term "customer satisfaction with the ease of the banking process" (Zouari & Abdelhedi, 2021) refers to a customer's level of happiness and fulfilment because of utilizing financial services, with a special emphasis on the ease, efficiency, and convenience of using these services. Customers' satisfaction with the ease with which they may do a variety of banking transactions (including, but not limited to, transferring funds, paying bills, and inquiring about account balances) is reflected in this metric. Customers in Malaysia have greatly benefited from the banking industry's embrace of ICT, which has made several formerly difficult tasks much simpler to complete (Al-Gharaibah, 2020). Banking operations have been streamlined, new services have been introduced, and customer service has been enhanced thanks to ICT.

The proliferation of online banking is one of the most visible results of widespread ICT usage. Customers may manage their finances at any time and from any location, thanks to digital banking channels including online banking and mobile banking. Customers, especially those in remote places or with hectic schedules, have benefited from this development (Pazarbasioglu et al., 2020). The development of ICT has had significant effects, one of which is the automation of many monetary operations. Account opening, loan applications, and money transfers are all examples (Javaid et al., 2022). Because of automation, customers may now execute these jobs more quickly, with less effort, and with fewer mistakes.

The literature review also emphasizes how ICT adoption has enabled Malaysian banks to offer personalized services tailored to individual customers' needs. The utilization of data analytics tools integrated with ICT systems enables banks to analyze

customer behavior patterns and preferences accurately (Almaiah, et al., 2022). As a result, they can anticipate customers' needs proactively and provide customized recommendations or offers accordingly. This level of personalization enhances customer engagement while fostering long-term relationships between customers and banks. Customer awareness of ICT refers to the level of knowledge and understanding that customers have about ICT and its application in banking services (Noreen, et al., 2023). This includes factors such as customer familiarity with ICT terminology, their ability to navigate digital banking platforms, and their awareness of ICT-enabled banking features.

Satisfaction with a bank's services may be influenced by the customer's awareness of information and communication technologies. Customers with a higher level of ICT literacy were shown to have a higher likelihood of using and satisfaction with digital banking services, according to research by Pazarbasioglu et al. (2020). Similarly, Foroughi et al. (2019) found that customers who were more knowledgeable about mobile banking features were happier overall.

Customer Awareness of ICT in banking signifies the knowledge and understanding customers possess regarding digital banking services and technologies. In the dynamic landscape of banking technology, customer awareness is paramount. Studies by Omarini, (2022) highlight the pivotal role of customer awareness programs. These initiatives educate clients about the diverse capabilities and advantages offered by digital banking, from online transactions to mobile banking applications.

Challenges

Notable challenges include:

- Technical issues: Frequent downtime and poor mobile app design.
- Security concerns: Increasing cases of phishing and fraud (Chong et al., 2022).
- Digital illiteracy: Many rural or older customers struggle with ICT tools.
- Resource gaps: Smaller banks face high costs for implementing secure and scalable ICT systems.

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Customer Awareness of ICT in banking signifies the knowledge and understanding customers possess regarding digital banking services and technologies. In the dynamic landscape of banking technology, customer awareness is paramount. Studies by Omarini, (2022) highlight the pivotal role of customer awareness programs. These initiatives educate clients about the diverse capabilities and advantages offered by digital banking, from online transactions to mobile banking applications. Effective customer education initiatives bridge the knowledge gap, empowering customers to embrace digital banking confidently (Malchenko, et al., 2020). In the digital era, where banking services are evolving rapidly, informed customers are key drivers of the sector's progress. Fostering customer awareness not only benefits individual customers but also contributes significantly to the overall advancement and acceptance of digital banking technologies (Chan, et al., 2022). One of the most significant impacts of ICT adoption lies in its ability to enhance operational efficiency. Traditional banking processes often involved cumbersome paperwork and manual interventions, leading to prolonged transaction times and occasional errors. With the integration of ICT, these processes have undergone a radical transformation (Dasgupta, 2023). Automation of routine tasks, real-time data processing, and seamless integration between various banking functions have streamlined operations significantly. As a result, transaction times have been substantially reduced, ensuring that customers experience swift and efficient service.

Crucially, the adoption of ICT has ushered in a new era of customer-centricity within Malaysian banks. By leveraging digital technologies, banks have been able to craft personalized and intuitive customer experiences (Vial, 2021). Online interfaces are designed to be user-friendly, allowing customers to navigate through banking services effortlessly. Moreover, the availability of 24/7 online services ensures that customers have access to their accounts and essential banking functions at any time, transcending the constraints of traditional banking hours. These digital platforms not only facilitate transactions but also provide customers with tools for financial management, thereby empowering them with greater control over their finances (Vial, 2021).

CONCLUSION

The integration of ICT in Malaysian banks has significantly enhanced customer convenience, operational efficiency, and service accessibility. While the adoption trajectory is promising, it is not without hurdles. Technical, regulatory, and user-related challenges must be addressed through strategic investments, customer-centric design, and inclusive policies. As digital banking continues to evolve, the focus must shift towards resilient, adaptive, and inclusive ICT strategies that deliver value to both banks and customers. The completion of a research study with the

working title "Adoption of ICT by banking sector to give customer ease of processes in Malaysian banks" is the ultimate objective of all this laborious work. The author establishes the framework for the reader to comprehend the historical backdrop of Customer Satisfaction with the Ease of Banking Process and how it has emerged as a cultural phenomenon in recent years (Chapter 1) in the first few chapters of the book. The reader will be able to do this by reading Chapter 1. We carried out a survey of the relevant prior research (Chapter 2) to lay the foundation for the theoretical framework that would serve as the basis for our investigation. Customer Satisfaction with the Ease of Banking Process was the dependent variable, and the Pearson Coefficient Correlation test was used to analyze the strength of the association between the three independent variables (ICT Adoption in Banking, Digital Service Accessibility, and Customer Awareness of ICT). The results showed that there was a positive correlation between ICT Adoption in Banking, Digital Service Accessibility, and Customer Awareness of ICT, and the Customer Satisfaction with the Ease of Banking Process. We put this hypothesis to the test to determine the extent of the dependence that existed between the independent and dependent variables. The data that were gathered for this study provide support for all three of the hypotheses that were made.

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