ANALYSING THE IMPACT OF RISK ON CONSUMER TRUST IN DIGITAL BANKING TRANSFORMATION

by

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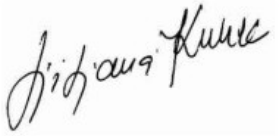

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Dedication

I dedicate this thesis to all the organizations and professionals who work tirelessly to make the digital banking world safer—strengthening cybersecurity, combating emerging threats, and building trust in online financial services. Your efforts inspire a more secure and resilient digital future.

I also dedicate this work to my parents and to all elder individuals who continue to adapt with strength and openness to the fast-paced digital era. Your perseverance motivates my commitment to creating inclusive and trustworthy digital experiences.

Finally, I dedicate this thesis to my mentor, Dr. Anuja Shukla, whose guidance, encouragement, and unwavering support have been a source of inspiration throughout this journey.

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Lastly, I express my appreciation to all elder individuals who continue to adapt to the fast-evolving digital era. Their resilience reminds us of the importance of creating secure, inclusive, and user-friendly digital environments for all generations.

To everyone who has contributed, encouraged, and inspired me along the way—thank you.

ABSTRACT

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This study looks into how consumer trust and intention to continue using digital banking are affected by risk-related issues. Customers are becoming more vulnerable to cybersecurity risks, privacy violations, and perceived service uncertainty as a result of the banking industry's rapid digital transformation. The purpose of this study is to investigate the relationship between consumers' inclination to stick with digital banking services and their level of awareness of security assaults, perceived risk, security and privacy concerns, age, and online banking experience. Primary data were collected through self-administered questionnaire, and 387 valuable and usable responses were recorded. The analysis was conducted using SmartPLS 4 software, the data were analysed using the partial least square structural equation modelling (PLS-SEM) approach. According to the study's findings, digital trust is perceived as being effectively managed rather than just the absence of risks. When banks uphold open communication, strong security, and privacy policies, informed

consumers show greater trust and loyalty. These results offer tactical guidance for initiatives aimed at retaining customers in digital banking. The study theoretically extends the knowledge of consumer behaviour in emerging field of digital banking and practically, it will help banking section adoption of digital infrastructure to understand the need of the consumer.

Keywords: *Consumer Trust, Digital Banking, Banking Industry, Cybersecurity Risks, Privacy Violations, Digital Transformation.*

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LIST OF ABBREVIATIONS

Abbreviations	Full Form
DLT	Distributed Ledger Technology
AI	Artificial Intelligence
KYC	Know Your Customer
OB	Open Banking
TAM	Technology Acceptance and Adoption Model
TRA	Theory of Reasoned Action
PLS	Partially Least Squares
SEM	Structural Equation Modelling
ATMs	Automated Teller Machines
KPIs	Key Performance Indicators
MSMEs	Micro, Small, and Medium-Sized Enterprises
PI	Purchasing Intention
DT	Digital Transformation
CI	Continuance Intention
ASA	Awareness of Security Attacks
PR	Perceived Risk

SC	Security Concerns
PC	Privacy Concerns
PT	Perceived Trust
ANN	Artificial Neural Network

CHAPTER I:

INTRODUCTION

1.1 Introduction

The modern digital technology is the driver of significant change in the world banking industry (Skvarciany and Jurevičienė, 2018). The advent of digital banking has revolutionised the provision of financial services by making account management, transaction processing, and customer support accessible from a variety of devices and locations. It has contributed to the occurrence of an innovative and competitive financial environment that has replaced and or upgraded old banking models with digital platforms (Wolska, 2025). Though this change may carry a lot of benefits it also comes with additional levels of complexity and risk especially when it comes to security issues to do with cyber security, system reliability and customer data security.

With digital channels now the most common touchpoint of consumers, issues related to risk and trust have emerged as a crucial aspect. Cybersecurity threats, phishing-based attacks, data breaches, and misuse of personal information may decrease customer trust and affect their desire to maintain the use of digital banks (Şenyapar, 2024). Thus, it is very important to comprehend how these risk factors impact consumer perceptions. Trust is one of the pillars of all financial transactions and its importance should be increased in a virtual world where people use systems instead of human-to-human communication.

This paper is an attempt to deconstruct the process of perceived risk and perceived security issues that influence consumer trust. Through the study of such variables, the study aims at offering an in-depth explanation of the trust dynamics within the digital space. The results will provide meaningful implications both to businesses that want to increase consumer confidence and to regulators that want to have more secure online spaces.

Maintaining and enhancing customer trust is not an option but a must in this era of digital engagement. Imparting high-security levels and being clear about communication tactics to limit perceived dangers and boost perceived trust, the study adds to the existing debate on the topic of digital security and consumer behaviour.

Digital Banking Transformation: An Emerging Landscape

The fast growth of digital technology and changing consumer tastes have had a significant influence on the banking industry, among other sectors. Online banking and other mobile financial services are no longer seen as an afterthought by financial institutions; rather, they are seen as core to their business model. The banking industry and customer interactions have been profoundly affected by technological advancements. Technologies like as mode, instantaneous data analytics, biometric security, and distributed ledger technology are a few examples. Banks are undergoing a strategic and technological shift as they replace antiquated models with new ones that are data-driven, customer-centric, and nimble (Deng, Huang and Cheng, 2019).

Consequently, it has brought to the digital banking system the most significant environment where speed is the key, convenience and personalisation are the most important factors. Nevertheless, as much as these innovations have many advantages, they also come in with new complexities and challenges-especially in terms of trust and risk managing in a full digital world. Analysis of the present state of affairs between customers and banks is crucial, especially with regard to how customers see and react to dangers inherent in the emerging digital banking landscape, and how this understanding relates to customers' faith in banks (Shin and Choi, 2019).

All economic entities must undergo digital transformation in today's fast-paced technology world. One way that banks might save money through digital transformation is by laying off workers and opening fewer physical offices. Online banking, point-of-sale

systems, and e-branch stores all contribute to the expansion of service channels (Deng, Huang and Cheng, 2019; Shin and Choi, 2019). This is why, according to Giatsidis, Kitsios and Kamariotou (2019), Compared to other industries globally, the banking industry invests three times as much on information technology. Financial institutions are contemplating new forms of operation. Conventional business practices are being transformed by digitalisation, disruptive innovation, and new technologies. Therefore, in order to stay competitive, banks will need to adapt their business models to future changes in client interactions, middle- and back-office procedures, and more.

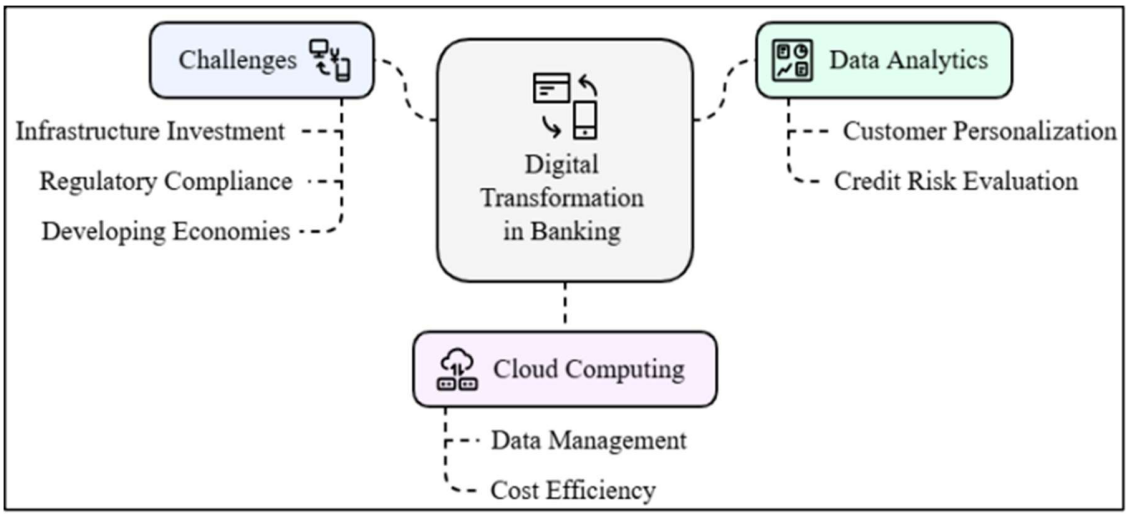

Figure 1.1: Digital Transformation in Banking

Source: (Munira, 2025)

Figure 1.1 shows the main factors that are impacting digital transformation in the banking industry. The transformation is supported by Cloud Computing, which enhances data management and improves cost efficiency. Simultaneously, Data Analytics enables customer personalisation and credit risk evaluation, allowing banks to deliver more targeted and risk-aware services. However, the journey toward digitalisation is not without challenges, including the need for significant infrastructure investment, ensuring

regulatory compliance, and addressing the constraints of developing economies (Munira, 2025).

Separate but related factors have also had a role in the shift to online banking. Here are a few instances: enthusiasm to embrace new technology as it comes, the necessity to de-regulate the sector, the necessity to expand service channels, and the wish to open the market to new entrants like Alipay and PayPal, who will undoubtedly raise competition (Kitsios, Giatsidis and Kamariotou, 2021; Zhao, Tsai and Wang, 2019). used the term "open point of banking" to describe any company that offers services unrelated to banking. Half of the individuals polled were willing to give these products a go.

Organisations in the financial sector and beyond should make measuring operational outcomes a top priority. Pio et al. (2024)states that this evaluation is crucial since it shows that they are financially efficient to investors, competitors, and market participants, which gives customers more faith in them. Nguyen, Tripe and Ngo (2018); Khan and Shireen (2020); Allen and Rai (1996) suggests the Operational Efficiency Index (OEI), which is determined by dividing the cost by the income.

According to Schepinin and Bataev (2019); R, Kuanr and KR (2021), With the use of digital technologies such as industry 4.0, the banking industry has ushered in a new age of operational efficiency. This has completely transformed the way financial procedures are carried out, tracked, and made easier. In addition to reducing the likelihood of human mistake, the digitisation and automation of mundane tasks has sped up the processing of financial transactions, thereby saving both time and money. Additionally, financial institutions can collect, analyse, and analyse vast amounts of data using digital platforms. Institutions can use this data to make informed decisions about resource allocation, risk management, and service enhancement (Banna and Alam, 2021; Pandey, Mittal and Subbiah, 2021; Al-Dmour *et al.*, 2022). According to Beheshtinia and Omidi (2017), the

digitalisation paradigm has improved the sector's overall efficiency by balancing various functions within banks and maximising the effectiveness of each component.

In conclusion, digitalisation of banking is a radical shift in the availability, distribution, and experience of financial services. The new landscape has been defined by great convenient, fast and efficient solutions that banks can deploy to deal with the changing consumer attitudes defined by the tech-savvy values. In spite of all this, we have witnessed the problem of safety of the system, consumer trust and adherence to regulations. Since digital banking keeps evolving, one should look beyond technological advancement and, instead, focus on consumer trust, data security, and a comprehensive enhancement of accessibility. It is not whether one can construe the larger picture of this change but whether it can be introduced to have robust customer-centric banking systems that may be viable enough to exist in a world of increasing digital financial culture.

The Importance of Consumer Trust in Digital Finance

Consumer trust has become a core component of the adoption and continued usage of fintech and online financial services in the fast-paced environment and has an enormous impact on the industry. As compared to the traditional banking system, the digital financial environment has no physical presence, further increasing the consumer fear of data security, privacy, and the overall reliability of the platforms (Adelaja *et al.*, 2024). In this case, the concept of trust mostly depends on the quality of handling privacy issues and other perceived risks by digital platforms, which has a direct correlation to the willingness to interact as a user. Customers are more hesitant to provide their sensitive financial and personal information on the Internet, especially when considering growing numbers of cybersecurity risks and data abuse incidents. When users feel that a certain platform is not able to adequately safeguard their privacy or avoid fraud, then they perceive an even greater risk and become unwilling to participate in it or even abandon it altogether. Conversely,

when a digital financial service demonstrates transparency, adheres to regulations, and implements robust security measures, it fosters trust and encourages greater consumer engagement. Therefore, building and sustaining consumer trust by addressing privacy and risk concerns is not just a competitive edge but a crucial factor for the success of digital finance (Shree *et al.*, 2021).

Financial services are being revolutionised by digital innovation. Recent years have seen a proliferation of new financial technologies, including robo-advice, mobile money, insurtech, and crypto-assets. 2 Retail customers now have easier and more convenient access to financial services because to fintech, which has been more prevalent for retail users. The wholesale markets of many different industries are being transformed by "Distributed Ledger Technology" (DLT), cloud computing, and artificial intelligence (AI). This includes finance, suptech, and regulatory and supervisory technology, among many others. In response to the increasing demand for innovative products and services, a plethora of new companies have emerged, and many of the more well-established ones have prioritised digital transformation in their long-term plans (Feyen, 2021). The best banks are rapidly digitising their customer services and internal processes to compete with fintechs and large tech businesses (Aguir, 2018).

Although these changes may lead to more market concentration, they also hold the promise of making markets more diverse, competitive, efficient, and inclusive. Innovation has facilitated greater inclusion and competitiveness, particularly in growing markets and underdeveloped nations (Frost, 2021). The markets with the least developed financial systems seem to have been the ones where fintech really took off (Didier, 2021). New technology and the fundamental economics of intermediation, however, might cause both old and new financial service providers to become more concentrated. Major tech platforms are already under investigation for potentially monopolistic or anticompetitive practices.

The financial services industry is experiencing fast change as a result of new players and business models. Regulators are confronted with the challenge of keeping consumers safe, maintaining financial integrity, ensuring fair competition, and maintaining stability, all while protecting people's data. The rapid advancement of technology can be attributed to the COVID-19 pandemic. In the near future, once the COVID-19 epidemic has passed, digital connectivity will be essential for the creation of financial services and the replacement of in-person contacts between consumers and service providers. This is vital for economies, businesses, and individuals alike. Consider the rise of online payment systems, the epidemic has accelerated their acceptance (Auer, Cornelli and Frost, 2020). It has also increased the number of people buying things online, which can be beneficial to the financial stability of large IT corporations (Alfonso *et al.*, 2020). Didier (2021) found that the download of financial apps spiked shortly after the pandemic in countries with tougher COVID-19 legislation and fewer community mobility. Additionally, it can be speeding up the process of CBDC development, which refers to digital currencies that are issued and administered by central banks (Auer, Cornelli and Frost, 2021).

Understanding the elements that impact customer trust is crucial in light of the dramatic changes brought about by the move towards digital banking, which have revolutionised the financial environment. In one study Gupta and Shukla (2024a) investigate how both actual and perceived security measures, as well as legal and regulatory frameworks, contribute to customers' faith in online banking.

Table 1.1: Key Determinants of Consumer Trust in Digital Financial Services

Major Category	**Specific Focus Area**	**Key Elements and Examples**
Policy & Regulatory Aspects	Legal Compliance Measures	Adherence to GDPR, PSD2 norms, Know Your Customer (KYC) practices, and audit documentation
	User Protection Frameworks	Systems to prevent fraud, manage complaints, and ensure account-level security

	Information Transparency	Clearly stated usage conditions, privacy disclosures, and user terms
	Legal Enforcement Actions	Regulatory fines, imposed sanctions, legal suits, and routine compliance inspections
System & Data Security	Security Technologies	Use of data encryption, biometric verification, and secure communication protocols
	Threat & Risk Handling	Implementation of risk evaluations and incident mitigation strategies
	User-Centric Design	User interface efficiency, easy system navigation, and error resolution mechanisms
	Data Handling Practices	Data retention methods, user access management, and protocols for breach notifications
Trust & Perception	Building Initial Trust	Organisational reputation, onboarding experience, and promotional messaging
	Sustaining Customer Confidence	Regular updates, support services, and proactive system improvements
	Negative Event Management	Handling of fraud cases, system failures, and exposure of sensitive information
	Social & Peer Influence	Feedback from peers, online testimonials, and family-based endorsements

Source: (Gupta and Shukla, 2024)

As shown in Table 1.1 above, the determinants of consumer trust in digital financial services are presented, which indicates the interrelationship between regulatory frameworks, technological safeguards, user experiences, and social factors. The digital finance ecosystem, which includes mobile banking, online lending, digital wallets and robo-advisory, is all about consumer trust as a prerequisite to adoption and continued engagement. The protection of the data and financial transparency is possible due to regulatory compliance based on such standards as GDPR, PSD, and KYC, as they help generate a sense of trust toward the institution. Fraud, dispute resolution, and enforcement

policy give the users a feeling of security and institutional accountability. At the same time, the application of technological protection, including encryption, biometric authentication, and secure protocols increases the perceived sense of security, whereas a well-developed risk management and user-friendly interface will provide a quality and credible user experience. Data management practices, including ethical storage and timely breach notifications, further reinforce confidence. Trust is initially formed through brand reputation, user-friendly onboarding, and marketing, and must be maintained through ongoing support, updates, and transparent communication. Negative experiences like data breaches or service outages can erode trust quickly, making effective incident response critical. Additionally, peer influence through reviews and recommendations significantly shapes consumer perception. In essence, consumer trust in digital finance is not incidental—it is strategically cultivated through consistent, transparent, and secure practices that span both institutional policy and user interaction (Gupta and Shukla, 2024).

In conclusion, consumer trust stands as a foundational pillar in the success and sustainability of digital finance. As financial transactions increasingly transition from traditional, face-to-face environments to remote, technology-driven platforms, the absence of physical interaction makes trust more essential than ever. Consumers must believe that their personal information is secure, that digital systems will function reliably, and that financial institutions are acting in their best interest. As fintech innovations reshape the financial services landscape, trust must be actively cultivated through robust regulatory compliance, advanced security mechanisms, and transparent data management practices. The dynamic interplay of these factors, as illustrated by regulatory standards like GDPR and PSD2, technological tools like biometric authentication, and user experience design, determines the extent to which consumers feel secure and valued. Furthermore, the role of peer influence, especially in an age of hyper connectivity and social validation, cannot be

understated. Negative incidents such as data breaches or system outages can rapidly damage trust, making swift and effective response measures essential. Ultimately, trust is not a static outcome but an evolving relationship between digital financial service providers and their users. It requires continuous investment in credibility, responsiveness, and ethical stewardship to ensure sustained growth in an increasingly digital and competitive financial environment.

Risk Factors in the Digital Banking Environment

There is a continual shift occurring in the banking industry. Omarini (2022) note that new business value propositions are cropping up in the financial services industry; some are trying to enhance the user experience, while others are offering banks assistance in rapidly and efficiently innovating their products, procedures, and channels of contact. Streamlining processes and lowering regulatory costs are the primary goals of these endeavours. In many different markets, banks are shifting their focus and reorganising their value chains. As a result, strategists no longer ignore value chains. The banking industry has seen a dramatic shift from the pipeline model, which is based on vertical integration, to the open banking paradigm, which is built on modularity, open innovation, and ecosystem-based banking business models. Because of the ever-changing nature of this environment, banks encounter both opportunities and challenges caused by digital technology. At a greater level than before, technology is now a strategic choice. The extent to which banks and other intermediate financial institutions may reimagine their place in the market is dependent on this (Omarini, 2018).

The growth of digital banking has significantly benefited the financial institutions and consumers as it has provided better accessibility, speed as well as efficiency in carrying out financial transactions. However, this trend toward electronic media also presents a

complex set of risk factors that may compromise the stability, security, and reliability of banking systems.

Among the most common are cyber threats, which can manifest in a variety of ways, including but not limited to phishing, data breaches, malware, identity theft, and financial data breaches. In such a space, the financial institutions face the threat of constant evolution and are forced to cope with the evolving nature of the digital threats and are now forced to implement a solid and flexible security framework that helps to guard against the same they are facing. Moreover, the risk environment further tenses with operational risks e.g. system failure, technicalities, third party vulnerability. With more customers giving their personal and financial details to the bank with each passing day, breaking of trust or feelings of insecurity can mostly destroy willingness to remain a customer. Thus, recognition of these risk factors is vital in not only trying to protect institutional integrity but also in to the extent of customer confidence in the digital banking services (Jimmy, 2024).

Meeting the monetary demands of customers all around the globe has always been an absolute must for banks. The fundamental ideas behind their businesses, though, have changed throughout the years and throughout countries. Consider how the United States and Japan dealt with their respective national banking crises in the 1920s and 1930s: by separating investment banking from commercial or retail banking, for instance. For business banks, this was just one of several regulations imposed by national governments. It was decided that such regulations would not be enforced in central Europe. The universal banking model allowed for the provision of insurance as well as a full suite of banking services to individuals and companies, including the acceptance of deposits, the distribution of loans, the management of assets, and the processing of payments (Omarini, 2022).

The monetary system relies on banks to process payments and wire transfers. The Internet can currently do all of these things and more. It is enabling public and private digital currencies and altering the method in which transactions are recorded on ledgers. There was a time when banks and their borrowers (customers) had unequal access to information, but that is starting to change. One bank was able to gain an advantage over another thanks to this disparity in client knowledge. Since this data is amenable to digital analysis, the digital revolution that financial technology ushers in diminishes this benefit (Broby, 2021).

In this regard, the following table outlines the major risks that influence consumer trust in digital finance.

Table 1.2: Key Risk Factors in Digital Banking and Their Impact

Risk Category	**Example Threats**	**Potential Impact**	**Mitigation Strategy**
Cybersecurity	Phishing, malware, data breaches	Loss of sensitive data, financial fraud, trust erosion	Multi-factor authentication, encryption, firewalls
Operational	System failures, third-party outages	Service disruption, customer dissatisfaction	Redundant systems, vendor risk management
Regulatory Compliance	GDPR, KYC, AML non-compliance	Legal penalties, reputational damage	Automated compliance tools, audit trails
Technological Obsolescence	Legacy systems, lack of updates	Vulnerability to new threats, reduced efficiency	Cloud migration, regular tech audits
Consumer Behavior	Low digital literacy, resistance to adoption	Reduced engagement, financial exclusion	User education programs, intuitive design

According to Table 1.2 above, cybersecurity security incidents like phishing and data breaches significantly damage user trust. A system's reliability and the happiness of

its users are affected by operational risks. These include things like interruptions to third-party services and system failures. Platforms risk legal repercussions and consumer mistrust if they fail to comply with standards like GDPR and KYC. Technological obsolescence, including outdated systems, limits innovation and weakens customer trust in service quality. Additionally, low digital literacy and reluctance to adopt among users create barriers to trust and engagement. To overcome these issues, the digital banks should embrace encryption, smooth interfaces, and education on the use of digital. Trust is a vital component of digital banking's long-term growth, as shown in the table, since it strikes a balance between consumers' security concerns, the need for conformity, and the need of user-centred design.

Digital banking is an appealing prospect because to its possible advantages, such as accessibility, ease, and operational efficiency, but it also comes with substantial concerns. Problems that are worrisome to consumers and financial institutions alike include internet security risks, data breaches, identity theft, phishing, and system failures. Aside from jeopardising the digital banking systems' technical integrity, these dangers also damage users' trust and motivation to continue using the services. To combat the vulnerabilities exposed by the increasingly complicated digital banking environment, institutions should prioritise consumer education, ongoing risk assessment, and improved security measures. Keeping customers' confidence and ensuring digital banking systems' long-term success hinge on effectively addressing these concerns.

Interrelationship Between Risk and Trust in Digital Banking

Trust-risk relationship is the core of consumer decision-making in terms of online financial services and fintech adoption. Since the digitization of banking services is eliminating the need to meet face-to-face, consumers are forced to use intangible information to determine the trustworthiness and security of the services. Trust is a

psychological process that helps reduce uncertainty in such settings thus allowing users to interact with digital platforms despite available risks to them (Ridwan *et al.*, 2025). On the other hand, an increased degree of perceived risk, either in terms of privacy, money loss, system security, or misuse of data, may drastically reduce consumer trust. Such reverse correlation is especially evident in the fintech ecosystem, where innovation tends to go faster than regulation and transparency. Consequently, instilling trust by using secure systems and systems with transparent communication and experience reliability is instrumental in ensuring adoption and promoting future participation. The dynamics of risk perception and trust do not only allow financial institutions to create superior digital services but also to understand why some consumers take to fintech innovations readily, and others resist them (Nkatekho, 2024).

Data has become an integral part of economic decision-making due to its ease of collection, storage, and analysis. A lively debate has broken out on who, a company or its consumers, should have custody of data produced by private economic activity, thanks to the data's increasing significance (Wieringa *et al.*, 2021). This is an especially pressing concern in the banking and finance industry, as the sale of financial goods by banks naturally results in the collection of valuable client information. One way to gauge a borrower's riskiness is by looking at their history of late payments, overdrafts, and periodic direct deposits. Firms can learn about their customers' needs by looking at their account balances and transactions. This allows them to offer personalised financial advice and products. Lenders may learn about a company's health from its transaction data, and fintechs could use it to provide financial management services (Babina *et al.*, 2024; Wieringa *et al.*, 2021).

There is a lot of debate over who should have authority over data created by private economic activity because of how important data is becoming: the corporation or its clients

(Wieringa *et al.*, 2021). In the financial services industry, where banks provide customers with financial products, this is an especially pressing concern. A borrower's late payments, overdrafts, and periodic direct transfers all contribute to their overall riskiness. Businesses can learn about their customers' financial situations and demands through their account activity and balances, which allows them to personalise their financial advice and solutions. Lenders might learn about a small business's health from its transaction data, and fintechs could use it to provide financial management services (Babina *et al.*, 2024; Wieringa *et al.*, 2021).

A customer's bank has had a pricing and personalisation advantage for quite some time due to the fact that it is the only entity that handles her financial data. The "open banking" (OB) movement is posing a threat to the financial data monopoly held by banks. OB makes it possible for bank customers to share financial operation data with other financial service providers. One example is OB, which makes it easy for a customer to share their banking history with potential lenders, financial management apps, or even other customers. This allows them to easily underwrite their credit based on their income and spending habits (Babina *et al.*, 2025).

To sum up, risk and trust are two sides of a coin that define consumer behaviour in the domain of digital banking. With more and more users becoming aware of privacy issues, data loss, and cybersecurity risks, the perceptions of risk will be higher, and it will have a direct impact on the level of trust that users have towards online financial systems. The perceived risk may be quite high and may considerably undermine the consumer trust, eventually leading to the discontinued use or usage of digital banking services. On the other hand, when financial institutions provide good security measures, transparency, and clearly explain safety measures to users, they assist in reducing the perceived risks and build confidence. This is a delicate balance because trust is not only a shield against perceived

risk but is also a customer loyalty and long-term engagement factor. Thus, the mutual dependence of trust and risk is essential to grasp and control to ensure the provision of reliable, secure, and trustful digital experience, which is increasingly competitive and technology-driven by banks.

Rationale for Investigating Trust and Risk in Banking Transformation

Customers' interactions with banks have evolved as a result of digital innovation, and now more than ever, factors like trust and risk perception are crucial in this dynamic landscape. As more and more banking services move online, including digital-only institutions, mobile banking, and AI-based solutions, the traditional basis of trust, including face-to-face communication, physical infrastructure, are giving way to virtual interactions. Such a change adds new risks to consumers, especially at the level of data security, transaction integrity, and protection of privacy, increasing their perceived risk (Campanella et al., 2023). As a result, trust emerges as the key to the effective digital banking transformation, as it can affect the choice of new technologies as well as the long-term engagement and loyalty of customers. A lack of trust can hinder even the most innovative digital services or they can simply be deserted. Studying the relationship between trust and risk is thus a crucial part of comprehending the user behaviour, reducing technological resistance, and creating a sustainable digital development. As financial institutions strive to balance innovation with customer confidence, research into this relationship offers vital insights for policy, design, and strategy in the future of banking (Ahuchogu, Sanyaolu and Adeleke, 2024).

People have been increasingly opting to use their mobile phones to pay instead of using cash during the COVID-19 lockout, largely as a precautionary measure (Liu, Pan and Yin, 2020). Even after the ban was lifted, mobile payment usage kept to up. Predictions published by Capgemini and The Royal Bank of Scotland indicate that the volume of non-

cash transactions, including those conducted through mobile apps, is projected to reach 28% in 2026, up from 17% in 2021. This is at least in part attributable to the unwavering backing of businesses and retailers who have seen the value in mobile payments and are eager to pass the savings on to customers. When it comes to everyday household consumption, for example, adopting mobile payment apps like Alipay and Apple Pay has increased frequency by 23.5% and spending by 2.4%. For this reason, businesses started tapping into customer loyalty programs and offering targeted discounts to promote and encourage NFC payments.

According to Świecka, Terefenko and Paprotny (2021); Verkijika and Neneh (2021), businesses may be disappointed with the amount of people using mobile payment technology, even though it is convenient and easy to use. One possible explanation is that customers have fewer alternatives when it comes to making purchases because not all stores are equipped to handle "Near Field Communication" (NFC) payments. Another concern is the likelihood of credit card fraud, often called skimming, in which a criminal uses a small device to steal sensitive information such as the card number, expiration date, and security code (CVV) from an unsuspecting user. A common cause of this is when a customer uses an ATM or point-of-sale device that has been compromised. Furthermore, there are valid worries regarding the security of NFC technology. Users' financial information could be at risk if NFC-enabled devices are susceptible to hacking (Lutfi et al., 2023; Kajol, Singh and Paul, 2022).

The proliferation of research into NFC mobile payment adoption has prompted the development of numerous models and theories, one of which is the technology acceptance and adoption model (TAM). Researchers have also made use of the following models: UTAUT2, PRIS, and the theory of innovation dissemination (Moghavvemi et al., 2021), and the push-pull mooring framework (Wang, Li and Zhang, 2021). Perceived danger and

belief in trust are supposed to be the two most important factors in deciding whether customers will adopt NFC mobile payments, according to a lot of previous research. According to the research, customers are less likely to embrace and use new technologies like NFC mobile payment if they perceive a high level of risk associated with doing so, but they are more likely to do so if they have a high level of confidence and believe in the innovations (Almaiah et al., 2022).

Consumers' adoption of the dynamic digital financial landscape can be better understood through studies that examine trust and risk from the viewpoint of banking transformation. With banks moving into the digital era and relying less on their historic, brick-and-mortar models and more on technology-driven platforms, the use of secure and seamless digital experiences has become one of the primary factors of customer satisfaction and retention. There is, however, an increased perception of risk associated with this change; this risk can be in the form of cybersecurity risk or data privacy risk among others and this risk, unless addressed will create distrust among consumers. Since trust is an important facilitator of not only technology acceptance but also long-term use, the interplay with risk should be carefully discussed to come up with effective digital banking plans. Through this relationship, banks and regulators will be able to devise better systems, policies and systems of communication which minimise the risk perceptions, build up the confidence of the user and establish a sustainable participation in a digitally converted banking system. This rationale underscores the need for focused academic and practical inquiry into the trust-risk dynamic as a foundation for successful digital banking adoption and transformation.

1.2 Research Problem

Digital revolution in banking has transformed the banking sector in its core by changing how financial services are delivered, accessed and perceived (Porfírio, Felício

and Carrilho, 2024). The traditional banking system that was characterized by physical branches by mainly relying on face-to-face communication with customers has moved to a virtual platform where customers perform transactions using desktops, smartphones, tablets and other online gadgets. The evolution has literally introduced new levels of convenience, speed and accessibility to the world where the user can now check balance, transfer money, pay our bills and access statements anywhere and at any time (Gill et al., 2024). The transformation, however, comes at the cost of causing new problems: among which the perceived risks are at the top (Cabeza-Ramírez et al., 2022). Lack of physical contact and the excessive consumption of technology can produce fear in the consumers especially the ones being related to security violations, unauthorized information encroachment and misuse of personal financial information. These fears are no more hypothetical; cyberattacks, phishing threats and identity thefts are the order of the day and they run a constant test on the strength of digital banking systems (Snider et al., 2021). Therefore, in order to preserve long-term relationships with clients in an industry where digital transformation is becoming increasingly common, it is crucial to understand how consumers perceive risk and the impact of risk on their trust.

Although its efficiency of operation and convenience of the customer are quite clear in the case of digital banking, there is another nearly as important aspect to consider in relation to the perceived risk of the consumer and his resulting trust of the system (Barjaktarovic Rakocevic, Rakic and Rakocevic, 2025). The concept of trust underlies any kind of financial interaction, especially in an online setting, where the consumer must trust the technology, transparency, and security measures implemented by the bank (Gupta and Shukla, 2024). An increasing number of cyber-attacks, such as data leakage, financial fraud and so on are spreading a lot of concern, given the fact that the news about something terrible has time to spread fast in social media and ruin the image of a bank in a few

minutes. Moreover, the study shows that increasing consumer awareness of digital risks leads to an increase in demands towards banks that are not only supposed to provide high standards of cybersecurity infrastructure but also provide employees and customers with continuous communication feedback outlining the extent to which their information is secure. The inability to achieve such expectations could lead to customer dissatisfaction, customer loss, or unwillingness to use digital services at the full level (Ozuem et al., 2021). Thus, the digital banking platforms sustainability is digitally dependent but also within the realms of perceptions of risk and building the confidence of the institution through secure transparent experiences and ease of use.

Though previous research has examined cybersecurity adoption, cooperation with fintech, and the wide aspects of consumer behaviour related to digital banking, a host of gaps remains regarding the interplay between the perceived risk and consumer trust the desire to stay in the respective digital banking provider, i.e., continuance intention(Appiah and Agblewornu, 2025). This research intends to fill that void by investigating how users' perceptions of security risks, privacy concerns, and trust influence their actions when asked to remain in a digital banking environment. Furthermore, it seeks to examine whether there is a possibility that these relationships may be moderated by the effect that demographic variables like age and previous experience with internet banking may have on the relationship and provide a better perspective on the nature of consumer trust. Given the tendency towards digital banking being perceived as an order rather than an exception, it becomes a requirement to take the policy communicating the risk and building trust in financial institutions to a reassessment, which will prove essential in allowing the company to stay in the game in the new environment where customers are increasingly volatile.

1.3 Purpose of Research

Ultimately, the research hopes to provide light on important aspects of consumer psychology and the security considerations that must be made in this era of digital change for the benefit of the industry (Kraus et al., 2022). The goal of the present investigation is to offer an extensive analysis of the literature and business practices of several security-related factors and how they affect customers' intentions to stick with the bank in the age of digital banking (Li et al., 2021). In particular, the following sub-objectives are part of the study:

- To provide a comprehensive review of impact with respect to awareness of security attacks and the continuance intention to stay with the bank.
- To review impact of consumers Perceived Risk, Security and Privacy Concerns and the continuance intention to stay with the bank.;
- To review the aspects related to Perceived Trust and its impact on the continuance intention to stay with the bank;
- To analyze if the Age matters to trust and Continuance intention to stay with the digital bank.
- To analyze if the experience with online banking matters to trust and Continuance intention to stay with the bank.
- To analyze if the gender of user with online banking matters to trust and Continuance intention to stay with the bank.
-

1.4 Significance of the Study

During the age of digitalization, banks and financial organizations are introducing innovative technologies to make their business more efficient, provide more convenient experiences to consumers, and offer them 24-hour access to money (Ononiwu *et al.*, 2024).

Nevertheless, with such a metamorphosis, numerous issues have arisen regarding risk, trust, security, and privacy. The current topic of study is crucially important because it is expected to test the influence of these aspects of risk on consumer trust and further determine their willingness to persist with using digital banking services (Alrawad et al., 2023). Any vulnerable or exploitable piece of information can cause consumers to lose faith in a company, and financial data is no exception. The significance of comprehending how customers evaluate risks and impact their actions is highlighted by this.

Such a study would be of great value to the digital banking stakeholders; that is, the banks, fintech firms, and cybersecurity professionals, because it is an empirical study that offers guidance on how to build and sustain trust amid growing consumer concerns about the issue of data privacy, security breaches, and digital fraud. With an understanding of the relationships among perceived risk, security awareness, trust, and continuance intention, the institutions will be able to base their online strategies on consumer interests. The research project also presents an account of the effects of demographic factors (age and experience with online banking), which can elaborate on this finding and facilitate the creation of detailed approaches to trust-establishment strategies (Chawla and Joshi, 2018). The study can also be utilized by policymakers and regulatory authorities to develop more effective regulatory and awareness campaigns that enhance consumer confidence and protect individuals in an increasingly digital financial environment.

1.5 Research Purpose and Questions

As it was found that there is a need for a better understanding of consumer's various behavioural aspects its impact on continuance intentions to stay with the bank.

- How does the awareness of security attack impacts Continuance intention to stay with the bank?

- How do the Perceived Risk, Security and Privacy concerns impact Continuance intention to stay with the bank?
- How the Perceived Risk negatively impact Continuance intention to stay with the bank?
- How Age of the consumer impacts Continuance intention to stay with the bank?
- How does the earlier experience with online banking positively impact Continuance intention to stay with the bank?

CHAPTER II:

REVIEW OF LITERATURE

2.1 Introduction

The revolution in the banking sector brought by the internet technology and the fast growth of digital technologies have provided customers with readily available, fast and easy services using the online platform. This change to a digital world, however has brought with it a large amount of concerns in terms of security, privacy and trust, which have been very important in the way the customers actually perceive whether they are going to persist on these services or not.

The primary objective of this chapter is to survey the existing research on the topic of customers' intentions to maintain their digital banking accounts. A major determinant of this intention is the knowledge of security attacks, which are by way of phishing, identity theft and cyber fraud. The customer behaviour might also differ when they have better knowledge on such risks, and hence, they might not be able to trust digital banking unless sufficient safeguards have been implemented. Tight in line with these arguments are perceived risks, security and privacy issues that define the level of a customer's access to the digital platforms. In the event of a feeling of loss of privacy or a lack of data protection, users may not want to use these services further. Perceived trust is another major element, measuring how a customer feels about the bank being reliable, safe, and able to safeguard their interests. Trust clearly diminishes the perceived risk factor and reinforces customer loyalty. Other individual differences, such as age and online banking experience, also contribute to building trust and the prospect of continued usage. Older users might be rather suspicious of digital banking; the more skilled users are likely to be cautious and safe.

“Theory of Reasoned Action” and “Theory of Planned Behaviour”, which shed light on user behaviour and social influence in the digital realm, provide the theoretical

foundation for this chapter's discussion of these topics. This review will help the chapter to discern some key points, provide an overview of previous findings, point out research gaps, and place this study within a theoretical context.

2.2 Theoretical Framework

Bank operations and customer engagement have been transformed by the advent of online banking, which has changed the dynamics of the financial sector. Mobile banking, artificial intelligence, blockchain, and machine learning are just a few examples of how technological advancements are influencing service providers and consumers alike. Theoretical studies in this area show that technology progress is just one factor; shifting consumer habits and market rivalry also play a role in a bank's digital transformation.

In a study, Barjaktarovic Rakocevic, Rakic and Rakocevic (2025) explored a number of features of online banking, uncovered what consumers anticipate from the service, assessed potential dangers, and understood how both factors influence end users' happiness. A survey-based research methodology was used to achieve this goal, with 535 valid replies collected through an online questionnaire. Customers in this study ranked digital banking services as the most significant feature when selecting a bank. Also revealed by the study's findings are the features of digital banking services that clients are most worried about and the features that they hope will bring them the most joy.

In this work, Rakhmataliev and Shavkatov (2025) concentrated on the statistical study of banking system digitisation, with an emphasis on the commercial bank's online operations. It will focus on the determination of strength, weaknesses, opportunities and threats when considering the existing evaluation methodologies in a broad scale swot analysis with a detailed literature review. The study demonstrates the necessity of combined quantitative and qualitative performance measures that can be enhanced with the help of sophisticated analytics technologies to achieve better assessment precision. The

results are useful to banks, policy-makers and researchers to improve the effectiveness and reliability of online banking service assessment in a very dynamic online landscape.

Henkler and Schubart, (2025) There is a pressing need to change the conventional lending operations of the banks in the digital age. Rising digital provider rivalry and increasing client demands for faster and more efficient financial services are exacerbating the rise of this need. Traditional methods of extending credit to businesses were tedious and time-consuming manual procedures. As a result, banks were unable to react quickly enough to client demands; now, discussions centre on how open banking and automated transaction analysis can propel the digital revolution of lending. Using real-time data and cutting-edge analytics, banks can improve their credit choices and make consumers happier. Concurrently, we investigate the risks and difficulties of deploying these technologies, paying special attention to data security, legislation, and the underlying technological infrastructure. The results of the current investigation are also helpful to financial institutions that want to keep up with the current world, which is changing fast in the digital world, and have to reconsider their lending procedures radically.

Adwani (2025) The digital era is an era of speedy transition in the landscape of the global banks, with the opportunities and threats created by the integration of new advanced technologies, including blockchain, AI, and digital banking platforms. In one research, they assessed the risk management approaches that were used by the international financial institutions to deal with these difficulties. This study evaluates the effect of cybersecurity threats, regulatory compliance, operations risks, and data privacy issues on banking activities by interpreting the current risk frameworks. Moreover, the contribution of digital transformation to the improvement of risk mitigation practices is discussed, including the ways in which banks respond to technological advances and prevent the occurrence of disruptions.

2.3 Theory of Reasoned Action

Hagger (2019) The reasoned action method, a modern take on planned behaviour, has been a cornerstone paradigm for understanding and predicting intentional behaviour since its inception in the late 1970s by Martin Fishbein and Icek Ajzen. The theories have been widely utilised by a variety of actions, settings, and groups. The ideas centre on people's expectations about how a behaviour will play out in the future; they have their origins in social cognitive theory and attitude theory. Considered action theory was its initial manifestation. The theory relies heavily on the concept of intention, which is considered as the primary driver of behaviour. The intensity of the intention indicates the extent to which one works hard to accomplish and pursue a certain course. Attitudes and subjective norms are two belief-based constructions that are supposed to constitute intention. A person's favourable or negative judgements of their future performance of the behaviour show attitudes, whereas subjective norms express the belief that important persons would want them to engage in the behaviour. A large variety of demographics, events, and behaviours could be accurately predicted by reasoned action. Ajzen has made multiple adjustments to the idea of reasoned action in order to clarify things that people were compelled to perform. A further suggestion from the theory of planned behaviour was the idea of perceived behavioural control. An individual's sense of control over their actions, when matched with their actual and perceived degrees of control, determines the intensity of the intention-behavior link. People were more likely to see their objectives through when they felt they had substantial control over the circumstance. Perceived behavioural control, according to Ajzen, will directly predict behaviour when it is realistically close to actual control. While presenting the reasoned action approach, Fishbein and Ajzen provided further details about their hypothesis, which was based on their study. Expanding on the idea of planned behaviour, the reasoned action technique

examines the constructs of attitude, subjective norm, and perceived behavioural control. These theories have been widely used because of their ability to explain significant behavioural variation, as well as their relative ease of use and adaptability. The theories have also been used to build new theories that incorporate new concepts, with the goal of creating better explanations of behaviour and testing important processes that decide what people do, like the connection between intents and actions. This annotated bibliography summarises the key works that chart the development, application, and dissemination of these theories from their inception to the present day. While this bibliography does not claim to be exhaustive, the works included do attempt to paint a picture of the theoretical framework, including its foundations, key assumptions, and internal debates, as well as its empirical testing, extensions, and practical applications.

"Theory of Reasoned Action" (TRA) states that one's attitude and one's subjective standards are also important factors in persuasion. This article takes a look at the problem of using TRA and its components to forecast people's intentions, beliefs, and propensity to change their behaviour, among other related topics. To compare the two treatments before and after communication, researchers utilised a randomised field trial design. Gender, prior experiences, and level of understanding are other aspects that impact children's behavioural goals. One way to anticipate and influence intents is to build a communication strategy around theories (Nguyen *et al.*, 2018).

2.4 Security Awareness and Its Impact on Continuance Intention

In a research work, Al Doghan and Mirzaliev (2024) investigated factors that promote the adoption of fintech by boosting client trust in digital banking, including cybersecurity knowledge, enabling conditions, personal inventiveness, and access to capital. We also looked at how digital literacy could play a moderating effect. With the use of a self-administered questionnaire, 390 customers of Fintech banks provided

quantitative data. In a cross-sectional study, researchers use a suitable sampling method to gather data. The research programme SPSS and the program Smart PLS were employed to verify the assertion. According to PLS-“Structure Equation Model” SEM research, cyber security awareness, personal innovativeness, favourable conditions, and access to financing considerably and favourably affect digital payment trust. Digital banking services offered by fintech companies tend to attract more customers when those customers have trust in those companies. Regarding cybersecurity knowledge, trust, personal innovativeness, financial access, and enabling conditions, digital literacy played a significant moderating role. Key elements determining digital banking trust in digital finance contexts include personal innovativeness, awareness of cyber security, access to money, and favourable conditions. This model expands upon prior studies that have addressed the same question.

In Aprilia and Amalia (2023) utilised a survey to gather information and a convenience sample to pick participants. There were 240 people who took part in this study, and the data was analysed using "partially least squares" (PLS), “Structural Equation Modelling” (SEM). Although felt security did not correlate with continuation intention, assessed usefulness, enjoyment, and attitude were directly associated with continuation intention. Feeling useful and secure were predictors of attitude and satisfaction. Satisfaction impacted attitude, as seen in this study. The information system field and TCT's application to user intent to continue are both advanced by this study. There is a discussion of implications to theory and practice and further research directions.

In another work Dinari and Tjhin (2023) assessed the reliability of the Expectation-Confirmation Model when supplemented with other novel components, in regard to the users' persistent engagement with contact tracing apps. Researchers in this study polled 531 Indonesians who have downloaded the PeduliLindungi contact tracing app. Statistical

equation modelling (SEM) with partial least squares was used for model verification and assessment. The reasons why people keep using contact tracing apps are investigated in this study. The following factors—satisfaction, effort, performance, trust, and perceived privacy and security—are strongly correlated with confirmation. A person's level of happiness is positively and significantly affected by their expectations of safety, effort, and performance. There is a strong relationship between performance expectations and trust and effort expectations. Factors like as contentment, effort expectation, performance expectation, and perceived security influence the continuing intention variable. Up until now, the only theories that have been acknowledged have dealt with the connection between trust, contentment, perceived privacy, and continuation intention. Both academic and management insights are presented, along with a discussion of the study's limitations and potential future research approaches.

Understanding Security Attacks in Digital Banking

In a study, Borah and Chaudhary (2024) analysed how consumers' openness to new ideas might play a role in lowering their perception of danger, which in turn can increase their adoption of digital banking. We used SEM to look at how innovativeness and risk affected people's willingness to use digital banking. A hundred people who have used online banking services are part of the sample. There has been some preliminary quantification of the idea of risk. Findings highlight consumer creativity as a key component in increased online banking usage. Innovative approaches in the banking sector assuage customers' concerns about internet banking. The shift from analogue to digital channels and the relationship between customer innovation and risk perception are two areas where digital banking literature is severely lacking. The process of formative risk configuration can yield a new measure for this concept.

sekhar and Kumar (2023) Online technology has been greatly improved in the 21st century, allowing for excellent performance and widespread usage. Using platforms like NEFT, Google Pay, PhonePe, etc., There are few industries that have been quicker to adopt internet technology than the digital banking sector. As online banking has grown in popularity, so has cybercrime targeting banks and other financial organisations. Half of all cybercrimes involve the use of automated teller machines (ATMs), debit cards, and internet banking accounts. Cybercriminals target financial institutions more frequently than any other industry. This research looks at the banking industry's vulnerability to cyberattacks and how to strengthen cybersecurity against such attacks.

Kumar *et al.* (2023) applies an expansion of UTAUT to the question of why young Indian consumers have taken to using mobile banking services. SEM with Amos 22.0 was used to analyse data acquired from 253 users, ranging in age from 18 to 30 years, via a survey questionnaire. Expectations of effort, social influence, perceived financial cost, and performance were found to favourably increase intentions to behave. However, the enabling circumstances had no bearing on the actual use. Perceived risk and trust also modify the association between behavioural intention and actual mobile banking use, according to the results. The results provide fresh insight into the ways in which individuals' perceptions of risk and trust impact the relationship between their inclination to act and their utilisation of mobile banking applications. The findings of this study can shed insight on the processes that lead to the behavioural intentions that propel the use and acceptance of mobile banking services.

Consumer Awareness and Behavioural Intentions

Nan *et al.* (2025) By investigating what influences people's intentions towards generative AI (like ChatGPT), this study hoped to pave the way for the creation of such technologies. By including ideas about information system success, privacy worries, and

perceived innovation into an expanded expectation confirmation model, they were able to create a causal model. Afterwards, they validated the model using survey data from 252 Korean ChatGPT users. Consequently, they discovered that users' intents to continue using and supporting generative AI ChatGPT are greatly influenced by aspects such as perceived innovativeness, privacy concerns, information quality, and system quality. Overall, this study is among the first to determine what makes consumers want to continue using and recommending ChatGPT, an AI that generates suggestions.

Hasan *et al.* (2024) is focused on the development of a holistic framework that will be able to determine the different aspects and analyze how they can affect the behavioural intentions of customers toward using particular M-wallets to make payments. In this case, they published a theoretical model. A total of 482 of 600 questionnaires could be regarded as valid. SEM was used to test both the research hypotheses and the stability of the suggested model. While factors including social influence, perceived value, trust, and compatibility all play a role in shaping behavioural intention, customers are less inclined to utilise an M-wallet based on their enjoyment. In the area of mobile payments, they also discovered that customers' behavioural intentions are most influenced by trust and compatibility. This study was limited to a certain age range in one city and only contained six M-wallets. By exploring the different elements of behavioural intention, the providers of M-wallet can gain the confidence of the consumers and motivate them to use their facilities more consistently to use M-payments. These results indicate that service providers ought to take into account and control all the probable variables that affect M-wallet intention in case they desire to be proactive towards their plans. With this approach, the companies will be able to regulate the formation of the behavioural intentions of their users by creating an M-wallet-user behavioural intention model.

Long, Zaidin and Mai (2024) incorporates social media influencer streamers as an exogenous variable, broadening the notion of planned behaviour. Views on the practice, subjective standards, perceived behavioural control, and the impact of social media influencers were among the aspects that researchers looked at to determine whether customers intend to shop live-streamed. The study's online questionnaire was disseminated throughout four distinct regions of the Chinese market in order to accomplish those research objectives. Stratified and selective sampling allowed them to get 385 usable replies from those four areas. Using SEM with partial least squares and SmartPLS 4.0, the data from the study was examined. Subjective standards, perceived behavioural control, social media influencer streamers, and consumers' opinions on the subject have a substantial impact on consumers' intents to participate in live-streaming purchasing. Social media streamers possess considerable sway over their audiences, particularly when it concerns issues such as subjective standards, perceived behavioural control, and live-streaming purchasing.

In a study Rozenkowska (2023), In their comprehensive examination of consumer behaviour, the writers drew from “Theory of planned behaviour” (TPB), its foundational elements, and its extensions. They also offered suggestions for further study in this area. Researchers looked for papers mentioning TPB, its components, or extensions in Scopus and the Web of Science. Studies that were considered for inclusion have to have been published in English-language peer-reviewed journals within the last ten years (i.e., from 2012 to 2021). The results of the study were presented graphically. They used MAXQDA 2020 software to cluster the literature. All told, the review encompassed 118 scientific sources that had been peer-reviewed. The literature review yielded two main groups, five clusters, and seven subclusters. A strong trend towards studying environmentally conscious customer behaviour and food product purchase intentions emerged from the

data. Green personal care goods, green cars, and consumer intention towards and purchase behaviour of apparel were the least-explored research areas. This review lends credence to the idea that TPB is becoming more common in studies of consumer behaviour that seek to identify the causes of such actions.

In Min and Lee (2023) studied the intentions, purchasing histories, and recognition levels of Korean consumers with regard to functional foods. Research has shown that functional foods are more commonly recognised and purchased by health-conscious, higher-income customers who also report high levels of anxiety about the COVID-19 pandemic. They observed that a higher positive relationship between recognition and buying experience was observed among the health-conscious buyers and buyers with sick family members. Those who were younger had a bias for vitamin and fermented product sales, while those who were older had a preference for ginseng-based food sales. The most important factors in increasing the likelihood that a consumer would make a purchase were favourable opinions of the shopping experience and promotional tactics like free product samples. Customers in their thirties favoured personalised subscriptions and bulk purchases.

Immonen and Kopsakangas-Savolainen (2022) The researchers in Finland set out to find out how electricity users there are currently using their power and whether or not they want to help achieve carbon neutrality by cutting back on their energy usage. The objective was to show how disconnected people's purchasing habits were from their stated goals of combating climate change. This objective was accomplished by conducting an evaluation of customer awareness and intentions using a qualitative research method. In order to ensure uniform and standardised data gathering, a survey of consumers was carried out. To measure success, the study used key performance indicators (KPIs). Social KPIs linked to qualitative values offer a holistic perspective. The results show that consumers

do not have a particularly high level of self-awareness regarding their purchase behaviour, and they also identify certain data demands. Furthermore, there is evidence of residents' strong desire to help the environment and reduce energy consumption. But customers didn't seem to know about the data and services that were already out there to assist them become more energy efficient. Hence, increased information and incentives are still needed to change people's power consumption habits.

Permana (2019) This study aims to examine the product knowledge, brand awareness, and attitude of Islamic banking consumers in Indonesia in order to throw light on their intention-behavior. Smart PLS SEM was used to assess the outcomes after data gathering. In Indonesia, the intention to use Islamic banks is influenced by product knowledge, brand awareness, and attitude, all of which have a positive and statistically significant association.

Salman, Naveed and Nazir (2017) This study sought to explore the role of customer perception as a mediator between socio-religious goals, product awareness, and the degree of consumer acceptance towards Islamic finance services. The subjects of the study were academic sector clients of Lahore, Pakistani banks. The research team used a survey to get the ball rolling, and then used convenience sampling to get 300 legitimate replies from clients of academic sector banks. they have used the structural equation route modelling algorithm method in order to know the relationship within the specified constructs through “Partial Least Square” (PLS)-Smart PLS 3 software that simultaneously updates the measurement model and the structural model. The study suggested that socio-religious perspective, product awareness and perception were the three independent variables of the study, which significantly affected the level of consumer acceptance of Islamic financial services directly. Nevertheless, it did determine that consumer perception mediated the relationship between the consumer product awareness and the level of consumer

acceptance. In conclusion, research shows that buyers should do their research on products. Managers benefit from this because it raises awareness of important shifts in customers' attitudes, actions, and inclination to purchase or utilise Islamic banking services, all of which bankers achieve by improving customers' impressions of their goods. Both practitioners and politicians can benefit from the study's distribution of innovative and useful insights regarding customer acceptability.

Impact of Awareness on Customer Retention

A study by Octavia and Riza (2023) was carried out to investigate, via the medium of customer happiness, the impact of customer value and brand recognition on client retention. This study's survey data comes from 291 people who filled out an online questionnaire (using a Google form) with 18 questions. Additionally, AMOS version 23 was used for data processing. This study's findings demonstrate that, via customer happiness as a moderating variable, customer value and brand awareness positively and significantly impact customer retention. Many people are hoping that business owners, the fast-commerce sector, and science as a whole will all reap the benefits of this study's findings. Time and sample size are constraints in this study. Future studies could benefit from a larger sample size and a different time of day. This necessitates further research by academics into the depths of quick commerce, more extensive geographic coverage, and innovative research approaches.

Yang *et al.* (2022) examined how equity (knowledge and impression) of tech brands and social media marketing influence Chinese customers repurchase intentions. The final tally for this cross-sectional study came from 477 legitimate replies to an online survey. The experiment was carried out using a combination of ANN and PLS-SEM, or partial least squares SEM. The researchers reported that trendiness, interaction and word of mouth had positive and significant impacts on brand awareness. Brand perception improved with

personalisation, popularity, engagement, and recommendations from satisfied customers. There was an effect of brand recognition and perception on the desire to repurchase. According to multilayer ANN analysis, the most important component in building a brand's reputation and awareness is how trendy the product is. Research has shown that brand awareness has a significant role in fostering repurchase intention. The results show that social media marketing initiatives can raise brand equity by correctly predicting whether customers will buy a brand again. Marketers should prioritise the entertainment and customisation aspects of social media marketing to establish a positive reputation for their business. We address the limitations of the study and provide directions for further research in the paper's last section.

Sastrawati, Darsono and Tabrani (2020) described Moorelife product purchase decisions and customer loyalty as a function of brand recognition, product understanding, and product quality in Banda Aceh City, Indonesia. This study uses moorlife products as an object and the user as a respondent. The 1.532 individuals who utilise moorlife in Banda Aceh are the subjects of this research. SEM requires 5 times 25 indicators, which means that 125 respondents were included in the sample. Using amos software to test the model, the data is analysed using sem, a statistics technique. Results demonstrate that among Banda Aceh City residents who buy moorlife products, factors such as brand awareness, product knowledge, product quality, consumer loyalty, and the interaction between the two impact purchase decisions. The previous theories on the variable-related causality criterion are supported by the results. The novel aspect is the synthesis of the prior causality models. The object count and number of variables are the limiting factors. In addition to providing insight into the variables themselves, these results have managerial implications. Managers of moorlife product customers can use it as a road map to take advantage of opportunities and boost customer loyalty in banda aceh.

Ngurah Gede Sadiartha (2020) The purpose of the study was to show that ensuring customer happiness is essential, considering how closely related it is to concepts like customer value and retention. The research's empirical testing shows that customer value has a substantial impact on customer relationship management and customer retention at Village Credit Institution. Results also demonstrated that CRM can considerably affect customer retention at Village Credit Institution, mediating the relationship between customer value and retention. By meeting the needs of Micro, Small, and Medium-Sized Enterprises (MSMEs) and the people of Denpasar, Village Credit Institution contributes significantly to the area economy. As a result, it is necessary that the institution has an effective management style in place across all sectors, including services.

Shahid, Hussain and Zafar (2017) this study to thoroughly examine how these two factors relate to one another. The findings support the notion that purchasing intention (PI) and BA are substantially correlated. A higher degree of brand awareness increases the likelihood that customers may consider buying a company's goods or services, as stated by the association. Other factors that affect this relationship between BA and intention to buy include product quality, particular requirements, and consumer satisfaction with previous transactions. The importance of brand awareness and its capacity to affect purchasing decisions are underscored by the research findings. Getting a high level of public recognition for their brand is something that companies should focus especially on if they want customers to make purchases. But with the right marketing plan investment, businesses can effectively influence consumer choice and increase brand recognition. Additionally, concentrating marketing efforts on certain age groups might increase the impact of brand knowledge on purchase intentions. In conclusion, this study highlights how crucial brand awareness is in relation to consumers' purchasing intentions. It provides

marketers with the resources they require to foster client loyalty and create successful brand strategies.

Ghaleb Magatef Elham Fakhri Tomalieh (2015) The researchers behind this study set out to learn all they could about how customer loyalty programs affect client retention rates. Local Jordanian consumers took part in the research. In this study, the impact of loyalty programs on customer retention will be examined as the independent variable, with customer retention serving as the dependent variable. Loyalty programs come in all shapes and sizes, with some offering monetary incentives, others based on points or tiers, and yet others that demand payment in advance for special benefits. Surveys were used to gather data from the sample in order to accomplish the research goal. The researchers randomly sent 350 questionnaires to Jordanian clients they could reach through friends, family, school, and local shopping centres. Each participant came from a variety of social, educational, and professional backgrounds. The response rate came to 81.14%. The findings prove without a reasonable doubt that customer loyalty programs are effective in attracting and retaining customers. Upfront fees for VIP benefits and point systems were the second most noticeable effect, behind the Tier system's rewards. Non-financial initiatives were the least effective.

2.5 Perceived Risk, Security, and Privacy Concerns

Syed and Drakshayani (2025) Perceived risks, including those associated with security, privacy, finances, performance, and time, are examined in this study to determine their effect on the uptake of online banking. The research shows that consumers' perceptions of these risks impact their decision to use internet banking differently by comparing public and private sector banks. Because they are backed by the government, customers of public sector banks feel more secure, which in turn reduces their concerns about security and financial threats. But concerns about performance and time risk as a

result of slower adoption of technology are a constant struggle for them. On the other hand, the more technologically advanced banks in the private sector are associated with more privacy and security concerns, even though they provide a better user experience and the transactions are quicker. The research results show that the trust can be used to the advantage of the public sector banks as long as they improve their technological setup to promote usage. Conversely, it is imperative that banks in the private sector focus on building customer trust and transparency to eliminate the issue of privacy and security risks. Such findings provide important advice to banks to come up with certain strategies to counter perceived threats and facilitating the wider application of online banking among various customer groups.

The study Zhou and Liu (2023) sought to investigate how Chinese teenagers' views on privacy served as a moderator in relation to their online privacy protection activities and their perceptions of the advantages and hazards of maintaining their privacy. Participants were teenagers based in seven regions across Mainland China, and their responses were evaluated using SEM. The total number of responders was 1538. The perceptions of privacy risks on teens had a significant positive impact on their behaviours of protecting their privacy online, the effects of perceptions of privacy benefits were found to be not significant on teens information privacy concerns and their behaviours of protecting their privacy online. In addition, the concerns of the Chinese teenagers about the privacy of information acted as a strong moderator of the perceived privacy risk that ultimately affected their online privacy behaviour protection.

Cheng, Hou and Mou (2021) Within the framework of ride-sharing made possible by IT, the study examines how factors that impact people's perceptions of risks impact their decisions regarding the privacy of their personal information, and how the trade-off between these factors affects people's decisions.

Otika *et al.* (2019) The researchers set out to determine whether and how several dimensions of risk perception—financial, performance, time, psychological, and social—influence online shoppers' intents to make a purchase. This research aims to fill a knowledge vacuum by investigating why certain Nigerian internet users opt not to make online purchases while having the means to do so. This study used a descriptive research strategy based on survey data to compile its findings. Everyone living in the study area who uses the internet is considered part of the population. A total of 390 individuals took the time to fill out and return the pragmatic, closed-ended survey within a month. A convenience sampling methodology was employed, which is a non-probability sampling method. We utilised SPSS 23 to do multiple linear regressions in order to validate our assumptions. There is strong evidence that consumers' perceptions of the time risk play a significant role in determining whether or not they will shop online. Internet users' intentions to purchase online were also significantly impacted by psychological risk, according to the research. Financial risk and performance risk are two of the most important aspects that influence Internet users' intentions to purchase online.

Yeh (2018) In this research, the technology acceptance model was used to study the effect of some elements of websites on the perception of the participants of the risks to their personal data and their will to buy something. It was carried out as a factor analysis in which the LISREL software 8.54 was utilised to examine the factors and factor analysis carried out using the SPSS 12.0. The findings indicated that the existence of the attributes of the websites positively impacts the perceived risk of information security and privacy that ultimately affects purchase intention. The construct factors' validity and reliability were examined using SPSS 12.0. A total of 387 internet consumers served as the sample. This study found that the likelihood of making a purchase is strongly connected with the perceived danger of losing one's privacy and data security when visiting a particular site.

Building e-commerce security management systems and strengthening the network security of e-commerce technologies are two ways to make websites easier to regulate. Additionally, a platform for websites emphasising the importance of client data security should be established to guarantee the safety of online purchases. Finally, for online shoppers to feel safe, better integrity management is a must.

2.6 Consumer Trust and Continuance Intention in Digital Finance

Alzoraik *et al.* (2025) The study starts out by outlining the rising significance of online banking in Bahrain's financial industry, and it names trust and happiness as two key factors that might affect the adoption rates of consumers. The study is influenced by cultural variations and technological improvements, which are acknowledged. A thorough literature evaluation is employed in the research to construct a theoretical framework through the analysis of pertinent academic material. Based on secondary data obtained through various empirical and comparative research studies, we shall be in a position to examine what has already been established concerning the determinants of trust, satisfaction and the uptake of online banking. The data is also strongly correlated with improved security measures and better levels of user trust. The possibility that consumers would use the product is enhanced when its interface is simple and straightforward. As indicated by the findings, positive feedback loop leads to an increment in the use of online banking in cases where the customers are satisfied and trust the bank. The two factors trust and satisfaction were found to be among the most important aspects that influence the use of online banking services by the Bahrainis in the survey. It offers effective suggestions in the form of financial organisations to enhance security, user interfaces and client education tailored to the individual. These are the strategies that are crucial towards the creation of a conducive environment that will lead to the development of online banking services in the region.

An (2025) This research takes an empirical look at the relationship between fashion e-commerce platform trust and users' intentions to continue using the platform, taking into account both actual and perceived risks. Here, we'll talk about how platform trust mediates the relationship between fashion aesthetic risk, digital transaction risk, information created by stores, and information acquired from outside sources. Examining the internet shopping habits of MZ (Millennials and Generation Z) shoppers who purchase mid-range fashion items is the overarching goal of the research. Using exploratory factor and regression analysis, as well as a survey of 203 MZ consumers, the hypotheses were tested. We utilised basic statistical approaches and correlation analysis to gain a better understanding of the variables' interrelationships. Concerns about digital transactions and the platform's aesthetics have a detrimental effect on users' trust and their intent to use it frequently. However, these unfavourable results were intermediated by platform trust. On the flip side, information from both the store and outside sources significantly boosted platform confidence, which in turn favourably affected the desire to use the platform continuously. It is notable that the association between perceived risk on the part of the consumers and quality of the information that they provided was found to be greatly affected by trust on the platform. Thus, the measures toward decreasing the perceived risk and maximizing trust are of paramount importance to enhancing continuous use intention, which proves that platform trust is a decisive factor in consumer behaviour. The study also found that consumers' trust and willingness to reuse are impacted by the trustworthiness of platform information and the openness of digital transactions. Differentiation in information delivery, product descriptions, and user-generated reviews is an important factor in building trust and deciding to buy, as was also validated. In view of the peculiarities of both fashion products and digital platforms, the following paper provides a strategy plan to make the platform more competitive and mention the necessity of building the trust in

fashion e-commerce platforms. Moreover, the research provides important strategic lessons to platform managers who would like to establish long-term relationships with clients on the foundations of trust and happiness. The research has practical implication to both theory and practice and online fashion e-commerce sites constantly strive to be ahead of the competition.

Kaushik (2024) Examining how digital banking has affected customer behaviour and happiness is the primary objective of this study. To find out how people's tastes, routines, and perspectives on digital banking platforms have evolved, they performed a literature review, quantitative surveys, and qualitative interviews. The survey delves into many aspects that impact client satisfaction with digital banking services, including customisation, ease of use, accessibility, and security. These findings have far-reaching consequences for banks and other financial institutions that want to maximise client pleasure and loyalty in the digital environment. They also provide insight on how digital banking affects customer behaviour in general.

Gupta and Shukla (2024) The planned research will look at how customers' perceptions of security measures and the regulatory and legal frameworks impact their faith in online banking. The qualitative research method included a survey of 30 customers of online banking in the form of a semi-structured interview. To ensure that there was a wide selection of demographics, the purposive sampling method was employed in selecting the participants. After gathering data to the point of theoretical saturation, it was analysed using the NVivo software to uncover patterns and themes. The research uncovered three main points: the effects on regulations, the dynamics of consumer trust, and the perception of security. In terms of regulatory impact, we can classify policies pertaining to consumer protection, standards for compliance, enforcement, transparency, and penalties. Data management, user experience, technological safeguards, and risk management all

contributed to the overall feeling of security. Consumer Trust Dynamics included the following: Establishing Trust, Keeping Trust, Dealing with Negative Experiences, Using Peer Influence, and Building Relationships Over Time. In order to increase customer confidence in online banking, the study found that strong security measures, a well-established regulatory framework, and innovative trust-building techniques are crucial. Banks must retain and improve user trust through proactive customer relationship management, transparent rules, and innovative security technologies.

António Porfírio, Augusto Felício and Carrilho (2024) In order to determine what aspects of "Digital Transformation" (DT) have the most influence on banking performance and company volume, this study examines how the banking industry perceives these implications. In order to determine what factors and combinations of Employees, Internal, and External variables determine the implications of DT on the performance of Portuguese banks, the current research uses the ground theory and fsQCA based on the perceptions of some of the board members as well as the opinions of fifty employees of the banks. It forms the evidence of a holistic view of the DT process in the development of research at a micro level. The study finds out that the management capacity and flexibility plays a role in maximising the effectiveness of DT in banking. It also underlines the utmost significance of the skills of employees in the process of surmounting its disadvantages to enhance the management and HR strategies that address DT in the banking sector and the digital experience of stakeholders.

Tumaku *et al.* (2023) Consumers' hedonic and utilitarian values, as well as the trust-perceived-value relationship, are the foci of this research into the sharing economy. This study aimed to empirically evaluate the suggested paradigm by surveying 320 users of the DiDi app. they tested the accuracy of the model using the partial least squares method of SEMs. Results The results show that hedonic and utilitarian value had similar influences

in the determination of platform pleasure and trust. The factors were platform trust, user enjoyment, and constant willingness to utilise the taxi-hailing app, although hedonic and utilitarian values did not influence driver trust. Interestingly, the findings of this paper suggest that trust in the driver is more important than trust in the platform. Value and originality Satisfaction and utilitarian value are revealed to be the necessary conditions of continuing intention by the findings of the essential Condition Analysis.

Jatimoyo, Rohman and Djazuli (2021) The purpose of the proposed study is to investigate, within the framework of electronic commerce, the question of what factors influence the propensity to maintain the use of online purchasing services. In this study, the association between intention and reported ease of use is mediated by perceived usefulness and trust. This first one is a free-floating variable. This study seeks to provide an explanation. Participants in this study are the people who use Klikindomaret. One hundred seventy people were chosen for the survey from the purposive sample. The survey served as the data source, and PLS-SEM was utilised for the analysis. According to the results of this study, the main elements that impact the intention to continue are perceived utility, trust, and convenience of use. Between trust and perceived utility, two additional variables mediate the relationship between perceived ease of use and continuance intention.

Guo *et al.* (2021) The aim of the study is to give a description of the continuation intention of older users through the lens of how health worry and technological anxiety influence affective and cognitive trust. The research model and assumptions were examined through SEM with the help of survey data compiled on 232 older consumers. The paper's findings suggest that elder users' affective and cognitive trust can enhance their intention to continue using mHealth services. On the one hand, health anxiety reduced the effect of emotional trust on the intention to continue, and on the other, it enhanced the effect of rational trust. Furthermore, in relation to the intention to continue, technological

anxiety increases the magnitude of emotional trust while decreasing the size of rational trust. Worth and novelty This research contributes to our understanding of mHealth service utilisation since it was one of the first studies to look at the retention intention of older users in relation to mHealth service utilisation via the lens of cognitive and emotional trust. Furthermore, this study addresses a knowledge vacuum in the literature by investigating hitherto unexplored constructs—affective and cognitive trust—and their contingent link to health anxiety, technological anxiety, and other similar concepts.

2.7 Impact of Online Banking Experience on Trust and Continuance

Due to the spread of online banking systems that allow access to the financial services via Internet technologies and applications, online banking systems have become an indispensable component of our everyday routine. Yet, their popularity causes the development of even more radical security and privacy issues. Numerous cybersecurity risks pose a risk to these systems, putting them at risk of data breaches, compromised sensitive financial information, reputational harm, and major interruptions to operations. When it comes to banking environments, the current approach that aims to protect both customers and service providers doesn't always tackle the specific security and privacy issues that arise. A study conducted by Azura, Azad and Ahmed (2025) proposes a single model of administration which is directed to the internet banking systems through the utilization of danger and risk models. Considering security factors related to the banking context, threat environments, and the information about the financial resources, the framework integrates an in-depth risk management strategy and a principled assessment processes. Using context-aware, pre-defined techniques, vulnerability analysis and threat identification examine various attack scenarios and their potential consequences. Quantifying cybersecurity risks is an important part of the assessment process, as it helps to identify which measures will be most effective in mitigating those risks. We have tested

the framework to see if it can be used successfully in online banking systems in the real world. Consumers now enjoy far more convenient and efficient financial transactions thanks to the fast digitisation of banking services. Financial institutions and their customers are more vulnerable to cyber threats such as phishing, malware, ransomware, data breaches, and unauthorised access due to the growing dependence on digital banking (Waliullah et al., 2025).

In a work Ali Alqararah, Shehadeh and Yaseen (2025) investigated 129 managers from 16 different Jordanian commercial banks were surveyed on their perceptions of their own performance in relation to three digital transformation competencies: technological flexibility, strategic positioning, and competitive positioning. Data was collected via a web-based survey that contained 29 items measured using a 5-point Likert scale. Results from multiple linear regression analysis showed a positive correlation between these abilities and perceived performance, with 68% of the variance explained by this correlation. When looking at technological adaptation, strategic positioning, and competitive positioning, there was a strong association with perceived performance. There was little evidence of common technique bias and strong positive correlations among all study variables, according to the Harman single-factor test. Based on the findings, Jordanian banks need a comprehensive digital transformation plan to stay ahead of the competition, ensure their goals are aligned, and make smart investments in technology. To gain a clearer view of this impact of digital transformation, future research should expand its scope to include organisational culture, regulatory frameworks, and objective performance metrics. Researchers, practitioners, and politicians interested in digital disruption and its effects on company growth may find the current study very useful.

In a research work VLADIMIR-AURELIAN (2025) examined Within the context of a hybrid digital economy, changes in consumer use of non-banking financial services

will be determined by technological progress, demographic shifts, and new regulations. Digital financial services have proliferated in response to the COVID-19 coronavirus pandemic, which has caused a dramatic shift in consumer behaviour. The astronomical growth of robo-advisory services, digital wallets, mobile payment systems, and other fintech-related goods is evidence of this. They show regional and demographic trends in consumer preferences by analysing publicly available data from Eurostat and national statistical organisations. Early adopters, who tend to be younger and more tech-savvy, stand in stark contrast to older consumers, who show a markedly lower adoption rate, according to their findings. Furthermore, the research emphasises how mobile banking, blockchain technology, and AI will shape the future of financial services. Developed economies show more interest in digital finance than developing economies, according to the survey, which shows an imbalance in regional adoption. The paper concludes by looking forward to the possible development of nonbanking financial services, including fintech, the increasing relevance of artificial intelligence and blockchain, and changes in the regulatory environment. This article can help policymakers, financial companies, and tech innovators comprehend the challenges of the hybrid digital economy and how consumer behaviour is changing regarding digital financial services.

Similarly, Saputri (2025) analyzed the Indonesian banking sector strategies of addressing the change of the digital environment and the market. The methods of data collection included observation, interviewing, and the analysis of documents. The study findings reveal that innovation of digital products and services, technological development, cooperation with fintech, and optimization of data analysis related to the process of business decisions are the primary strategies adopted by the banking sector. Moreover, they are quite significant to obtain digital transformation, which is compliance with regulations and cybersecurity aspects. And despite obstacles like legal constraints and increasing

competition, the findings show that Indonesian banks can use digital technology to their advantage to increase the efficiency of their operations and the reach of their markets. Not only does this study provide significant benefits for banking sector stakeholders, but it could also show how to better respond to the ever-changing market.

This study Sahu *et al.* (2024) provides a foundational examination of consumer trust in online banking, focussing on critical factors, obstacles, and approaches to enhancing trust in computerised banking processes. The consider delves into many factors that either strengthen or weaken consumers' faith in online money storage, including security measures, worries about security, client encounter, perceived chance, and administrative systems. It looks at how cyber threats, data breaches, and deceptive practices affect customers' trust in online banking services. Strong cybersecurity measures, clear information hones, user-friendly interfacing, and viable communication of security approaches are some of the theoretical examination techniques used by financial institutions and related teachers to foster client confidence in online account management. Also, it explores how regulatory bodies and industry standards play a role in maintaining credibility and legitimacy in the digital accounting environment. In this theoretical framework, the current trends, barriers, and best practices are explored to illuminate the aspects that contribute to consumer trust in online banking and offer the solution that will help to make online banking safer, more trustworthy, and satisfying to their customers.

In Jurnawan and Oktavia (2024) examined and pinpoint elements that, through user happiness, may increase the likelihood that users will keep using the digital banking app. Two hundred and fifty-nine people were surveyed for the study, representing a cross-section of digital banking users in Indonesia. This study employed a modified framework based on TAM and UTAUT to understand app users' thoughts. Along with additional variables like security, trust, and features, the user experience variable was included as a

mediating variable. Reviews on the Google Play store were consulted for the study. The SEM-based Smartt PLS 3.0 software was used in the analysis approach. The results show that, with the exception of social impact, no other variable significantly affects user pleasure. Features, usability, perceived usefulness, safety, and confidence all play a role in user happiness. Similarly, customer satisfaction significantly and positively affects the likelihood that a client would maintain their use of digital banking.

Similarly, Indrawati, Dharmawan and Pillai (2023) determine what elements impact users' inclination to continue using the Digicash application to resolve the issue. In 2012, Venkatesh, Thong, and Xu created the UTAUT 2 model, which is the theoretical framework used. This research tweaks the UTAUT2 model by adding new variables like trust, perceived security, price savings orientation, and privacy. The data was collected by sending out online surveys to 464 people in Indonesia using Google Forms. We asked 32 questions across 8 categories in the survey. This research applied Smart PLS 4 software to carry out SEM to analyse the data. Social Influence, Price Saving Orientation, Perceived Risk, Hedonic Motivation, Habit, and Performance Expectancy are the factors that have influence on the continuance intention to use Digi cash in a descending order of their results. The model has acceptable R 2 of 56 percent and it is able to make Indonesian consumer behaviour prediction on whether to continue using the Digi cash services. Habit has a moderating effect on the Age variable as well. This model can be employed by the management of Digi cash developer, bank bjb, in an effort to make effective decisions, which will enhance and sustain the on-going intention of Digi cash by listening to the mentioned components and indicators.

Fungáčová, Kerola and Weill (2022) This study is concerned with the effect of previous experience of banking crisis on the trust of individuals in banks. We combine data on the occurrence of banking crises in 52 countries between 1970 and 2014 with the

data of the countries on trust in banks. Our research shows that people's faith in banks declines after being through a banking crisis, and that the more often a person is exposed to such crises, the less trust they have in banks. Those between the ages of 41 and 60 who were living through the financial crisis at the time find this information particularly pertinent. Everyone loses faith in banks during a crisis, but younger generations are particularly vulnerable to the effects of a severe crisis, while older generations are more likely to feel the effects of a mild crisis. Systemic banking crises appear to be the only ones that have a negative impact on public confidence in financial institutions. There is less of an impact from other kinds of financial crises. Taken together, our findings show that the economy pays an unanticipated price when people lose faith in banks after a crisis.

In another work, Sambaombe and Phiri (2022) applied Applying the TRA model to Stanbic Bank's case study will help us understand how online banking impacts commercial banks' customer satisfaction levels. The present study is cross-sectional survey research that was carried out in order to gather information about customers of the Stanbic Bank in their headquarters within Lusaka district. The study had 196 participants in total. The data was gathered by use of a questionnaire and the respondents were chosen using circular systematic random selection. On top of that, stratified sampling was used. To establish a connection between online banking and client satisfaction with banking services, we employed Kendall tau-b correlation. To find out how online banking affected the dependent variable (customer happiness), the binary logistic regression model was used. Customer satisfaction was found to have a weakly positive correlation with online banking. Factors associated with dissatisfaction with online banking include being male, having a secondary or lower level of education, holding negative attitudes and views, and not using the service. These are the outcomes that were achieved. Therefore, these are

variables that the bank must consider in their strategy planning in case they wish to retain or even acquire new customers and make them happier.

Andani and Hidayat (2022) Using continuation intention as a mediator, this study examines the relationship between customer satisfaction, trust, and loyalty among Yogyakarta-based Islamic bank mobile banking customers. This study takes advantage of SEM PLS 3 to analyse primary data gathered from surveys given to 100 randomly selected participants. The results show that the news of the BUMN Islamic bank merger had no noticeable impact on BRIS shares in the market. This is supported by the fact that the abnormal returns were unchanged both before and after the merger. Unexplored among Islamic mobile banking users in this region, the study adds new insights by investigating the mediating function of continuing intention in the relationship between satisfaction, trust, and loyalty.

Jin and Park (2018) The advent of internet-only banks, P2P financing, and mobile banking is transforming the banking industry, as the fundamental services such as borrowing and lending are moved online. The perception of customers on the value, system performance and bank trust influence their use of internet banking, loyalty and continuity. Perceived value includes usefulness, simplicity of use, customisation and ease of use, whereas promise keeping, opportunism and staff trust measure trust in the bank. Using SPSS-based analysis of survey data, the study finds that all four perceived value factors significantly impact usage and loyalty. Task performance trust influences both usage and loyalty, while security trust does not. Within bank trust, promise keeping and employee trust affect loyalty, but opportunistic behavior does not. Additionally, switching barriers—costs, unfamiliarity with new systems, and uncertainty—moderate the impact of usage and loyalty on continuity. The findings suggest banks must enhance perceived value, build trust

(especially in security), and raise switching barriers to retain customers and ensure continuity.

Selvanathan *et al.* (2016) Trust, consumer experience, cost, and usability are the four main determinants of online banking adoption in Malaysia, and this study aims to investigate all of these aspects. One hundred and twenty people in Kota Damansara, Selangor, Malaysia, who use internet banking were given a questionnaire. There was a strong correlation between the results and the degree to which customers trusted and had experience with online banking. Still, the study indicated that neither cost nor simplicity of use were relevant. Banks can utilise the findings to inform the development of more accessible and user-friendly online banking products aimed at the general public.

Hasandoust and Saravi (2017) This study aims at examining how customer satisfaction, trust, commitment and loyalty are influenced by successful e-banking components. The simple random sample was used to select 385 clients of the Bank Sepah branches in the North of Tehran in a random manner. The survey's validity and reliability were confirmed by specialists in the field as well as by Crobach's alpha testing. Partial sum of squares was the final test used to evaluate the data collected from the study questionnaire. Several factors affect customers' trust and satisfaction with online banking, as shown in the research. Some factors to think about include the quality of the websites and services offered, customers' perceptions of the bank's security and privacy, their trust in the bank, their desire to commit, and the effect of customer satisfaction on loyalty regarding e-banking. It was also found that customers' trust and contentment with the service are unaffected by their perceptions of the privacy of e-banking, and that customer satisfaction is unaffected by the quality of e-banking services. Customers' dedication to e-banking has little effect on their loyalty, and consumer satisfaction with the service has little effect on their trust in e-banking.

2.8 Summary

This chapter provides an exhaustive review of the literature on customers' continuance intention in the digital banking domain. It begins by establishing the theoretical foundation, drawing on the model developed by “Theory of Reasoned Action” and “Human Society Theory”, which describe user behavior within a digital context. It was found that knowledge of security threats, such as cyber fraud or phishing, influences customers' perceptions and their decisions to continue using digital banks. The chapter also analyzes the roles played by perceived risk, security, and privacy concerns, with a focus on how these variables shape trust and loyalty among customers. It emphasizes that trust is one of the most critical factors in customer relationships and customer relationship management, and that reducing perceived threats can strengthen online trading systems. Additionally, the effects of age and digital banking experience as individual differences were examined to understand how demographic and experiential factors influence trust and continued usage. Generally, younger and more digitally savvy users tend to feel more comfortable and trusting of online platforms. The chapter concludes by highlighting significant gaps in the existing literature and emphasizing the need for further empirical research to develop the conceptual framework and methodology, which will be presented in the following chapters.

CHAPTER III:
METHODOLOGY

3.1 Overview of the Research Problem

Banking is one of the sectors that has been heavily altered by the quick digitization of operational processes in all sectors. The ancient banking services, represented by the actual presence of the customer in the bank branch where he/she could make transactions

or collect statements, have been majorly replaced by the digital platforms, which are available to customers via desktop, laptop, and mobile systems (Bousrih, 2023). Although the transformation presents unmatched convenience, speed and accessibility, it also presents risks that are perceived by the consumers, which may destroy consumer confidence.

Customer retention in the digital banking space is highly dependent on trust. Trust in the safety of customers' financial and personal information is essential (Kreger, 2025). The fast expansion of social media, however, has contributed to a heightened public awareness of cybercrime, fraud, and data breaches, which in turn has prompted serious worries over privacy and security (Li and Liu, 2021).

Customer satisfaction with current protections, digital change in the banking industry, and cybersecurity measures have all been the subject of prior study. Customers expect banks to provide greater technical assistance and cybersecurity education programs, and research shows that partnerships between conventional banks and fintech firms make both parties more susceptible to hacks.

Therefore, it is necessary to explore how digital transformation affects consumer trust, security awareness, perceived risk, and how these factors influence customers' intentions to continue using digital banking services. These are behavior related aspects which are critical in establishing effective strategies to create trust, security and customer loyalty over a long period in online banking.

3.2 Operationalization of Theoretical Constructs

Operationalization procedure converts theoretical structure of the study to measurable variables ensuring that all constructs are defined, measured, and aligned to research objectives. This paper has found six pivotal constructs as shown in Figure 1 based on past literature on the subject of security and trust in online banking, namely, the

following: “Continuance Intention” (CI), “Awareness of Security Attacks” (ASA), “Perceived Risk” (PR), “Security Concerns” (SC), “Privacy Concerns” (PC), and “Perceived Trust” (PT).

Each construct was measured in five closed-ended statements which were adapted and borrowed validated scales in past research studies to determine conceptual precision and content validity. The responses were noted in a 5-point Likert scale where the scale varied between 1 (Strongly Disagree) and 5 (Strongly Agree), hence quantification of the attitude of the respondents, their perceptions, and their intent could be calculated. The items were designed in such a way that they reflected dimensions of each construct.

The Perceived Risk metric assessed the level of uncertainty and possible negative consequences of using the online banking services, whereas the Continuance Intention metric tested the consumers' intention to continue using the services despite the security dangers. In the same way, Awareness of Security Attacks captured the level of user awareness of popular cyber threats.

This method of operationalization guaranteed that the theoretical constructs were converted into specific, measurable variables, which would provide the possibility of conducting proper statistical analysis and test hypotheses.

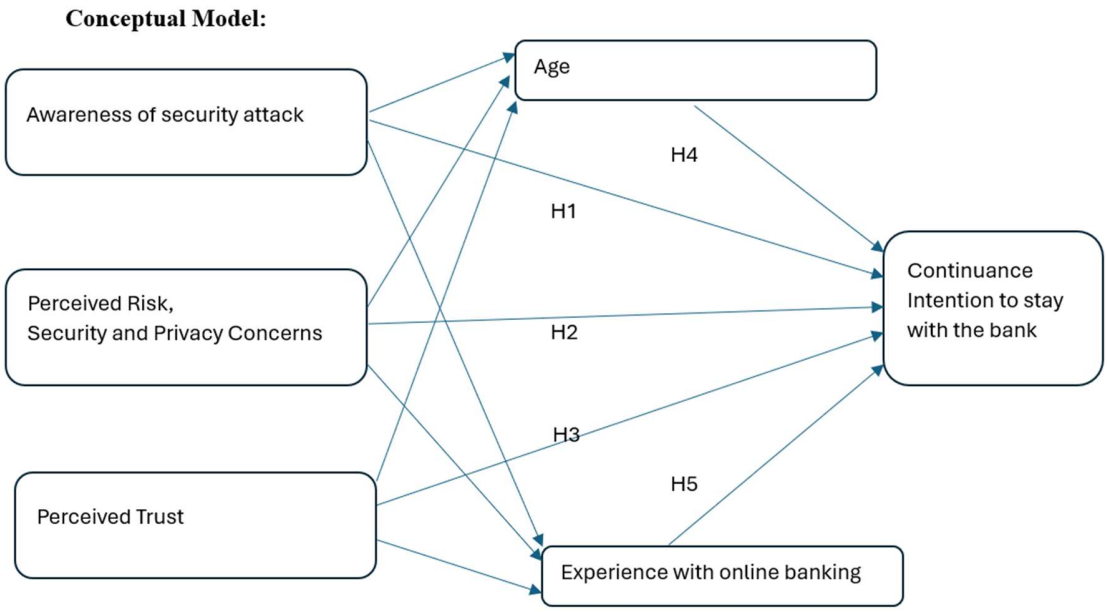

Figure 1: Conceptual Model

3.3 Research Purpose and Questions

Analysing industry insights on critical consumer psychology characteristics and security issues needed during the digital transformation age is the long-term goal of the project. In this digital age of banking, the goal of this study is to give a comprehensive literature evaluation and analysis of industry practices pertaining to several security-related factors and their influence on the intention to continue using the bank. In particular, the following research question is posed by the study:

1. How does the awareness of security attack impacts Continuance intention to stay with the bank?
2. How do the Perceived Risk, Security and Privacy concerns impact Continuance intention to stay with the bank?
3. How the Perceived Risk negatively impact Continuance intention to stay with the bank?
4. How Age of the consumer impacts Continuance intention to stay with the bank?

5. How does the earlier experience with online banking positively impact Continuance intention to stay with the bank?

3.4 Research Design

The effect of digital transformation on customers' faith in banks is examined in this study using a quantitative survey methods approach, quantitative survey. A quantitative research method to explore the relationship between independent variables and dependent variables. It is a suitable method as it is accepted as a form of scientific inquiry (Creswell, 2013). It was chosen due to its crucial ability to obtain individuals beliefs, opinions and attitudes as well as its capability to satisfy the objective of developing and testing theory.

3.5 Population and Sample

The subject of the research is individuals who are exposed to online banking and actively use digital platforms and social media in a great number of areas. The sample size used was 387 respondents which were subjected to a targeted sampling and they were also diverse with regard to demographic and professional background in order to capture a wide scope of responses.

To ensure that all participants satisfied the inclusion requirement of having expertise in online banking, we used a convenience random sampling method, which is a sort of non-probability sampling. This method also made it convenient to reach the participants. Researchers select individuals not at random but according to how convenient they are, making it a non-probability sampling strategy. The reason is that it is fast, cheap, and convenient, though it may be biased and restrict the applicability of the result (Nikolopoulou, 2022) (Nyimbili and Nyimbili, 2024).

The sample is aimed to obtain a general picture of customer perceptions of the cybersecurity awareness, perceived risk, trust, and continuance intention within the context of digital banking.

Table 3.1: Target Population and Sample Size

Criteria	Description
Target Population	Online banking users with digital platform exposure
Sample Size	387 respondents
Sampling Technique	Convenience random sampling (non-probability)
Inclusion Criteria	Active online banking users familiar with digital transactions
Data Collection Tool	Structured questionnaire

3.6 Participant Selection

People who were already familiar with and made use of online banking were chosen to participate in this study. People from all walks of life who frequently use internet banking were contacted using a convenience random sample technique.

Inclusion and exclusion criteria were developed to ensure the responses were relevant and consistent. The active experience in digital banking was taken into consideration only, as the insights of such people would be directly related to the understanding of perceived trust, perceived risk, and continuance intention. These criteria are given in the following Table 3.2:

Table 3.2: Inclusion and Exclusion Criteria for Participant Selection

Criteria Type	Inclusion Criteria	Exclusion Criteria
Banking Usage	Active users of digital/online banking services in the last 6 months	Individuals without any experience in online banking
Age	18 years and above	Below 18 years
Geographical Location	Residing in the study's target region	Outside the study's target region

Digital Access	Access to internet-enabled devices for banking transactions	No access to internet-enabled devices
Willingness	Willing to voluntarily participate in the survey	Unwilling to participate or incomplete responses

3.7 Instrumentation

A structured questionnaire served as the major research instrument for this study, allowing researchers to collect data on participant demographics as well as their opinions regarding the trustworthiness and safety of online banking. The following table 3.3 details the two portions that made up the questionnaire:

Table 3.3: Questionnaire Structure

Section	Variable / Construct	No. of Items	Measurement Scale
A	Demographics (Age, Gender, Education, Occupation, Income, Years of Online Banking Experience, Type of Bank, Frequency of Use)	8	Nominal / Ordinal
B	Continuance Intention (CI)	5	5-point Likert
	Awareness of Security Attacks (ASA)	5	5-point Likert
	Perceived Risk (PR)	5	5-point Likert
	Security Concerns (SC)	5	5-point Likert
	Privacy Concerns (PC)	5	5-point Likert
	Perceived Trust (PT)	5	5-point Likert

The questionnaire contained a total of 38 questions (8 demographic + 30 construct-based), with items adapted from validated scales in previous literature to ensure content validity. This design ensured that the instrument was systematic, measurable, and aligned with the research hypotheses, while also being concise enough to encourage participant completion.

3.8 Data Collection Procedures

Customers of the bank who make heavy use of online banking services were the principal subjects of a structured online survey. To reach a large audience, the survey link was shared across several online platforms, including social media, email, and banking-related forums. Their participation was voluntary, and informed consent was taken before data collection. Answers were taken down anonymously to guarantee secrecy. The questionnaire was also to measure all the theoretical constructs with validated items, and a pilot test was done to refine the wording as well as the clarity. An online questionnaire-based survey was used to collect the data for this research. The survey approach was used because it allows generalizability of outcomes, replicability of findings, and simultaneous evaluation of multiple factors (Bawack, Wamba, & Varillo, 2021). A structured questionnaire devised with the help of available literature. To formulate the survey question an extensive literature review was conducted. The previously published were studied thoroughly. The online survey method was chosen due to its crucial ability to obtain individual's beliefs, perceptions, opinions and attitudes towards technology, as well as its capabilities to satisfy objective of developing and testing theories.

3.9 Data Analysis

The data collected from the survey was analysed using structural equation modelling (SEM) based on partial least squares (PLS) approach with SmartPLS 4 software (Ringle, Wende, & Becker, 2015). We used the PLS-SEM approach because of following reason. This approach is widely used in recent research (e.g., Dwivedi, Hughes, et al., 2021; Hu et al., 2021) and it is based on component-based structural equation modelling (Hair, Ringle, & Sarstedt, 2011). In addition, PLS is recommended for prediction-based models

that focus on identifying the key predictor or driver constructs (Hair et al., 2011), which align with the research objective. We adopted partial least squares (PLS) modelling for data analysis as it is considered an analytical technique that is particularly appropriate for theory explorations. PLS also places fewer restrictions on residual distributions, multivariate distributions, and sample size (Gefen et al., 2000). It has become popular choice for researchers in the area of information systems, strategy, and marketing (Hair et al., 2012; Beker et al., 2012). The data gathered in this study were also analysed using a statistical package for social sciences (SPSS). Appropriate statistical tools were used to examine the collected data. A descriptive statistic was employed to describe the frequencies and percentages of the respondents' demographic profiles.

Cleaning and Preparation

The survey of the questionnaires was carried out among the consumers who are exposed to digital banking. Thus, cleaning and preparation of data commenced immediately after the returned of some questionnaires by the respondents.

Demographic Profile of the respondents

This section highlights the demographic and behavioural characteristics of digital banking users, indicating a predominantly young, educated, and employed user base with moderate income and regular engagement with digital banking platforms. The data gathered in this study were analyzed using a statistical package for social sciences (SPSS).

Appropriate statistical tools were used to examine the collected data. A descriptive statistic was employed to describe the frequencies and percentages of the respondents' demographic profiles.

Table 4.2: Demographic Profile of Respondents

Demographic	**Category**	**Frequency**	**Percent**
Gender	Male	236	60.9
	Female	151	39.1

Age Group	18–24 Years	142	36.7
	25–34 Years	123	31.8
	35–44 Years	64	16.5
	45–54 Years	45	12.6
	55 and above Years	13	3.4
Education	High Secondary School	54	14.2
	Bachelor's Degree	169	44.2
	Master's Degree	125	31.8
	Doctorate	37	9.7
Occupation	Student	57	15.0
	Employed	223	57.6
	Business Owner	55	14.2
	Self-employed/Freelancer	39	10.0
	Retired	8	2.1
	Unemployed	4	1.1
Monthly Income	Below Rs 10,000	37	9.7
	Rs 10,001 – 30,000	180	46.5
	Rs 30,001 – 50,000	94	24.2
	Rs 50,001 – 1,00,000	37	10.3
	Above Rs 1,00,000	35	9.6
How many years have you been using online or digital banking services?	Less than 1 year	78	20.5
	1–3 years	180	47.1
	3–5 years	77	19.9
	More than 5 years	52	13.4
Which type of bank do you primarily use for digital banking?	Public Sector Bank	93	24.5
	Private Sector Bank	205	52.9
	Foreign Bank	60	15.5
	Digital-Only Bank	29	7.4
How frequently do you use digital banking services (e.g., mobile app, internet banking)?	Rarely	59	15.2
	Occasionally	155	40.0
	Weekly	86	22.2
	Daily	87	22.5

The gender distribution of respondents shows that 236 participants (61.1%) were male, while 151 participants (38.9%) were female.

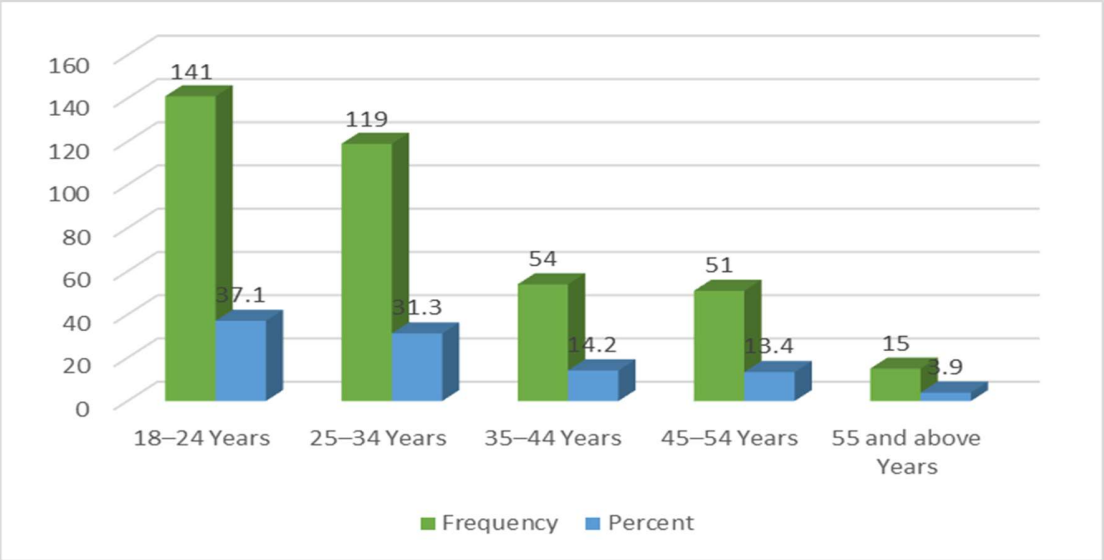

Figure 4.2: Age Group

As shown in Figure 4.2, the respondent age profile is largely concentrated in the younger age brackets. The 18–24 years group forms the largest segment with 141 participants (37.1%), followed closely by the 25–34 years group with 119 participants (31.3%). The 35–44 years and 45–54 years categories account for 54 participants (14.2%) and 51 participants (13.4%), respectively, while the smallest representation is from those aged 55 years and above with 15 participants (3.9%). This pattern highlights a youthful sample base, which could be a significant factor in shaping digital banking usage trends observed in the study.

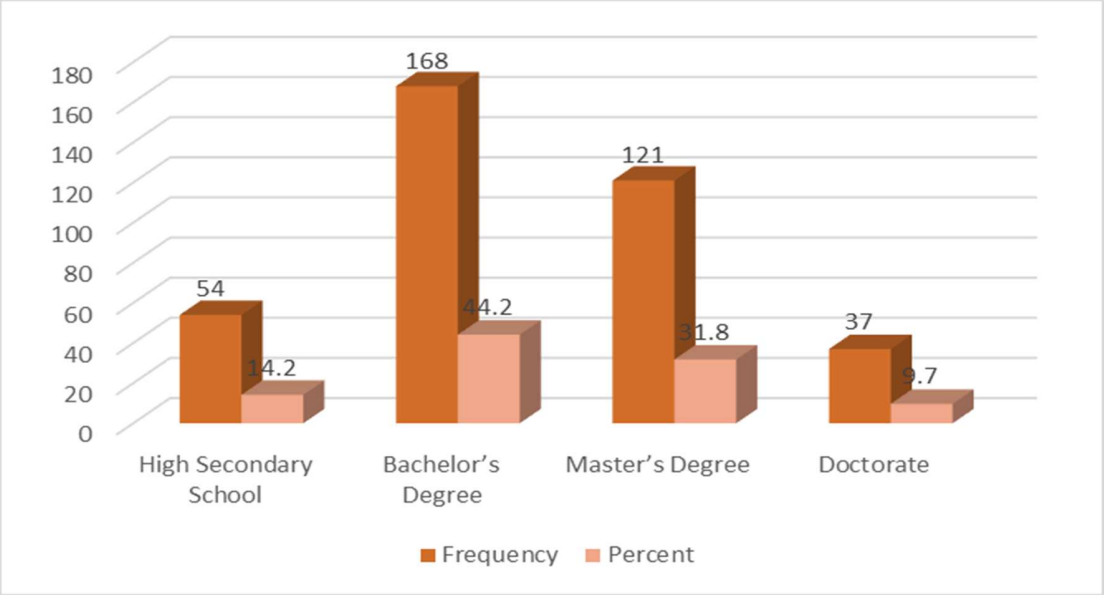

Figure 4.3: Education

According to Figure 4.3, the educational background of respondents shows that the majority hold a Bachelor's Degree, accounting for 168 participants (44.2%). This is followed by those with a Master's Degree, comprising 121 participants (31.8%). Respondents who completed Higher Secondary School represent 54 participants (14.2%), while the smallest group holds a Doctorate, with 37 participants (9.7%). This distribution indicates that most respondents possess higher education qualifications, which may positively influence their familiarity and comfort with using digital banking services.

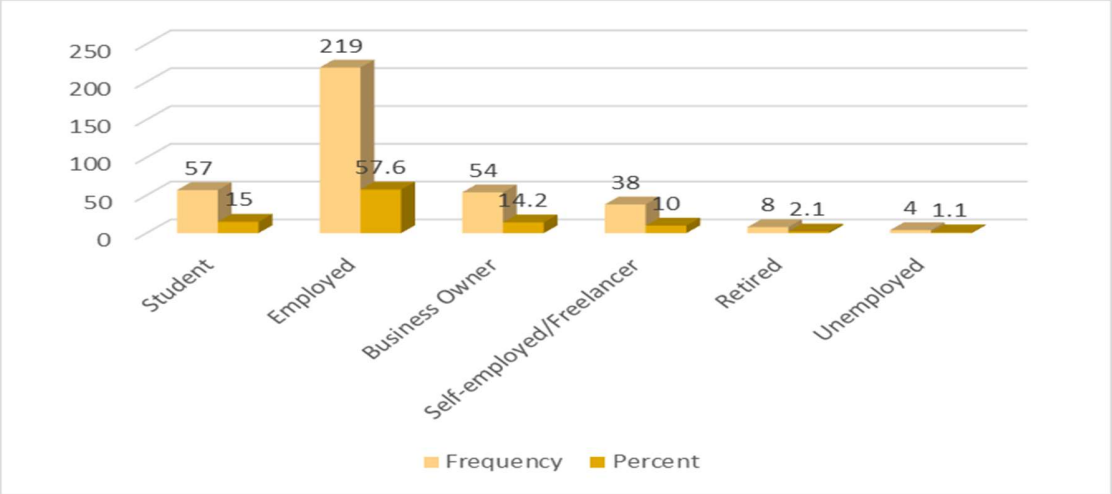

Figure 4.4: Occupation

In Figure 4.4, the distribution of respondents by occupation reveals that the largest segment is employed individuals, making up 219 participants (57.6%). They are followed by students with 57 participants (15%) and business owners with 54 participants (14.2%). Self-employed or freelancers constitute 38 participants (10%), while retired individuals account for 8 participants (2.1%). The smallest group comprises unemployed respondents, with only 4 participants (1.1%). This pattern indicates that the sample is predominantly made up of economically active individuals, which could significantly shape their interaction with and dependence on digital banking services.

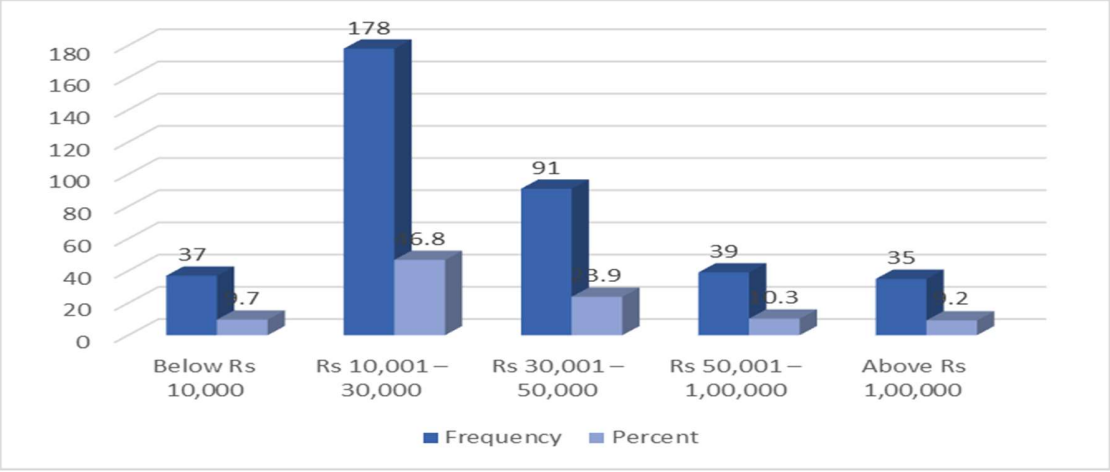

Figure 4.5: Monthly Income

As presented in Figure 4.5, the monthly income distribution of respondents shows that the largest proportion earns between Rs 10,001 – 30,000, comprising 178 participants (46.8%). This is followed by those earning Rs 30,001 – 50,000, with 91 participants (23.9%). Respondents earning Rs 50,001 – 1,00,000 account for 39 participants (10.3%), while 37 participants (9.7%) fall in the below Rs 10,000 income category. The smallest group earns above Rs 1,00,000, representing 35 participants (9.2%). This income distribution suggests that the sample is predominantly from the lower-middle to middle-income segments, which could influence their digital banking preferences and financial behavior.

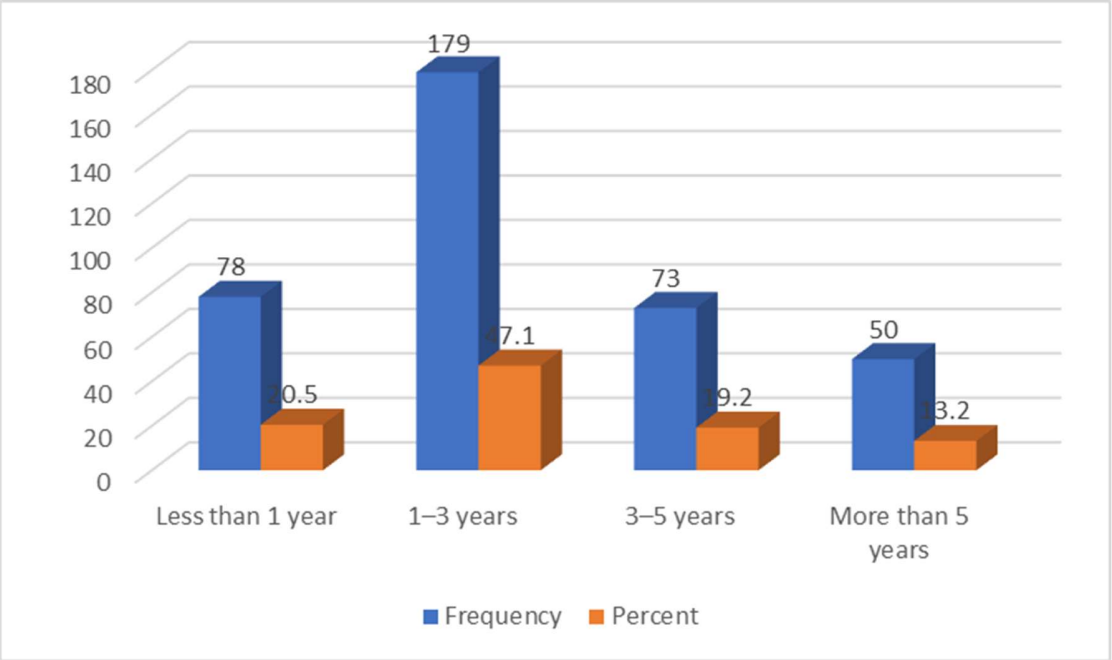

Figure 4.6: How many years have you been using online or digital banking services?

According to Figure 4.6, the majority of respondents have been using online or digital banking services for 1–3 years, accounting for 179 participants (47.1%). This is followed by 78 participants (20.5%) who have less than one year of experience, and 73 participants (19.2%) with 3–5 years of usage. The smallest group, comprising 50

participants (13.2%), has been using digital banking for more than five years. This pattern indicates that most respondents are relatively recent adopters of digital banking, which may reflect the growing popularity and accessibility of such services in recent years.

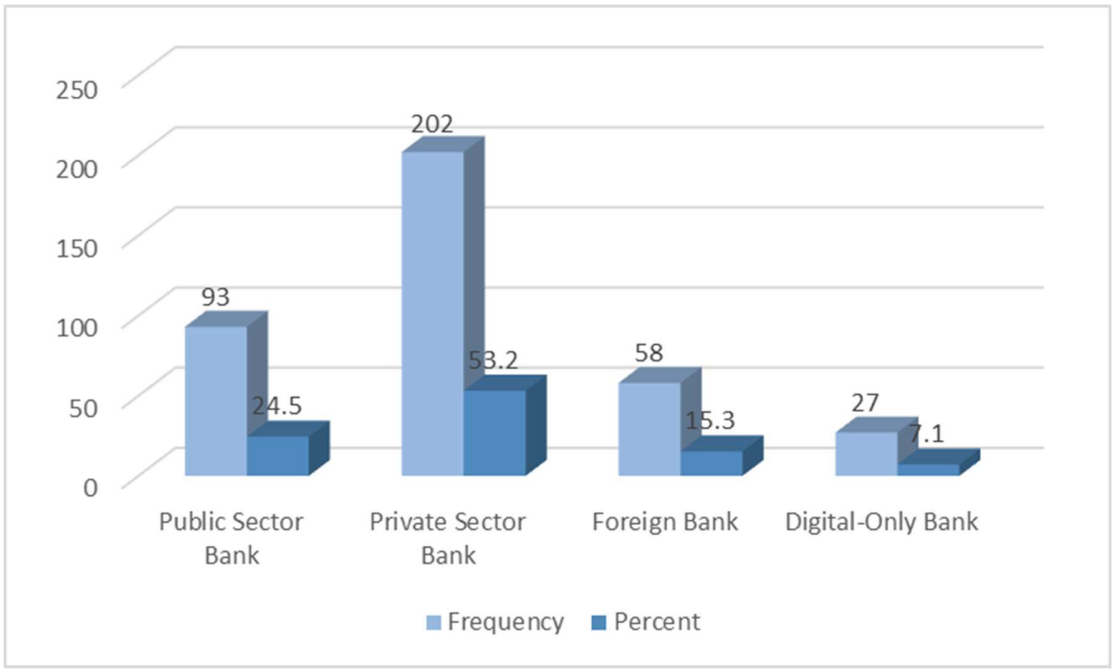

Figure 4.7: Which type of bank do you primarily use for digital banking?

As shown in Figure 4.7, more than half of the respondents primarily use private sector banks for their digital banking needs, accounting for 202 participants (53.2%). This is followed by public sector banks, used by 93 participants (24.5%), and foreign banks, chosen by 58 participants (15.3%). The smallest proportion of respondents, 27 participants (7.1%), primarily rely on digital-only banks. This distribution suggests a strong preference for private sector banks, possibly due to their advanced digital infrastructure, user-friendly interfaces, and competitive service offerings compared to other banking categories.

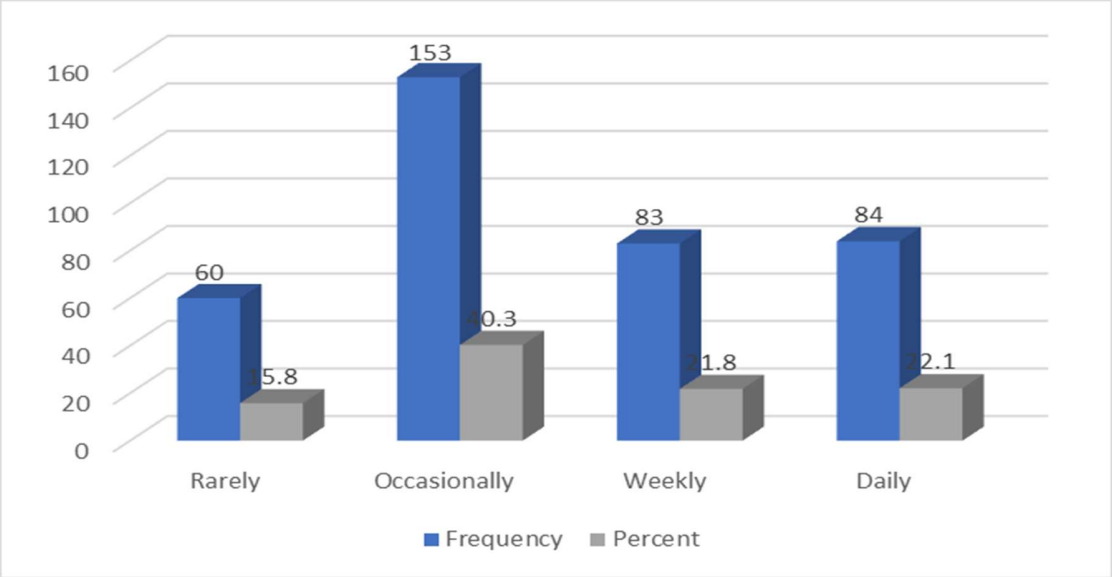

Figure 4.8: How frequently do you use digital banking services (e.g., mobile app, internet banking)?

According to Figure 4.8, the largest proportion of respondents use digital banking services occasionally, with 153 participants (40.3%) falling into this category. This is followed by those who use such services daily (84 participants, 22.1%) and weekly (83 participants, 21.8%), showing a nearly equal representation between regular and frequent users. A smaller group, 60 participants (15.8%), reported using digital banking rarely. This usage pattern indicates that while occasional use is most common, a significant portion of respondents engage with digital banking on a frequent or daily basis, reflecting its growing role in routine financial transactions.

3.10 Research Design Limitations

The following limitations were identified in the research design:

- **Sample Size Constraints:** A Limited number of respondents may reduce the statistical power and generalizability of results.

- **Geographical Boundaries:** Information obtained using a given place or group might not be reflective of wider groups of people.
- **Self-Reported Data:** The use of responses by participants may lead to bias because of poor recall or because of social desirability tendencies.
- **Cross-Sectional Nature:** The data used is obtained at one point in time, it restricts the capacity to evaluate causal associations.
- **Narrow Scope of Variables:** The concentration on a few variables might exclude other variables that affect the research problem.
- **Technological and Contextual Shifts:** The findings can be influenced by the rapid changes in technology or the industry conditions, which could change in the long term.

3.11 Conclusion

In order to address the study's objectives, this chapter detailed the research methodology, including the research strategy, data gathering procedures, sample strategies, and analysis methods. In addition to staying within the parameters of the study, the technique was designed to offer a systematic, organised, and well-planned examination of the research problem. Data interpretation was confirmed to have made use of the primary statistical methods and software tools. Also, the chapter did not overlook limitations of research design, including limitations due to sample size, self-reported information, and cross-sectional study, which potentially affected interpretation and generalizability of findings. The methodological framework provides a solid foundation for arriving at significant discoveries and warranted findings, albeit these limitations. The study questions and hypotheses will be answered with empirical data provided by the findings and discussion offered in the next chapter, which is based on the collected data.

CHAPTER IV:

RESULTS

4.1 Introduction

This chapter includes the findings of the survey dataset of this study. This includes all the findings related to different aspects that have been analysed in this research work.

4.2 Reliability Analysis

This section presents the details of the dataset's reliability analysis, conducted to assess the internal consistency and ensure the data is both valid and reliable for further statistical evaluation.

As the model was based on developed theory, therefore PLS-SEM was used for evaluation. In PLS-SEM, the model is evaluated in two steps. The first step is of assessment of measurement which consist of evaluating reliability and validity. The second step is to assess the structure which conducts the evaluation of hypothesis. In PLS, the reliability of the measurements is calculated by examine the factor loading of each item to its respective latent construct (Hulland & Business, 1999). In this method, higher loading is preferable as it means that there is more shared variance between construct and its items than error variance while, low loadings implies that the explanatory power of the model is weak (Hair, Black, Babin, & Anderson, 2013; Hulland & Business, 1999).

To validate the construct the path diagram was constructed using PLS toll then connected as hypothesized in the theory as shown in Figure 1. In the first step, PLS algorithm was calculated. In the result all the factors showed significant loading. In the next step bootstrapping was done to check that the test on sample is the true representation of population. Bootstrapping is the process to estimate t-values of the item loadings for outer model and path coefficients for inner model. Bootstrapping was run on 500 subsamples (Hair et al., 2014) at two tail test. The values of t were found to be > 1.96 at

0.5 level of significance. The reliability of items was measured by Cronbach's Alpha values are higher than 0.7 indicating robustness. The composite reliability of constructs ranges from 0.86 to 0.81 (Table 4.1). The values between 0.70 to 0.95 are considered 'satisfactory to good' (Hair et al., 2014). To evaluate convergent validity, average variance extracted (AVE) of each variable was calculated, as suggested by Fornell and Larcker (1981). The AVE for all items shows convergent validity as it exceeds 0.50 (Table 4.1). The factor loading also were greater than 0.5 and therefore found significant. To validate that the constructs share high variances among themselves as compared to other constructs discriminant validity was used. The diagonal elements represent AVE of construct, and other values represent correlation between constructs (Table 4.2.1). The square root of each construct's AVE was found to be higher than its correlations with any other constructs, hence supporting the sufficient discriminant validity of the scales (Henseler et al., 2009).

The discriminant validity is further confirmed by the Heterotrait-Monotrait Ratio (HDMT) (Table 4.2.1). Values should be smaller than 0.90 or a conservative value of 0.85 (Henseler et al., 2015). The valued are less than 0.85, indicating that they are distinctively measuring the latent constructs which proof a strong discriminant validity.

The result shows that the constructs are good fit to the mode and the reliability and validity is good.

Table 4.1: Reliability Statistics

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
ASA	0.713	0.718	0.812	0.565
CI	0.734	0.759	0.823	0.586
PC	0.813	0.821	0.869	0.571
PR	0.778	0.843	0.838	0.511

PT	0.797	0.805	0.86	0.552
SC	0.779	0.78	0.849	0.529

Table 4.2.1: Discriminant Validity of the Constructs: Correlations between Constructs (Fornell–Larcker Criteria, 1981)

	ASA	CI	PC	PR	PT	SC
ASA	**0.682**					
CI	0.542	**0.698**				
PC	0.497	0.438	**0.744**			
PR	0.458	0.258	0.5	**0.781**		
PT	0.57	0.479	0.566	0.51	**0.743**	
SC	0.533	0.4	0.632	0.594	0.51	**0.712**

Table 4.2.2: Discriminant Validity of the Constructs: Heterotrait-Monotrait Ratio (HDMT)

	ASA	CI	PC	PR	PT	SC
ASA						
CI	0.720					
PC	0.649	0.558				
PR	0.599	0.326	0.616			
PT	0.762	0.609	0.701	0.627		
SC	0.764	0.554	0.856	0.808	0.693	

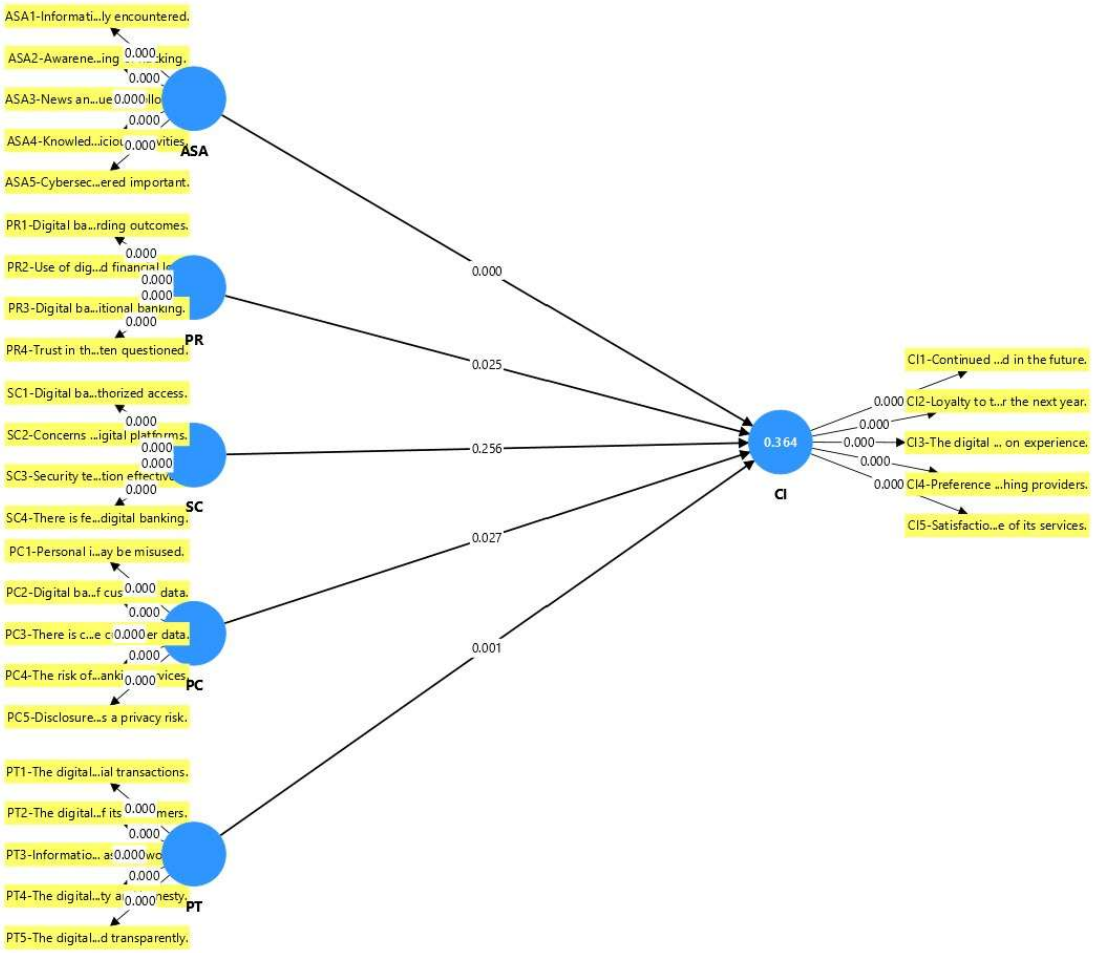

Figure 2: Item Loadings, Path Coefficient

4.3 Hypothesis Testing (Path Coefficient)

The final step in evaluating the structural model is by examines the research hypotheses through assessing the path coefficient. For that end, the hypothesized relationship was examined by running bootstrapping. Bootstrapping is a procedure whereby a large number of subsamples (e.g. 5000) are taken from the original sample with replacement to give bootstrap standard errors, which in turn provides approximate t-value for significance testing of the structural path.

Hence, applying bootstrapping approach provides an estimate for the spread, shape and the bias of the sample distribution of a specific statistic (Henseler et al., 2009). The results of all bootstrapping samples in PLS-SEM, provide standard error and t-value (t-test) for each path coefficient model to measure the significance of such path model relationship (Chin, 1998).

Based on that, bootstrapping analysis enable to test statistically the research hypotheses. However, the criteria to determine whether the assumed relationship is significance or not is based on the value of t-value. Commonly used critical values are 1.65 (significance level= 10%), 1.96 (significance level = 5%), and 2.57 (significance level = 1 %). However, Instead of t-values, researchers routinely report p-values that correspond to the probability of erroneously rejecting the null hypothesis, given the data at hand (Hair et al., 2011). The smaller p-value is the stronger the significance relation will be. Table 4.8 exhibits the findings of the path coefficient that used to test research hypotheses of the current research.

Table 4.3: Path coefficient of the research hypothesis

Hypothesis	***Relationship***	***Std. Beta***	***Std. Error***	***T - Value***	***P - value***	***Decision***
Awareness of security attacks significantly impacts continuance intention to stay with the bank.	*ASA -> CI*	*0.364*	*0.063*	*5.766*	*0*	*Accepted**
	PC -> CI	*0.154*	*0.07*	*2.215*	*0.027*	*Accepted**

Perceived Risk, Security, and Privacy concerns significantly impact continuance intention to stay with the bank.	*PR -> CI*	*0.146*	*0.065*	*2.238*	*0.025*	*Accepted**
	PT -> CI	*0.215*	*0.063*	*3.432*	*0.001*	*Accepted**
Perceived trust significantly impacts continuance intention to stay with the bank.	*SC -> CI*	*0.085*	*0.075*	*1.136*	*0.256*	*Rejected*

*Significant at p**= < 0.01, p* <0.05*

Abbreviation: ASA= Awareness of Security Attack, PC= Privacy Concerns, PR= Perceived Risk, PT= Perceived Trust, SC= Security Concerns, CI= Continuance Intension to stay with the bank.

4.4 Multi-group Analysis (MGA)

This section examines how other factors like age, gender and experience with digital banking affects the continuance intension to stay with the bank. We used Bootstarp Multi Group Analysis using Smart PLS software to analyse those factors. We looked at notable variations between two groups in terms of effect of awareness of security attack, perceived risk, security and privacy concerns, perceived trust and continuance intension to stay with the bank.

MGA - Age of consumer

MGA was ran for age group 18-24 years and 25-34 years against group of 35-44 years and 45-54 years to check if there is any impact with respect to young consumers verses older consumers. Subsamples of 5000 was selected with Two tailed test.

Table 4.4: Multi-group Analysis – Age group

Hypo	Difference Youngest-Older	Difference Youngest-Oldest	Difference Younger-Older	Difference Younger-Oldest	Youngest-Older P-Value	Youngest-Oldest P-Value	Younger-Older P-Value	Younger-Oldest P-Value
ASA -> CI	-0.296	-0.002	-0.384	-0.091	0.062	0.487	0.036*	0.317
PC -> CI	-0.142	0.073	-0.399	-0.184	0.225	0.38	0.042*	0.207
PR -> CI	0.196	0.286	0.426	0.516	0.191	0.073	0.041*	0.011*
PT -> CI	0.233	-0.061	0.28	-0.014	0.117	0.356	0.113	0.468
SC -> CI	0.197	-0.139	0.352	0.017	0.174	0.267	0.06	0.489

*The Difference are significant in the relationships between the two genders (P<0.05)

MGA - Experience with online banking

To check the impact of experience with online banking on continuance intention to stay with the bank MGA was ran for group with less than 1 year and 1-3 years against the consumer group with experience with online banking of 3-5 years and above 5 years. Subsamples of 5000 was selected with Two tailed test.

Table 4.5: Multi-group Analysis – Years of experience with online banking

Hypo	Difference (1-3 years - 3-5 years)	Difference (1-3 years - More than 5 years)	Difference (Less than 1 year - 3-5 years)	Difference (Less than 1 year - More than 5 years)	Group_1-3 years vs Group_3-5 years P-Value	1-3 years vs More than 5 years P-Value	Less than 1 year vs 3-5 years P-Value	Less than 1 year vs More than 5 years P-Value
ASA -> CI	0.374	0.042	0.256	-0.076	0.035*	0.408	0.148	0.352
PC -> CI	0.388	0.425	0.448	0.485	0.078	0.026*	0.077	0.047*
PR -> CI	0.047	0.428	0.139	0.52	0.406	0.034*	0.289	0.026*
PT -> CI	-0.205	-0.251	-0.13	-0.177	0.163	0.088	0.286	0.205
SC -> CI	-0.264	-0.158	-0.214	-0.107	0.139	0.315	0.204	0.366

*The Difference are significant in the relationships between the two genders (P<0.05)

MGA - Gender of consumer

MGA was ran for group based on gender to check if there is any impact with respect to female consumers verses male consumers. Subsamples of 5000 was selected with Two tailed test.

Table 4.4: Multi-group Analysis – Gender

Hypo	Difference (Female - Male)	P-value
ASA -> CI	-0.227	0.040*
PC -> CI	0.029	0.422
PR -> CI	0.058	0.329
PT -> CI	0.13	0.157
SC -> CI	-0.007	0.479

*The Difference are significant in the relationships between the two genders (P<0.05)

4.5 Research Question One

This section examines how awareness of security attacks impacts customers' continuance intention to stay with the bank.

Hypothesis 1

H1: There is significant impact of Awareness of security attack on Continuance intention to stay with the bank.

H1 evaluates whether Awareness of security attack has significant impact on Continuance intension to stay with the bank. The results revealed that Awareness of security attack has a significant effect on CI ($\beta = .364$, $t=5.766$, $p<0.001$). Hence H1 was supported.

4.6 Research Question Two

This section investigates how perceived risk, security concerns, and privacy concerns influence continuance intention, identifying which of these risk-related factors significantly affect customer retention.

Hypothesis 2

H2: There is significant impact of Perceived Risk, Security and Privacy concerns on Continuance intention to stay with the bank.

H2 proposed that Perceived Risk, Security, and Privacy concerns significantly impact continuance intention to stay with the bank. Based on the results, H2 is accepted because PR and PC show significant relationships with CI as shown in Table 4.3.

PR has significant impact on CI ($\beta = .146$, $t=2.238$, $p<0.05$) so also PC ($\beta = .154$, $t=2.215$, $p<0.05$) although SC did not show any significant relationship with CI. But overall H2 was supported.

4.7 Research Question Three

This section analyses whether perceived risk significantly impacts continuance intention to stay with the bank.

Hypothesis 3

H3: There is significant impact of Perceived Trust on Continuance intention to stay with the bank.

The results revealed that PT has a significant effect on CI (β = .215, t=3.432, $p<0.001$). Hence, H3 stated that Perceived Trust significantly impacts Continuance Intention to stay with the bank. Based on the results, H3 is accepted.

4.8 Research Question Four

This section explores how the age of consumers affects continuance intention to stay with the bank, identifying whether retention behavior varies significantly across age groups.

Hypothesis 4

- **H4:** Age has a significant impact on perceived trust in digital banking services.

As per the results shown in Table 4.3 This indicates that variations in perceived trust across age groups may be due to chance rather than a real effect of age. The findings suggest that trust levels in digital banking are not strongly influenced by age, and other factors such as digital literacy, prior experience, or service quality may play a more decisive role. H4 is rejected.

Results as shown in Table 4.4 for ASA, PC, PR relationship is significant with CI and it is observed that age does matter in continuance intension for to stay with the bank.

We can see significant differences youngest and older, youngest and oldest so also for younger and oldest. So it is found that age impacts the continuance with online banking for few of the relationships, but it did not impact for PT and SC. Hence H4 is rejected.

4.9 Research Question Five

This section assesses how earlier experience with online banking positively impacts continuance intention, evaluating whether longer familiarity with digital banking drives stronger customer loyalty.

Hypothesis 5

- **H5:** Experience with online banking has significant impact Continuance intention to stay with the bank.

As we can see from Table 4.5 there are significant difference for the consumer having less than 1 year exposure with online banking verses consumer with more than 5 years of online banking experience. But for few of the relationship PR and PC with CI where impact is significant. Hence, H5 is accepted — longer online banking experience significantly increases continuance intention.

4.10 Summary of Findings

The summary of findings are listed in the following Table 4.16:

Table 4.16: Summary of Findings Based on Research Questions

Research Question	Hypothesis	Statement	Finding	Hypothesis Status
RQ1: How does the awareness of security attacks impact continuance intention to stay with the bank?	H1	Awareness of security attacks significantly impacts continuance intention to stay with the bank.	Positive moderate correlation — higher awareness linked to greater continuance intention.	**Accepted**
RQ2: How do perceived risk, security concerns, and privacy concerns impact continuance intention to stay with the bank?	H2	Perceived Risk, Security, and Privacy concerns significantly impact continuance intention to stay with the bank.	Perceived risk and privacy concerns positively influence continuance intention; security concerns not significant.	**Accepted**
RQ3: How does perceived risk significantly impact continuance intention to stay with the bank?	H3	Perceived trust significantly impacts continuance intention to stay with the bank.	Perceived trust has a significant correlation with continuance intention.	**Accepted**
RQ4: How do demographic	H4	Age has a significant	Variation in perceived trust	**Rejected**

factors such as age and perceived trust impact continuance intention to stay with the bank?		impact on Perceived trust to stay with the bank.	across age groups observed, Differences were not statistically significant, indicating no significant effect of age on perceived trust.	
RQ5: How does earlier experience with online banking positively impact continuance intention to stay with the bank?	H5	Experience with online banking positively impacts continuance intention to stay with the bank.	More experience strongly linked to higher continuance intention; highest for >5 years of experience.	**Accepted**

4.11 Conclusion

This chapter presented the results and analysis of the study, examining how various factors influence customers' continuance intention to stay with their banks. The findings highlight that awareness of security attacks, perceived risk, privacy concerns, perceived trust, age, and prior online banking experience all play significant roles in shaping customer loyalty. Interestingly, perceived risk showed a positive rather than negative relationship with continuance intention, suggesting that customers who recognize risks may also value secure banking relationships more. Perceived trust emerged as the strongest predictor, reinforcing its critical role in sustaining customer relationships. Age and experience

demonstrated clear behavioural patterns, with middle-aged customers and those with longer online banking experience showing higher loyalty. The results not only validate most proposed hypotheses but also provide practical insights for banks to enhance security awareness, strengthen trust, and tailor services to different customer segments for long-term retention.

CHAPTER V:
DISCUSSION

5.1 Discussion of Results

This study set out to answer the question, "How do various demographic and risk-related factors influence consumers' trust in and future use of digital banking services?" by analysing these variables. To guarantee long-term retention in the face of the banking sector's rapid digital transformation, it is critical to understand the connection between perceived risks and consumer trust. The primary aim was to analyse how a person's age, level of familiarity with security assaults, perceptions of risk, worries about privacy and security, and past experiences with online banking influence their future intention to continue using digital banking services.

One of the most notable findings of the study is the paradoxical observation that, as users' awareness of security threats increases, their willingness to continue engaging in digital banking also tends to rise. This suggests that heightened awareness does not necessarily deter usage; rather, it may foster greater confidence in navigating potential risks. As opposed to viewing awareness as a frightening or stopping factor, it emerges to be a factor that makes informed consumers more confident and powerful. This shows the

significance of consumer education, once the users are informed about the character of digital threats and what measures to take, they are better prepared to trust and use the digital services. This observation reaffirms the idea that security awareness initiatives by banks can be used as a form of trust building as opposed to a compliance measure.

The study also indicates that perceived risk coupled with security and privacy concerns have a positive relationship with the willingness of the users to stick with their digital banks. This implies that the consumer can be ready to tolerate some risk as being a normal practice of using digital services, especially when the services are highly convenient and efficient. The result here is that the idea of an informed trust is revealed- the users are informed of the risks, but still proceed to use it as they feel that the benefits outweigh the harm. Notably, in these issues, the aspect of privacy was the most relevant aspect. These results strengthen the rising consumer desire to transparency, data security, and ethical treatment of personal data by the financial institutions.

Considering the demographic variables, the research discovered that age has a complex position. Although age did not play a significant role in the perception of trust, it plays a role in continuance intention. The middle-aged users were most likely to keep on using digital banking than the younger or older generations. This may have been as a result of a mixture of digital literacy, financial maturity, and dependence on digital platforms to carry out day-to-day transactions. However, study supported that age significantly influenced continuance intention, with middle-aged groups showing higher commitment.

As such, the digital banks ought to learn to adjust their communication and support systems to meet the needs of different age groups to achieve increased retention. In addition to this, past experience of online banking proved to be a good indicator of continuance intention. The greater the user experience in conducting digital banking, the higher the chance of maintaining such services. This further emphasizes the need to establish trust at

the initial stages of user journey. The issue with financial institutions is that they need to concentrate on onboarding patterns, early education, and digital ease of use throughout the initial experience to form long-term users.

In essence, the findings show that the possibility of disrupting customers' faith in online banking is not always a given. Building trust should instead focus on giving customers access to high-quality information, giving them agency, and making sure institutions are actively managing risk. Customer education, robust privacy measures, and user-friendly service design must consequently accompany digital transformation in banking to make sure that consumers remain loyal and continue to trust it in the long run.

5.2 Discussion of Research Question One

How does the awareness of security attack impacts Continuance intention to stay with the bank?

The results of the current study show that security threat awareness in digital banking has positive effect on consumers intending to maintain the usage of these services. This is a major departure of the initial thinking that the knowledge of cyber threats can create fear and consequently decline consumer interest. The results are better explained by the fact that people who are well-informed about internet banking are more likely to feel safe and in charge when utilising these services. Due to the constant updates regarding phishing attempts, data breaches, and fraud prevention strategies, more and more customers are putting their faith in online banking systems. This is relevant to the "Theory of Reasoned Action" (TRA), which posits that people's actions are influenced by their knowledge and intentions. The better they know the possible threats, the better the users are likely to engage in protective behaviours, i.e., enable multi-factor authentication or avoid potentially suspicious links, thereby increasing the level of trust in the system and

lowering the perceived risk. In turn, this trust is reflected in an increase in the chances of subsequent use.

The result is in line with another study, such as Ameen et al. (2021), who stressed that consumer engagement with advanced technologies is enhanced when they are well-educated concerning their functions and risks. The results show that trust and perceived sacrifice are important mediators between perceived ease, personalisation, and the quality of AI-enabled services. Relationship commitment significantly affects AI-enabled customer experience, according to the research. On the same note, Najaf, Mostafiz and Najaf (2021) proved that proactive cyber defence awareness initiatives boost users' trust in online banking and other digital services. Cybersecurity threats have consistently jeopardised the assets and data of individuals, organisations, and governments. The banking industry is no different. In order to remain competitive, banks are increasingly focussing on maintaining low interest rates. This is a clear implication that financial institutions must continue to invest in user education campaigns, which help to explain the dangers and protection mechanisms of digital banking.

Thus, the increased awareness does not turn away users but functions as a confidence driver to maintain the use of digital banking. This explains the relevance of transparency, customer education, and proactive cybersecurity communication as the means to enhance consumer confidence and long-term interest.

5.3 Discussion of Research Question Two

How do the Perceived Risk, Security, and Privacy concerns impact the Continuance intention to stay with the bank?

Users' intents to remain linked to digital banking services were significantly impacted by perceived risk, security difficulties, and privacy concerns, according to this study. Surprisingly, these concerns did not act as deterrents but were positively linked to

the continuation intention. This suggests that users might accept these risks as part of digital platforms but continue banking because of their confidence in the banks' risk mitigation policies and the convenience of digital banking services. The privacy issue turned out to be the most decisive one and supported the findings of the study conducted by Bianchi and Andrews (2012) where the researchers pointed out that users are especially sensitive to the way personal information is managed online.

The perception that privacy protection is a priority enhances trust in an organisation regarding its integrity. The results also correspond to the works of Victor et al. (2018) explained the strategic place of risk management in forming consumer behavior. Users are more loyal to banks when they see that those banks care about their security and privacy issues, even if they acknowledge potential risks. The findings suggest that clear privacy policies, secure technologies, and open communication about risks are crucial for building long-term trust and ensuring the continuity of digital banking services.

5.4 Discussion of Research Question Three

How the Perceived Risk negatively impact Continuance intention to stay with the bank?

The results showed that, contrary to expectations, consumers' perceptions of risk did not influence their decision to continue using digital banking. Rather, a robust positive association was found between ongoing use and perceived danger, indicating that users who are cognisant of risk may see these risks as manageable when accompanied by robust security measures and reliable institutional protections. This indicates that risk is not perceived as a barrier by many users, but rather as a manageable aspect of digital banking—especially when combined with other positive features like speed, accessibility, and convenience.

The result contributes to the perceptive by Jeyaraj et al. (2024), those that stress the fact that digital transformation is hitting the banking industry hard and is changing the way banks function, interact with clients, and handle internal operations. More flexible, scalable, and cost-effective solutions are now the norm, thanks to the proliferation of digital technologies. Those who are exposed to technology more extensively might find risk as a common element of online interaction and not a barrier element.

Additionally, in many cases, digital maturity is linked to the ability to manage perceived risks more effectively, which leads to increased use of digital platforms. The presence of security protocols and alerts can also be seen by users as a sign of transparency and accountability in the system, thereby helping to build trust even with the understanding of risk.

Overall, the study emphasizes the compatibility of trust and perceived risk, especially in cases where users are well-informed and experienced and protected by the walls of institutions. There is thus a need to strike a balance between communicating risk and reliability by banks.

5.5 Discussion of Research Question Four

How Age of the consumer impacts Continuance intention to stay with the bank?

The results give a two-sided view of age in digital bank involvement. Although age was not significant in perceived trust, age was significant in establishing continuance intention. This implies that, irrespective of age, the users are expected to develop comparable trust towards the digital banking services. Nevertheless, the middle-aged group of consumers demonstrated higher interest in continuing to use digital banking, which could be explained by higher financial responsibility, habitual use, and moderate technological compatibility.

Apart from this, some other factors were also there, as Kim and Yang (2025) three key takeaways from the research. First, among the characteristics of perceived quality, physical quality, customer orientation, and brand image had the most impact on customer satisfaction, which in turn increased loyalty to the brand. On the other hand, neither brand recognition nor brand accessibility were found to be substantial factors. The second is that digital quality, which includes information, service, and system quality, indirectly increased brand loyalty by making customers happier. Furthermore, thirdly, digital quality components were unmodified by environmental unpredictability, which had a favourable impact on consumer satisfaction. In the age of digital banking, these findings suggest that, more than traditional brand equity characteristics like firm size, digital service channel quality and brand image are determining customer valuation.

In another supportive study, Gefen and Straub (2004) states that trust in online services is acquired through experience and through repeated product delivery, which middle-aged users would have had more opportunities to build. The fact that the level of trust did not vary indicates that banks have been able to create a base level of credibility among the different age groups. The varying levels of continuance intention, however, point to age-specific digital solutions, including the simplification of platforms to older users and engaging customers of younger generations.

5.6 Discussion of Research Question Five

How does the earlier experience with online banking positively impact the Continuance intention to stay with the bank?

The research that supports the hypothesis well is the fact that the previous experience of online banking positively influences the willingness to continue using the services of the digital bank. The longer the years of use, the more the respondents exhibited their loyalty and commitment to their digital banks. This observation. It backs the idea that

the more someone knows it, the more comfortable it would get, and out of comfort would come trust-at least in the technology-mediated financial environments. In a study Kaushik (2024) made important discoveries regarding the game-changing impacts of online banking on consumer habits and provides useful recommendations for financial organisations aiming to boost client happiness and devotion in a digitally-driven society. This indicates that improved confidence and user retention are the result of long-term exposure to digital systems. Awakened users have become used to the characteristics of the bank, and they are better able to detect fraud and are more willing to think about digital communications as safe and efficient.

In addition, this prolonged experience leads to better grasp of the digital banking ecosystem, allowing users to better understand possible threats and strengthen their sense of security. This repeated exposure creates a feeling of trustworthiness and cuts down fear of using technology in transactions, which directly converts into greater continuance intention. Banks have an opportunity to use it to provide specific educational programs and individual assistance to new users and accelerate the trust-building process.

Finally, long-term exposure to the digital bank services leads to more than just loyalty: it contributes to advocacy. The champions who have used digital banking are likely to be brand ambassadors by preaching the advantages of digital banking to their peers and friends. This natural marketing allows banks to increase the number of customers as well as strengthen the circle of trust and retention. In such a way, the interrelation between experience and continuance intention is reciprocating and complementing, which explains the vital importance of customer experience management in the process of the digital revolution of the banking industry.

CHAPTER VI:

SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

6.1 Summary

This study is an investigation of how risk factors affect consumer trust and the willingness to persist with the digital banking services in an increasingly digital financial world. With the banking organizations already going digital to improve their service delivery, an increased number of cyberattacks and privacy issues have started posing severe questions regarding consumer reaction, trust, and sustainability. Finding out how factors including age, level of expertise with online banking, perceived risk, security and privacy concerns, and knowledge of security assaults affect consumers' willingness to maintain digital banking connections is the primary goal of this research.

The study's main methodology was a structured questionnaire sent out to people who utilise online banking services. The focus was on how customers feel about the security and dependability of online banking services, and how it makes them feel about their loyalty and their intents to use the system. Respondents tended to be young, college-

educated, and tech-savvy; they also tended to engage in the more commonplace forms of online banking.

It is found that the users are typically knowledgeable about cybersecurity threats, like phishing, hacking, and fraud and often track news and alerts about such events. This knowledge will help create a more knowledgeable user base that is confident in the digital banking environment. Interestingly, increased awareness of the cyber risks does not seem to affect the desire to use the digital banking system again, but on the contrary, it increases trust and loyalty to it. Such awareness is perceived by the consumers as empowerment and readiness, which further strengthens their belief in the usage of these platforms.

Users recognize perceived risks like financial losses, uncertainties regarding the result of a transaction and exposure to fraud. Nevertheless, such risks are not strong enough to discourage further use. Rather, the study presents that customers are ready to accept some risk when they have confidence in the security systems and the digital framework of the bank. Trust is, therefore, the balancing factor that cancels out fear and uncertainty. Besides, there is a lot of concern regarding the efficiency of digital banking security technology, the appropriateness of data protection, and possible privacy breaches. In spite of such concerns, the majority of users still demonstrate high preferences for their existing digital banking providers and are loyal to them in terms of future utilization and referral.

The study also looks into how age and digital experience impact trust and continuance intention. Although the age factor is not influential in the perception of trust, it influences the willingness of users to use digital banking further, with middle-aged users expressing the highest continuance intention. Also, the longer the experience of users in the digital banking, the more trust and a desire to stay with their current service provider they demonstrate.

Overall, the results indicate that risks and security issues perceived by consumers do not necessarily undermine trust. Quite the opposite, with the right awareness and sense of control, these aspects could increase customer confidence. This is an indication of the changing landscape of digital trust, where the informed user ceases being a mere recipient of services but a proactive participant in the management of their security. The research highlights the need to have clear communication, consumer education, and a strong cybersecurity framework to help build brand loyalty of consumers in the digital banking ecosystem over the long term.

6.2 Implications

The study also has theoretical and managerial implications that can promote insights on consumer confidence in online banking when there is a perception of risks involved. Theoretically, the results \

the existing beliefs of risk aversion since it was found that more awareness of security threats does not influence usage but may have a positive effect on continuance intention. It implies that informed behavioral beliefs, including awareness about cybersecurity, may enhance the intention via perceived control and trust. Another important contribution of the study is the filling of the significant gap in the literature that empirically associates the variables of risk awareness, privacy concerns, and demographic characteristics with the digital banking retention Behavior.

Managerially, the study has some action points for banks and financial institutions. It emphasizes the role of proactive communication, security awareness, and trust-enhancing approaches to various user segments. Banks are not supposed to concentrate on risk minimization, but they should also ensure that there is transparency in the risk

management to build confidence among consumers. Such segmentation by age and experience can be used to create more specific awareness programs and digital onboarding. Moreover, the visible and working security technologies and clear communication on data protection practice can be used to assure the users and increase loyalty. Through a fit between digital strategies and customer trust drivers, banks will also be able to manage the risk perception and long-term engagement in a competitive digital environment

6.3 Recommendations for Future Research

According to the results of the present study, the following suggestions are suggested to be used in future research and practice:

Future Research:

1. **Longitudinal Studies:** A longitudinal study will be used in the future to monitor the changes in consumer trust and risk perception over a long period, particularly post-incident such as cyberattacks, system upgrade, or regulatory changes.
2. **Qualitative Approaches:** Although the study was quantitative, the qualitative approach using interviews or focus groups can be used to investigate deeper psychological reasons of trust, fear, and security Behavior in digital banking.
3. **Include Additional Behavioral Constructs:** Additional behavioral constructs may also be included in future models using some other measure of behavioral elements like digital literacy, personality (e.g., risk tolerance), or the emotional reaction to cyber incidents, which will introduce even more variables to the model that explain consumer Behavior.
4. **Cross-Cultural Comparisons:** Comparative cross-national research or between regions may be used to show the influence of culture on perceptions of digital risk, trust and privacy expectations.

5. **Dive Deeper into Generational Differences:** A more in-depth study into generational digital Behavior may help provide understanding around how Gen Z, millennials, Gen X, and boomers make different choices regarding trust formation and loyalty.

In Managerial Practice:

1. **Open Risk Communication:** Banks have to be transparent in terms of conveying the possibilities of threats and the response mechanism. When done in an open way, proactive messaging has the potential to turn risk into reassurance.
2. **Cybersecurity Education:** Customized awareness programs: Banks can develop user-specific programs depending on their age, experience, and usage patterns that will help them adopt safer online Behavior.
3. **Promote Trust-Building Features:** Security features such as biometric authentication, fraud detection, and two-factor authentication should be given a great deal of prominence to create a sense of reinforcement.
4. **Enhance Data Protection Policies:** Institutions should not only comply with data protection protocols, but also be able to show the customer how they protect their data.
5. **Responsive Customer Support:** Digital support, as part of responsive customer support, can be fast, empathetic, and well-informed and thus can transform risk-related complaints into opportunities to establish lasting trust.

6.4 Conclusion

This research provides a detailed analysis of the relationship between risk perception and consumer trust in the process of digital banking transformation. On one side, digital platform represent a new level of convenience and efficiency never seen before. On the other side, they are associated with numerous concerns related to

cybersecurity, data privacy, and transaction safety. Contrary to traditional assumptions, the research shows that the more a user is aware of digital threats, the less discouraged they tend to be. Indeed, consumers, especially well-informed ones, can trust digital banking even more when they believe sufficient security measures are in place.

The results indicate that trust does not depend solely on the absence of risk, but also on how well risks are perceived to be managed. When customers feel that digital banks are proactively addressing security issues transparently and responsibly, they are more likely to remain loyal. Moreover, age and previous digital banking experience influence continuance intention, highlighting the importance of demographic-specific strategies in building trust.

Ultimately, digital trust is an evolving phenomenon, as it is affected not only by system performance but also by consumer perception, awareness, and involvement. In the context of banking, educating users, increasing perceived security measures, and fostering a culture of openness are crucial for long-term customer retention. This approach enables financial organizations to not only mitigate perceived risks but also turn them into opportunities to strengthen customer trust and loyalty in the digital era.

REFERENCES

Adelaja, A.O. *et al.* (2024) 'Enhancing consumer trust in financial services: the role of technological security innovations', *Finance & Accounting Research Journal*, 6(10), pp. 1746–1759. Available at: https://doi.org/10.51594/farj.v6i10.1610.

Adwani, R. (2025) 'Evaluating the Risk Management Strategies of Global Banks in the Digital Age', *SSRN Electronic Journal* [Preprint]. Available at: https://doi.org/10.2139/ssrn.5162034.

Aguir, A. (2018) 'Central Bank Credibility, Independence, and Monetary Policy', *Journal of Central Banking Theory and Practice*, 7(3), pp. 91–110. Available at: https://doi.org/10.2478/jcbtp-2018-0025.

Ahmed, I. and Jena, A.K. (2023) 'Using non-parametric Kruskal-Wallis H test for assessing mean differences in the opinion of environmental sustainability', *International Journal of Geography, Geology and Environment* [Preprint]. Available at: https://doi.org/10.22271/27067483.2023.v5.i1a.146.

Ahuchogu, M.C., Sanyaolu, T.O. and Adeleke, A.G. (2024) 'Balancing innovation with risk management in digital banking transformation for enhanced customer satisfaction and security', *International Journal of Management & Entrepreneurship Research*, 6(9), pp. 3022–3049. Available at: https://doi.org/10.51594/ijmer.v6i9.1566.

Al-Dmour, H. *et al.* (2022) 'Validation of the impact of marketing knowledge management on business performance via digital financial innovation as a mediating factor', *VINE Journal of Information and Knowledge Management Systems* [Preprint]. Available at: https://doi.org/10.1108/VJIKMS-05-2020-0085.

Alfonso, V. *et al.* (2020) 'E-commerce in the pandemic and beyond: online appendix', *BIS Bulletin* [Preprint].

Ali Alqararah, E., Shehadeh, M. and Yaseen, H. (2025) 'The Role of Digital Transformation Capabilities in Improving Banking Performance in Jordanian Commercial Banks', *Journal of Risk and Financial Management*, 18(4), p. 196. Available at: https://doi.org/10.3390/jrfm18040196.

Alili, A. and Krstev, D. (2019) 'USING SPSS FOR RESEARCH AND DATA ANALYSIS', *Knowledge International Journal* [Preprint]. Available at: https://doi.org/10.35120/kij3203363a.

Allen, L. and Rai, A. (1996) 'Operational efficiency in banking: An international comparison', *Journal of Banking and Finance* [Preprint]. Available at: https://doi.org/10.1016/0378-4266(95)00026-7.

Almaiah, M.A. *et al.* (2022) 'Investigating the Effect of Perceived Security, Perceived Trust, and Information Quality on Mobile Payment Usage through Near-Field Communication (NFC) in Saudi Arabia', *Electronics (Switzerland)* [Preprint]. Available at: https://doi.org/10.3390/electronics11233926.

Alrawad, M. *et al.* (2023) 'Examining the influence of trust and perceived risk on customers intention to use NFC mobile payment system', *Journal of Open Innovation: Technology, Market, and Complexity*, 9(2), p. 100070. Available at: https://doi.org/10.1016/j.joitmc.2023.100070.

Alzoraik, M. *et al.* (2025) 'Examining the Impact of Trust and Satisfaction on the Adoption of Online Banking', in, pp. 541–549. Available at: https://doi.org/10.1007/978-3-031-71318-7_50.

Ameen, N. *et al.* (2021) 'Customer experiences in the age of artificial intelligence', *Computers in Human Behavior*, 114, p. 106548. Available at: https://doi.org/10.1016/j.chb.2020.106548.

An, S. (2025) 'The Impact of Perceived Risk and Information on Trust and Continuance

Intention in Fashion E-commerce Platforms', *Forum of Public Safety and Culture*, 39, pp. 175–194. Available at: https://doi.org/10.52902/kjsc.2025.39.175.

Andani, A.D. and Hidayat, F. (2022) 'The Effect Of Satisfaction, Trust And Continuance Intention On Mobile Banking User Loyalty', *AL-ARBAH: Journal of Islamic Finance and Banking*, 4(1), pp. 1–18. Available at: https://doi.org/10.21580/al-arbah.2022.4.1.14661.

Appiah, T. and Agblewornu, V.V. (2025) 'The interplay of perceived benefit, perceived risk, and trust in Fintech adoption: Insights from Sub-Saharan Africa', *Heliyon*, 11(2), p. e41992. Available at: https://doi.org/10.1016/j.heliyon.2025.e41992.

Aprilia, C. and Amalia, R. (2023) 'Perceived Security and Technology Continuance Theory: An Analysis Of Mobile Wallet Users' Continuance Intention', *Global Business Review*, p. 097215092211458. Available at: https://doi.org/10.1177/09721509221145831.

Auer, R., Cornelli, G. and Frost, J. (2020) 'Covid-19, cash, and the future of payments', *BIS Bulletin* [Preprint].

Auer, R., Cornelli, G. and Frost, J. (2021) 'Rise of the Central Bank Digital Currencies: Drivers, Approaches and Technologies', *SSRN Electronic Journal* [Preprint]. Available at: https://doi.org/10.2139/ssrn.3724070.

Azura, Y.T.Y., Azad, M.A. and Ahmed, Y. (2025) 'An integrated cyber security risk management framework for online banking systems', *Journal of Banking and Financial Technology* [Preprint]. Available at: https://doi.org/10.1007/s42786-025-00056-3.

Babina, T. *et al.* (2024) 'Customer Data Access and Fintech Entry: Early Evidence From Open Banking', *SSRN Electronic Journal* [Preprint]. Available at: https://doi.org/10.2139/ssrn.4720785.

Babina, T. *et al.* (2025) 'Customer data access and fintech entry: Early evidence from open banking', *Journal of Financial Economics*, 169, p. 103950. Available at: https://doi.org/10.1016/j.jfineco.2024.103950.

Banna, H. and Alam, M.R. (2021) 'Impact of digital financial inclusion on ASEAN banking stability: implications for the post-Covid-19 era', *Studies in Economics and Finance* [Preprint]. Available at: https://doi.org/10.1108/SEF-09-2020-0388.

Barjaktarovic Rakocevic, S., Rakic, N. and Rakocevic, R. (2025) 'An Interplay Between Digital Banking Services, Perceived Risks, Customers' Expectations, and Customers' Satisfaction', *Risks*, 13(3), p. 39. Available at: https://doi.org/10.3390/risks13030039.

Beheshtinia, M.A. and Omidi, S. (2017) 'A hybrid MCDM approach for performance evaluation in the banking industry', *Kybernetes* [Preprint]. Available at: https://doi.org/10.1108/K-03-2017-0105.

Bianchi, C. and Andrews, L. (2012) 'Risk, trust, and consumer online purchasing behaviour: a Chilean perspective', *International Marketing Review*. Edited by F. Fastoso, 29(3), pp. 253–275. Available at: https://doi.org/10.1108/02651331211229750.

Borah, S. and Chaudhary, D. (2024) 'A Study On The Impact Of Consumer Risk Perception And Innovativeness On Digital Banking Adoption In India.', *Educational Administration Theory and Practices*, 30. Available at: https://doi.org/10.53555/kuey.v30i5.5044.

Bousrih, J. (2023) 'The impact of digitalization on the banking sector: Evidence from fintech countries', *Asian Economic and Financial Review* [Preprint]. Available at: https://doi.org/10.55493/5002.v13i4.4769.

Broby, D. (2021) 'Financial technology and the future of banking', *Financial Innovation*

[Preprint]. Available at: https://doi.org/10.1186/s40854-021-00264-y.

Cabeza-Ramírez, L.J. *et al.* (2022) 'Impact of the perceived risk in influencers' product recommendations on their followers' purchase attitudes and intention', *Technological Forecasting and Social Change*, 184, p. 121997. Available at: https://doi.org/10.1016/j.techfore.2022.121997.

Campanella, F. *et al.* (2023) 'FinTech in the financial system: Towards a capital-intensive and high competence human capital reality?', *Journal of Business Research* [Preprint]. Available at: https://doi.org/10.1016/j.jbusres.2022.113376.

Chawla, D. and Joshi, H. (2018) 'The Moderating Effect of Demographic Variables on Mobile Banking Adoption: An Empirical Investigation', *Global Business Review*, 19(3_suppl), pp. S90–S113. Available at: https://doi.org/10.1177/0972150918757883.

Cheng, X., Hou, T. and Mou, J. (2021) 'Investigating perceived risks and benefits of information privacy disclosure in IT-enabled ride-sharing', *Information & Management*, 58(6), p. 103450. Available at: https://doi.org/https://doi.org/10.1016/j.im.2021.103450.

Deng, X., Huang, Z. and Cheng, X. (2019) 'FinTech and sustainable development: Evidence from China based on P2P data', *Sustainability (Switzerland)* [Preprint]. Available at: https://doi.org/10.3390/su11226434.

Didier (2021) 'Global Patterns of Fintech Activity and Enabling Factors'.

Dinari, P. and Tjhin, V.U. (2023) 'How Are Security, Privacy and Trust Affecting Continuance Intention of Contact Tracing Applications?', *Journal of System and Management Sciences* [Preprint]. Available at: https://doi.org/10.33168/JSMS.2023.0103.

Al Doghan, M.A. and Mirzaliev, S. (2024) 'Cybersecurity Awareness and Digital Banking

Adoption: Exploring the Moderating Impact of Digital Literacy', *International Journal of Economics and Finance Studies*, 16(3), pp. 34–58. Available at: https://doi.org/10.34109/ijefs.202416303.

Feyen (2021) 'Digital Financial Services and the Pandemic: Opportunities and Risks for Emerging and Developing Economies', (2021).

Frost (2021) 'Covid-19 and cyber risk in the financial sector', (2021).

Fungáčová, Z., Kerola, E. and Weill, L. (2022) 'Does Experience of Banking Crises Affect Trust in Banks?', *Journal of Financial Services Research* [Preprint]. Available at: https://doi.org/10.1007/s10693-021-00365-w.

Garcia, G.D. (2021) 'Ordinal Regression', in *Data Visualization and Analysis in Second Language Research*, pp. 173–188. Available at: https://doi.org/10.4324/9781003032243-11.

Gefen, D. and Straub, D.W. (2004) 'Consumer trust in B2C e-Commerce and the importance of social presence: Experiments in e-Products and e-Services', *Omega* [Preprint]. Available at: https://doi.org/10.1016/j.omega.2004.01.006.

Ghaleb Magatef Elham Fakhri Tomalieh, S. (2015) 'The Impact of Customer Loyalty Programs on Customer Retention', *International Journal of Business and Social Science* [Preprint].

Giatsidis, I., Kitsios, F.C. and Kamariotou, M. (2019) 'Digital Transformation and User Acceptance of Information Technology in the Banking Industry', (2019).

Gill, S.S. *et al.* (2024) 'Modern computing: Vision and challenges', *Telematics and Informatics Reports*, 13, p. 100116. Available at: https://doi.org/10.1016/j.teler.2024.100116.

Guo, X. *et al.* (2021) 'Trust and elderly users' continuance intention regarding mobile health services: the contingent role of health and technology anxieties', *Information*

Technology & People, ahead-of-p. Available at: https://doi.org/10.1108/ITP-11-2019-0602.

Gupta, V. and Shukla, S. (2024) 'Consumer Trust in Digital Banking: A Qualitative Study of Legal and Regulatory Impacts', *Interdisciplinary Studies in Society, Law, and Politics*, 3(2), pp. 18–24. Available at: https://doi.org/10.61838/kman.isslp.3.2.4.

Hagger, M. (2019) 'The Reasoned Action Approach and the Theories of Reasoned Action and Planned Behavior', in. Available at: https://doi.org/10.1093/obo/9780199828340-0240.

Hasan, A. *et al.* (2024) 'Determinants of Behavioral Intention to Use Digital Payment among Indian Youngsters', *Journal of Risk and Financial Management*, 17(2). Available at: https://doi.org/10.3390/jrfm17020087.

Hasandoust, R.F. and Saravi, M.M. (2017) 'IDENTIFYING THE EFFECT OF SUCCESSFUL E-BANKING ON CUSTOMERS' SATISFACTION, TRUST, COMMITMENT AND LOYALTY', (2017).

Henkler, R. and Schubart, C. (2025) 'Open Banking and automated transaction analysis in the digitalization of business banking: Design, opportunities, and challenges of a digital credit process', (2025).

Immonen, A. and Kopsakangas-Savolainen, M. (2022) 'Capturing Consumers' Awareness and the Intention to Support Carbon Neutrality through Energy Efficient Consumption', *Energies*, 15(11), p. 4022. Available at: https://doi.org/10.3390/en15114022.

Indrawati, Dharmawan, R.H. and Pillai, S.K.B. (2023) 'Analyzing Factors Influencing Continuance Intention of a Digital Walet: A Study of Digicash by Using Modified UTAUT 2 Model', in *ICADEIS 2023 - International Conference on Advancement in Data Science, E-Learning and Information Systems: Data, Intelligent Systems,*

and the Applications for Human Life, Proceeding. Available at: https://doi.org/10.1109/ICADEIS58666.2023.10270902.

Janse, R.J. *et al.* (2021) 'Conducting correlation analysis: Important limitations and pitfalls', *Clinical Kidney Journal* [Preprint]. Available at: https://doi.org/10.1093/ckj/sfab085.

Jatimoyo, D., Rohman, F. and Djazuli, A. (2021) 'The effect of perceived ease of use on continuance intention through perceived usefulness and trust', *International Journal of Research in Business and Social Science (2147- 4478)*, 10(4), pp. 430–437. Available at: https://doi.org/10.20525/ijrbs.v10i4.1223.

Jeyaraj, S.S. *et al.* (2024) 'Navigating Digital Transformation in Banking with Cloud Computing Solutions', *Open Journal of Business and Management*, 12(06), pp. 4227–4253. Available at: https://doi.org/10.4236/ojbm.2024.126212.

Jimmy, F. (2024) 'Cybersecurity Threats and Vulnerabilities in Online Banking Systems', *International Journal of Scientific Research and Management (IJSRM)*, 12(10), pp. 1631–1646. Available at: https://doi.org/10.18535/ijsrm/v12i10.ec10.

Jin, C.O. and Park, S.-B. (2018) 'A Study on Factors Affecting Intention of Choosing Internet Banking and Intention of Continuity', *International Journal of Economics and Finance* [Preprint]. Available at: https://doi.org/10.5539/ijef.v10n12p54.

Jurnawan, J.N. and Oktavia, T. (2024) 'Analysis of Factors Influencing Continuance Intention Towards Digital Bank Applications', *Journal of Theoretical and Applied Information Technology*, 102(20), pp. 7532–7543.

Kajol, K., Singh, R. and Paul, J. (2022) 'Adoption of digital financial transactions: A review of literature and future research agenda', *Technological Forecasting and Social Change*, 184, p. 121991. Available at: https://doi.org/10.1016/j.techfore.2022.121991.

Kaushik, S. (2024) ‘Analyzing the impact of digital banking on customer behaviour and satisfaction’, in, pp. 324–347.

Khan, A. and Shireen, S. (2020) ‘Drivers of financial and operational efficiency of MFIs: empirical evidences from Eastern Europe and Central Asia’, *Benchmarking* [Preprint]. Available at: https://doi.org/10.1108/BIJ-11-2019-0515.

Kim, S.H. and Yang, Y.R. (2025) ‘The Effect of Digital Quality on Customer Satisfaction and Brand Loyalty Under Environmental Uncertainty: Evidence from the Banking Industry’, *Sustainability*, 17(8), p. 3500. Available at: https://doi.org/10.3390/su17083500.

Kitsios, F., Giatsidis, I. and Kamariotou, M. (2021) ‘Digital transformation and strategy in the banking sector: Evaluating the acceptance rate of e-services’, *Journal of Open Innovation: Technology, Market, and Complexity* [Preprint]. Available at: https://doi.org/10.3390/joitmc7030204.

Kokol Bukovšek, D. and Stopar, N. (2024) ‘On the exact region determined by Spearman’s rho and Spearman’s footrule’, *Journal of Computational and Applied Mathematics* [Preprint]. Available at: https://doi.org/10.1016/j.cam.2023.115463.

Koletsi, D. and Pandis, N. (2018) ‘Ordinal logistic regression’, *American Journal of Orthodontics and Dentofacial Orthopedics* [Preprint]. Available at: https://doi.org/10.1016/j.ajodo.2017.11.011.

Kraus, S. *et al.* (2022) ‘Digital transformation in business and management research: An overview of the current status quo’, *International Journal of Information Management* [Preprint]. Available at: https://doi.org/10.1016/j.ijinfomgt.2021.102466.

Kreger, A. (2025) ‘Enhancing Trust in Digital Banking: Digital Experience Branding Framework’. Available at: https://doi.org/10.13140/RG.2.2.33462.41283.

Kumar, R. *et al.* (2023) 'How Does Perceived Risk and Trust Affect Mobile Banking Adoption? Empirical Evidence from India', *Sustainability*, 15(5), p. 4053. Available at: https://doi.org/10.3390/su15054053.

Li, F. *et al.* (2021) 'Customer satisfaction with bank services: The role of cloud services, security, e-learning and service quality', *Technology in Society*, 64, p. 101487. Available at: https://doi.org/10.1016/j.techsoc.2020.101487.

Li, Y. and Liu, Q. (2021) 'A comprehensive review study of cyber-attacks and cyber security; Emerging trends and recent developments', *Energy Reports* [Preprint]. Available at: https://doi.org/10.1016/j.egyr.2021.08.126.

Liu, T., Pan, B. and Yin, Z. (2020) 'Pandemic, Mobile Payment, and Household Consumption: Micro-Evidence from China', *Emerging Markets Finance and Trade* [Preprint]. Available at: https://doi.org/10.1080/1540496X.2020.1788539.

Long, J., Zaidin, N. and Mai, X. (2024) 'Social media influencer streamers and live-streaming shopping: examining consumer behavioral intention through the lens of the theory of planned behavior', *Future Business Journal*, 10(1), p. 80. Available at: https://doi.org/10.1186/s43093-024-00370-0.

Lutfi, A. *et al.* (2023) 'Drivers and impact of big data analytic adoption in the retail industry: A quantitative investigation applying structural equation modeling', *Journal of Retailing and Consumer Services*, 70(August 2022), p. 103129. Available at: https://doi.org/10.1016/j.jretconser.2022.103129.

Min, S.-H. and Lee, S.H. (2023) 'Analysis of Consumer Awareness, Purchase Experience, and Purchase Intention Factors of Functional Foods', (2023).

Moghavvemi, S. *et al.* (2021) 'Drivers and barriers of mobile payment adoption: Malaysian merchants' perspective', *Journal of Retailing and Consumer Services* [Preprint]. Available at: https://doi.org/10.1016/j.jretconser.2020.102364.

Munira, M.S.K. (2025) 'Digital Transformation in Banking: A Systematic Review Of Trends, Technologies, And Challenges', *Strategic Data Management and Innovation*, 2(01), pp. 78–95. Available at: https://doi.org/10.71292/sdmi.v2i01.12.

Mvududu, N. and Shannon, J. (2023) 'Descriptive Statistics', in *Reimagining Research: Engaging Data, Research, and Program Evaluation in Social Justice Counseling*. Available at: https://doi.org/10.4324/9781003196273-6.

Najaf, K., Mostafiz, M.I. and Najaf, R. (2021) 'Fintech firms and banks sustainability: Why cybersecurity risk matters?', *International Journal of Financial Engineering*, 08(02), p. 2150019. Available at: https://doi.org/10.1142/S2424786321500195.

Nan, D. *et al.* (2025) 'Analyzing behavioral intentions toward Generative Artificial Intelligence: the case of ChatGPT', *Universal Access in the Information Society*, 24(1), pp. 885–895. Available at: https://doi.org/10.1007/s10209-024-01116-z.

Ngurah Gede Sadiartha, A.A. (2020) 'Customer relationship management in mediating impact of customer value on customer retention in the Village Credit Institution of Denpasar Indonesia', *Management and entrepreneurship: trends of development*, 1(11), pp. 53–66. Available at: https://doi.org/10.26661/2522-1566/2020-1/11-04.

Nguyen, Q.A. *et al.* (2018) 'Theory of Reasoned Action as a Framework for Communicating Climate Risk: A Case Study of Schoolchildren in the Mekong Delta in Vietnam', *Sustainability*, 10(6), p. 2019. Available at: https://doi.org/10.3390/su10062019.

Nguyen, T., Tripe, D. and Ngo, T. (2018) 'Operational efficiency of bank loans and deposits: A case study of vietnamese banking system', *International Journal of Financial Studies* [Preprint]. Available at: https://doi.org/10.3390/ijfs6010014.

Nikolopoulou, K. (2022) 'What Is Convenience Sampling: Definition & Examples', *Www.Scribbr.Com* [Preprint].

Nkatekho, B. (2024) 'The Impact of Fintech Innovations on Traditional Banking Systems', *International Journal of Finance*, 9(4), pp. 48–61. Available at: https://doi.org/10.47941/ijf.2116.

Nyimbili, F. and Nyimbili, L. (2024) 'Types of Purposive Sampling Techniques with Their Examples and Application in Qualitative Research Studies', *British Journal of Multidisciplinary and Advanced Studies* [Preprint]. Available at: https://doi.org/10.37745/bjmas.2022.0419.

Octavia, B. and Riza, F. (2023) 'The Effect Of Customer Value And Brand Awareness On Customer Retention With Customer Satisfaction As A Mediating Variable', *Journal Research of Social Science, Economics, and Management*, 3. Available at: https://doi.org/10.59141/jrssem.v3i02.553.

Omarini, A. (2022) 'The Changing Landscape of Retail Banking and the Future of Digital Banking', in *Perspectives in Law, Business and Innovation*. Available at: https://doi.org/10.1007/978-981-16-7830-1_8.

Omarini, A.E. (2018) 'Banks and Fintechs: How to Develop a Digital Open Banking Approach for the Bank's Future', *International Business Research* [Preprint]. Available at: https://doi.org/10.5539/ibr.v11n9p23.

Ononiwu, M.I. *et al.* (2024) 'The impact of digital transformation on banking operations in developing economies', *World Journal of Advanced Research and Reviews*, 23(3), pp. 460–474. Available at: https://doi.org/10.30574/wjarr.2024.23.3.2706.

Otika, U. *et al.* (2019) 'Risk Perceptions and Online Shopping Intention among Internet Users in Nigeria', (2019).

Ozuem, W. *et al.* (2021) 'Exploring customers' responses to online service failure and recovery strategies during Covid-19 pandemic: An actor–network theory perspective', *Psychology & Marketing*, 38(9), pp. 1440–1459. Available at:

https://doi.org/10.1002/mar.21527.

Pandey, M.K., Mittal, M. and Subbiah, K. (2021) 'Optimal balancing & efficient feature ranking approach to minimize credit risk', *International Journal of Information Management Data Insights* [Preprint]. Available at: https://doi.org/10.1016/j.jjimei.2021.100037.

Permana, D. (2019) 'Recognizing the Islamic Banking Consumer Behaviour from the Perspective of Product Knowledge, Brand Awareness and Attitude', *Journal of Marketing and Consumer Research* [Preprint]. Available at: https://doi.org/10.7176/JMCR/61-03.

Pio, P.G.C. *et al.* (2024) 'Complaint management: comparison between traditional and digital banks and the benefits of using management systems for improvement', *International Journal of Productivity and Performance Management* [Preprint]. Available at: https://doi.org/10.1108/IJPPM-08-2022-0430.

Porfírio, J.A., Felício, J.A. and Carrilho, T. (2024) 'Factors affecting digital transformation in banking', *Journal of Business Research*, 171, p. 114393. Available at: https://doi.org/10.1016/j.jbusres.2023.114393.

Pratap, R., Kaurav, S. and Kainthola, S. (2023) 'SPSS', in *Encyclopedia of Tourism Management and Marketing*. Available at: https://doi.org/10.4337/9781800377486.spss.

R, A., Kuanr, A. and KR, S. (2021) 'Developing banking intelligence in emerging markets: Systematic review and agenda', *International Journal of Information Management Data Insights* [Preprint]. Available at: https://doi.org/10.1016/j.jjimei.2021.100026.

Rakhmataliev, M. and Shavkatov, B. (2025) 'STATISTICAL EVALUATION OF THE DIGITAL TRANSFORMATION OF THE BANKING SYSTEM: THE CASE OF

COMMERCIAL BANKS' ONLINE ACTIVITIES', (2025).

Ridwan, M. *et al.* (2025) 'The Effect of Digital Banking Adoption, Trust in Fintech, Perceived Security, and Customer Satisfaction on Financial Inclusion in Indonesian Banking', *West Science Business and Management*, 3(01), pp. 158–168. Available at: https://doi.org/10.58812/wsbm.v3i01.1794.

Rozenkowska, K. (2023) 'Theory of planned behavior in consumer behavior research: A systematic literature review', *International Journal of Consumer Studies*, 47, pp. 2670–2700. Available at: https://doi.org/10.1111/ijcs.12970.

Sahu, A. *et al.* (2024) 'Consumer Confidence in Digital Finance: Trust Dynamics in Online Banking', (2024).

Salman, H., Naveed, M. and Nazir, A. (2017) 'Socio-religious perspective, consumer's product awareness and consumer acceptance level of Islamic Financing', *International Journal of Academic Research in Economics and Management Sciences*, 6(2). Available at: https://doi.org/10.6007/IJAREMS/v6-i2/2814.

Sambaombe, J.K. and Phiri, J. (2022) 'An Analysis of the Impact of Online Banking on Customer Satisfaction in Commercial Banks Based on the TRA Model (A Case Study of Stanbic Bank Lusaka Main Branch)', *Open Journal of Business and Management* [Preprint]. Available at: https://doi.org/10.4236/ojbm.2022.101022.

Saputri, F.O. (2025) 'Banking Industry Strategies in Facing Market Changes and Digital Transformation in Indonesia', (2025).

Sastrawati, M., Darsono, N. and Tabrani, M. (2020) 'THE EFFECT OF BRAND AWARENESS, PRODUCT KNOWLEDGE AND PRODUCT QUALITY ON PURCHASE DECISIONS AND ITS IMPACT ON CONSUMER LOYALTY IN MOORLIFE PRODUCTS IN BANDA ACEH CITY, INDONESIA', *International Journal of Business Management and Economic Review* [Preprint]. Available at:

https://doi.org/10.35409/ijbmer.2020.3138.

Schepinin, V. and Bataev, A. (2019) 'Digitalization of financial sphere: Challenger banks efficiency estimation', in *IOP Conference Series: Materials Science and Engineering*. Available at: https://doi.org/10.1088/1757-899X/497/1/012051.

sekhar, C. and Kumar, M. (2023) 'An Overview of Cyber Security in Digital Banking Sector', *East Asian Journal of Multidisciplinary Research*, 2, pp. 43–52. Available at: https://doi.org/10.55927/eajmr.v2i1.1671.

Selvanathan, M. *et al.* (2016) 'The Impact of Cost, Customer Experience, Ease of Use, and Trust towards Adoption of Online Banking', *International Business Research* [Preprint]. Available at: https://doi.org/10.5539/ibr.v9n11p235.

Şenyapar, H.N.D. (2024) 'Digital Marketing in the Age of Cyber Threats: A Comprehensive Guide to Cybersecurity Practices', *The Journal of Social Science*, 8(15), pp. 1–10. Available at: https://doi.org/10.30520/tjsosci.1412062.

Shahid, Z., Hussain, T. and Zafar, F. (2017) 'The Impact of Brand Awareness on the Consumers' Purchase Intention', *Journal of Accounting & Marketing* [Preprint]. Available at: https://doi.org/10.4172/2168-9601.1000223.

Shin, Y.J. and Choi, Y. (2019) 'Feasibility of the fintech industry as an innovation platform for sustainable economic growth in Korea', *Sustainability (Switzerland)* [Preprint]. Available at: https://doi.org/10.3390/su11195351.

Shree, S. *et al.* (2021) 'Digital payments and consumer experience in India: a survey based empirical study', *Journal of Banking and Financial Technology* [Preprint]. Available at: https://doi.org/10.1007/s42786-020-00024-z.

Siedlecki, S.L. (2020) 'Understanding Descriptive Research Designs and Methods', *Clinical Nurse Specialist* [Preprint]. Available at: https://doi.org/10.1097/NUR.0000000000000493.

Skvarciany, V. and Jurevičienė, D. (2018) 'Factors Influencing Individual Customers Trust in Internet Banking: Case of Baltic States', *Sustainability*, 10(12), p. 4809. Available at: https://doi.org/10.3390/su10124809.

Snider, K.L.G. *et al.* (2021) 'Cyberattacks, cyber threats, and attitudes toward cybersecurity policies', *Journal of Cybersecurity*, 7(1). Available at: https://doi.org/10.1093/cybsec/tyab019.

Świecka, B., Terefenko, P. and Paprotny, D. (2021) 'Transaction factors' influence on the choice of payment by Polish consumers', *Journal of Retailing and Consumer Services* [Preprint]. Available at: https://doi.org/10.1016/j.jretconser.2020.102264.

Syed, R. and Drakshayani, B.A. (2025) 'Impact of Perceived Risk on Online Banking Adoption: A Comparative Study on Public and Private Sector Bank', in, pp. 197–203. Available at: https://doi.org/10.1007/978-3-031-86712-5_16.

Takona, J.P. (2024) 'Research design: qualitative, quantitative, and mixed methods approaches / sixth edition', *Quality & Quantity*, 58(1), pp. 1011–1013. Available at: https://doi.org/10.1007/s11135-023-01798-2.

Toro, R. *et al.* (2022) 'Empirical Analysis of Cronbach's Alpha Coefficient as a Function of Question Response Options, Sample Size and Outliers', *Revista Iberoamericana de Diagnostico y Evaluacion Psicologica* [Preprint]. Available at: https://doi.org/10.21865/RIDEP63.2.02.

Tumaku, J. *et al.* (2023) 'Interplay between perceived value, trust and continuance intention: evidence in the sharing economy', *International Journal of Quality and Service Sciences*, 15. Available at: https://doi.org/10.1108/IJQSS-05-2022-0048.

Verkijika, S.F. and Neneh, B.N. (2021) 'Standing up for or against: A text-mining study on the recommendation of mobile payment apps', *Journal of Retailing and Consumer Services* [Preprint]. Available at:

https://doi.org/10.1016/j.jretconser.2021.102743.

Victor, V. *et al.* (2018) 'Factors Influencing Consumer Behavior and Prospective Purchase Decisions in a Dynamic Pricing Environment—An Exploratory Factor Analysis Approach', *Social Sciences*, 7(9), p. 153. Available at: https://doi.org/10.3390/socsci7090153.

VLADIMIR-AURELIAN, E. (2025) 'EXPLORING THE LONG-TERM SHIFTS IN CONSUMER ENGAGEMENT WITH NONBANKING FINANCIAL SERVICES IN A HYBRID DIGITAL ECONOMY', (2025).

Waliullah, M. *et al.* (2025) 'ASSESSING THE INFLUENCE OF CYBERSECURITY THREATS AND RISKS ON THE ADOPTION AND GROWTH OF DIGITAL BANKING: A SYSTEMATIC LITERATURE REVIEW', *American Journal of Advanced Technology and Engineering Solutions*, 1(01), pp. 226–257. Available at: https://doi.org/10.63125/fh49gz18.

Wang, W., Li, F. and Zhang, Y. (2021) 'Price Discount and Price Dispersion in Online Market: Do More Firms Still Lead to More Competition?', *Journal of theoretical and applied electronic commerce research*, 16(2), pp. 164–178. Available at: https://doi.org/10.4067/S0718-18762021000200111.

Wieringa, J. *et al.* (2021) 'Data analytics in a privacy-concerned world', *Journal of Business Research* [Preprint]. Available at: https://doi.org/10.1016/j.jbusres.2019.05.005.

Wolska, A. (2025) 'Open Banking and the Catalysts for Digital Transformation in the Financial Ecosystem'. Available at: https://doi.org/10.2139/ssrn.5075577.

Yang, Q. *et al.* (2022) 'Sustainable customer retention through social media marketing activities using hybrid SEM-neural network approach', *PLOS ONE*. Edited by Q. Liu, 17(3), p. e0264899. Available at:

https://doi.org/10.1371/journal.pone.0264899.

Yeh*, Y.C.T. and J.C. (2018) 'Perceived risk of information security and privacy in online shopping: A study of environmentally sustainable products', (2018).

Zhao, Q., Tsai, P.H. and Wang, J.L. (2019) 'Improving financial service innovation strategies for enhancing China's banking industry competitive advantage during the fintech revolution: A hybrid MCDM model', *Sustainability (Switzerland)* [Preprint]. Available at: https://doi.org/10.3390/su11051419.

Zhou, S. and Liu, Y. (2023) 'Effects of Perceived Privacy Risk and Disclosure Benefits on the Online Privacy Protection Behaviors among Chinese Teens', *Sustainability*, 15(2), p. 1657. Available at: https://doi.org/10.3390/su15021657.

APPENDIX A:

DATASET

What is your age?	What is your gender?	What is your highest level of education completed?	What is your current occupation?	What is your average monthly income?	How many years have you been using online or digital banking servic	Which type of bank do you primarily use for digital banking?	How frequently do you use digital banking services (e.g. mobile ap	CI1-Continued use of the digital bank's services is intended in th	CI2-Loyalty to the current digital bank is likely to be maintained	CI3-The digital bank's services are recommended to others based o	CI4-Preference exists to keep using the current digital bank inst	CI5-Satisfaction with the digital bank supports long-term conti	ASA1-Information about online banking frauds and cyber attacks i	ASA2-Awareness exists regarding potential threats in digital ba	ASA3-News and alerts about security breaches in banking systems a	ASA4-Knowledge of safe online banking practices is sufficient to	ASA5-Cybersecurity awareness in the context of digital banking i	PR1-Digital banking involves a high level of uncertainty regardi	PR2-Use of digital banking may lead to unexpected financial losses.	PR3-Digital banking services are perceived as risky compared t	PR4-Trust in the outcome of digital banking transactions is often	PR-5-The consequences of security failures in digital banking are	SC1-Digital banking systems are vulnerable to unauthorized acce	SC2-Concerns exist regarding the safety of transactions conduct	SC3-Data transmitted through digital banking platforms may not b	SC4-Security technologies in digital banking may not always func	SC5-There is fear of financial fraud due to weak security measures	PC1-Personal information shared with digital banks may be misuse	PC2-Digital banking services may not provide adequate protectio	PC3-There is concern about how digital banks collect store and use	PC4-The risk of identity theft exists when using digital banking s	PC5-Disclosure of personal information during digital transact	PT1-The digital bank is considered reliable in conducting financ	PT2-The digital bank is believed to act in the best interests of its c	PT3-Information provided by the digital bank is viewed as trustwo	PT4-The digital bank has a consistent reputation for integrity an	PT5-The digital bank is trusted to resolve issues fairly and trans

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45-54Years	Male	Master'sDegree	Employed	Above100000	Morethan5years	PrivateSectorBank	Daily	4	3	4	3	3	4	5	3	4	5	4	3	4	5	4	4	3	4	3	5	4	5	3	2	4	4	4	5	3	5
25-34Years	Male	Master'sDegree	Employed	30001-50000	Morethan5years	PublicSectorBank	Daily	5	1	5	4	5	4	2	1	1	5	4	5	5	4	5	2	2	3	3	4	4	5	5	1	2	1	4	5	4	2

25-34 Years	Male	Master's Degree	Employed	10001-30000	3-5 years	Public Sector Bank	Daily	4	3	3	4	5	5	3	1	2	5	3	5	3	3	5	3	4	3	4	5	2	3	3	4	4	2	4	3	3	2
35-44 Years	Male	Bachelor's Degree	Employed	30001-50000	More than 5 years	Public Sector Bank	Daily	3	3	4	3	4	5	5	1	3	5	4	2	4	4	4	5	5	3	3	5	5	4	4	4	4	4	4	4	4	4
25-34 Years	Male	Bachelor's Degree	Employed	50001-100000	More than 5 years	Public Sector Bank	Daily	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	4	4	3	4	4	4	3	3	3	3	3
25-34 Years	Male	Bachelor's Degr	Employed	30001-50000	3-5 years	Public Sector Ba	Daily	5	5	5	5	5	3	4	4	4	3	3	4	4	4	3	4	4	3	3	2	3	2	3	3	3	4	4	3	3	5

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25-34Years	Male	Bachelor'sDegree	Employed	50001-100000	Morethan5years	PublicSectorBank	Daily	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
25-34Years	Male	Bachelor'sDegree	Employed	30001-50000	Morethan5years	PublicSectorBank	Daily	5	5	5	3	4	4	3	4	4	3	4	3	2	2	5	4	5	3	3	5	4	3	3	3	3	2	3	3	2	3
35-44Years	Female	Master'sDegree	Other	10001-30000	3-5years	PrivateSectorBank	Daily	4	4	4	4	5	4	5	4	5	5	4	4	4	5	5	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4
25-34Years	Male	Bachelor'sD	Employed	50001-1000	3-5years	PublicSecto	Daily	4	4	4	4	4	3	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3	3	3	3	4	3

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25-34Years	Male	Bachelor'sDegree	Employed	50001-100000	Morethan5years	PublicSectorBank	Daily	4	4	4	4	5	4	4	4	4	4	3	3	4	3	5	5	4	4	4	5	5	4	4	4	5	4	4	4	4	3
25-34Years	Male	Bachelor'sDegree	Employed	Above100000	3-5years	PrivateSectorBank	Daily	5	4	4	4	4	4	4	4	4	3	2	1	2	3	3	4	3	3	3	3	2	2	2	3	2	4	4	4	4	4
45-54Years	Male	Master'sDegree	Self-employed/Freelancer	50001-100000	Morethan5years	PublicSectorBank	Daily	5	5	5	5	5	5	5	5	2	3	3	1	3	4	5	2	3	1	1	1	5	5	5	5	5	5	5	3	3	5

35-44Years	Male	Doctorate	Employed	Above100000	Morethan5years	PrivateSectorBank	Daily	5	4	5	3	3	5	5	5	5	5	1	2	1	2	5	1	2	1	4	2	3	1	1	1	1	5	5	5	5	5
25-34Years	Male	Bachelor'sDegree	Employed	50001-100000	3-5years	PrivateSectorBank	Daily	5	5	5	5	5	1	3	3	3	3	3	5	3	2	3	3	3	3	3	3	2	5	3	4	3	2	5	5	5	3
25-34Years	Male	Master'sDegree	Employed	50001-100000	3-5years	PrivateSectorBank	Daily	4	3	4	4	4	3	4	2	4	4	4	5	4	5	5	5	4	1	1	5	1	3	5	5	5	5	4	3	1	2
25-34Years	Male	Bachelor'sD	Employed	Above100000	Morethan5ye	PrivateSect	Daily	5	5	5	5	5	3	3	4	3	5	4	3	3	3	5	4	3	3	3	3	3	3	5	3	4	4	4	4	4	4

		egree			ars	orBank																															
45-54Years	Male	Doctorate	BusinessOwner	Above10000	Morethan5years	PrivateSectorBank	Daily	5	5	5	5	5	5	5	5	5	4	3	4	2	3	4	3	4	4	5	4	5	5	5	4	5	3	5	4	4	4
45-54Years	Male	Master'sDegree	Employed	Above10000	Morethan5years	PrivateSectorBank	Daily	5	5	5	5	5	5	5	5	4	5	5	2	2	3	5	4	5	1	3	3	5	4	3	4	3	4	4	4	4	5
45-54Years	Male	Master'sDegree	Employed	Above10000	Morethan5years	PrivateSectorBank	Daily	5	3	2	4	3	4	3	2	1	5	3	3	3	3	5	4	4	3	4	5	5	4	5	5	5	3	3	3	3	3
45-54	Male	Maste	Emplo	Above	Moret	Priva	Daily	5	5	5	5	5	3	3	3	3	4	4	4	5	5	4	5	5	5	5	4	4	4	5	3	5	4	4	4	5	5

Years		r's Degree	yed	100000	han 5 years	te Sector Bank																															
45-54 Years	Male	Doctorate	Employed	Above 100000	More than 5 years	Private Sector Bank	Daily	5	5	4	5	5	4	4	4	4	5	3	3	2	2	2	5	4	1	2	5	5	2	3	5	3	4	4	4	4	4
45-54 Years	Male	Doctorate	Employed	Above 100000	More than 5 years	Private Sector Bank	Daily	5	5	5	5	4	4	3	3	3	5	3	2	3	3	5	5	5	5	5	5	5	5	5	5	5	5	5	3	4	3
45-54 Years	Male	Master's Degree	Employed	Above 100000	More than 5 years	Private Sector Ba	Daily	5	3	4	2	4	5	5	4	4	3	4	5	3	3	5	4	4	3	4	5	5	4	4	5	5	4	4	3	3	3

						nk																															
45-54 Years	Male	Master's Degree	Employed	Above 10000	More than 5 years	Private Sector Bank	Daily	5	5	5	5	5	2	3	3	4	5	4	3	2	4	4	3	3	5	2	5	4	2	2	2	4	5	5	5	5	5
45-54 Years	Female	Doctorate	Employed	Above 10000	More than 5 years	Public Sector Bank	Daily	5	5	5	5	5	5	5	5	4	5	2	1	2	4	5	4	5	2	2	5	2	2	2	5	5	5	5	5	5	5
35-44 Years	Male	Master's Degree	Employed	Above 10000	More than 5 years	Private Sector Bank	Daily	5	5	3	5	5	5	5	4	4	4	2	3	4	2	5	4	4	3	3	3	2	2	2	4	3	4	4	4	4	4
45-54 Years	Male	Master's De	Employed	Above 10000	More than 5 y	Private Sec	Daily	5	3	5	5	4	5	5	4	2	5	3	3	3	3	5	5	5	4	3	3	5	5	5	5	1	1	1	1	1	1

		gree		00	ears	torBank																															
25-34Years	Male	Master'sDegree	Employed	30001-50000	3-5years	PublicSectorBank	Daily	5	5	5	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
18-24Years	Male	Bachelor'sDegree	Employed	10001-30000	1-3years	PublicSectorBank	Daily	3	4	3	4	2	4	4	2	2	4	3	3	4	2	2	3	3	3	4	4	3	2	4	4	2	2	2	4	4	2
35-44Years	Male	Bachelor'sDegree	Employed	30001-50000	Morethan5years	PublicSectorBank	Daily	5	4	5	5	5	3	3	3	4	5	4	2	2	2	5	4	4	3	4	5	5	5	5	5	5	4	4	4	3	2
45-54Ye	Male	Master'	Employ	Above10	Moretha	Private	Daily	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	4	4	3	3	3	4	4	4	4	4	4

ars		sDegree	ed	0000	n5years	SectorBank																															
35-44Years	Male	Bachelor'sDegree	Employed	Above100000	Morethan5years	PrivateSectorBank	Daily	5	5	5	5	5	5	5	3	2	5	1	1	1	1	4	3	1	1	1	5	1	1	1	2	1	5	4	5	5	3
45-54Years	Female	Doctorate	Employed	Above100000	Morethan5years	PrivateSectorBank	Daily	4	4	4	3	4	4	4	4	2	4	3	3	2	2	4	4	4	4	4	2	2	2	3	2	3	4	3	3	2	2
45-54Years	Male	Master'sDegree	Employed	50001-100000	Morethan5years	PrivateSectorBank	Daily	4	4	4	3	3	5	4	3	4	4	4	3	3	3	4	4	4	3	3	5	5	4	4	4	3	4	4	4	4	4

25-34 Years	Male	Bachelor's Degree	Employed	Above 10000	3-5 years	Private Sector Bank	Daily	4	3	2	4	4	5	4	4	2	5	2	2	4	4	4	4	4	4	3	4	4	3	5	5	5	4	3	3	4	3
35-44 Years	Male	Master's Degree	Employed	Above 10000	More than 5 years	Private Sector Bank	Daily	5	5	5	5	5	5	3	3	3	5	1	1	1	1	5	3	1	5	3	5	5	5	5	5	5	3	1	3	3	3
45-54 Years	Male	Doctorate	Business Owner	Above 10000	More than 5 years	Private Sector Bank	Daily	5	5	5	4	5	5	5	5	5	5	3	5	3	1	3	3	1	2	1	5	3	3	3	4	3	5	5	5	5	5
35-44 Years	Male	Bachelor's D	Employed	Above 10000	More than 5 ye	Private Sect	Daily	5	4	3	4	3	3	4	2	2	4	4	5	2	3	4	5	4	4	5	4	5	5	5	5	5	3	2	4	4	2

		egree			ars	orBank																															
45-54Years	Male	Bachelor's Degree	BusinessOwner	Above100000	Morethan5years	PrivateSectorBank	Daily	5	4	5	2	4	4	2	3	2	5	1	1	2	2	2	4	4	4	3	2	4	2	3	2	2	5	4	4	2	4
18-24Years	Female	Bachelor's Degree	Employed	100001-300000	3-5years	PublicSectorBank	Daily	4	3	4	4	3	2	4	2	2	2	4	3	3	2	4	4	4	4	4	4	4	3	3	4	4	2	2	3	2	2
35-44Years	Male	Master's Degree	Employed	Above100000	Morethan5years	PrivateSectorBank	Daily	5	5	5	5	5	5	5	5	4	5	1	2	1	3	5	1	2	1	1	1	3	1	1	3	5	5	5	4	5	4
45-54Y	Male	Bachel	Employ	Above1	Moreth	Public	Daily	5	5	5	3	4	3	3	3	2	4	3	3	3	2	4	4	4	3	2	3	5	5	4	4	4	4	4	4	4	4

ears		or's Degree	ed	00000	an 5 years	Sector Bank																															
45-54 Years	Female	High Secondary School	Unemployed	Below 100000	1-3 years	Public Sector Bank	Daily	2	5	3	4	2	4	2	2	2	5	2	4	5	4	4	5	5	4	3	4	4	4	4	5	4	3	2	3	3	2
35-44 Years	Male	Master's Degree	Employed	Above 100000	More than 5 years	Private Sector Bank	Daily	5	5	5	5	1	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	1	1	5	5	5
18-24 Years	Male	High Secondary Sch	Student	Below 100000	Less than 1 year	Digital-Only Bank	Daily	5	5	4	4	2	4	3	4	5	5	1	3	3	4	5	1	2	2	3	4	3	2	1	1	5	4	2	3	3	3

		ool																																			
18-24 Years	Female	High Secondary School	Student	Below 10000	1-3 years	Private Sector Bank	Daily	5	3	4	5	5	3	2	4	1	5	2	3	1	3	5	2	4	2	2	3	3	2	4	2	4	4	4	3	3	3
18-24 Years	Male	High Secondary School	Student	Below 10000	1-3 years	Private Sector Bank	Daily	5	4	4	5	5	2	5	4	5	5	2	2	3	2	5	5	4	3	3	2	3	2	4	2	4	4	4	5	4	5
25-34 Years	Male	Bachelor's Degree	Self-employed/Freelan	Below 10000	1-3 years	Private Sector Bank	Daily	4	5	3	4	4	3	4	5	4	3	4	3	4	3	4	3	4	3	4	5	5	4	3	3	4	3	4	3	2	4

			cer																																		
55 and above Years	Male	Master's Degree	Retired	30001-50000	3-5 years	Private Sector Bank	Daily	3	4	5	4	5	4	3	4	3	4	5	4	3	3	5	5	4	3	4	4	3	4	3	4	3	5	4	4	3	4
25-34 Years	Male	Bachelor's Degree	Business Owner	10001-30000	Less than 1 year	Private Sector Bank	Daily	2	4	5	4	5	4	3	5	4	3	4	4	5	4	3	3	5	4	3	4	4	3	4	3	4	5	5	4	4	3
45-54 Years	Male	Bachelor's Degree	Employed	Above 100000	More than 5 years	Private Sector Bank	Daily	3	3	4	5	4	2	3	3	2	5	3	3	4	3	4	3	3	3	3	5	5	5	5	5	4	3	3	3	3	2
25-34 Yea	Female	Master's	Employed	30001-50	3-5 years	Private S	Daily	3	4	3	4	3	4	3	4	3	4	3	4	5	4	5	5	5	5	5	4	5	5	5	4	4	4	3	5	4	4

rs		Degree		000		ectorBank																															
35-44Years	Male	Doctorate	Self-employed/Freelancer	30001-50000	Morethan5years	Digital-OnlyBank	Daily	3	4	5	3	4	5	4	5	3	3	4	4	3	5	4	4	4	5	5	4	4	5	4	4	5	5	5	4	5	4
45-54Years	Male	Doctorate	Self-employed/Freelancer	50001-100000	3-5years	Digital-OnlyBank	Daily	3	4	3	5	5	3	5	4	4	3	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5
35-44	Male	Maste	Busin	50001	3-5ye	Priva	Daily	4	5	4	4	3	5	3	4	5	5	4	3	3	4	5	4	5	2	4	3	5	4	4	5	3	3	3	4	5	4

Years		r'sDegree	essOwner	-100000	ars	teSectorBank																															
45-54Years	Female	Master'sDegree	Retired	50001-100000	3-5years	ForeignBank	Daily	4	3	4	3	2	5	5	4	5	4	3	5	3	4	5	4	3	5	3	5	4	3	2	4	4	5	5	3	5	4
35-44Years	Male	Master'sDegree	Self-employed/Freelancer	30001-50000	3-5years	ForeignBank	Daily	5	3	4	3	4	5	5	1	5	5	4	5	4	4	5	3	5	4	3	5	4	5	3	4	5	3	5	4	5	4
18-24Years	Male	Bachelor'sDe	Employed	30001-50000	1-3years	PublicSector	Daily	4	3	5	3	4	4	4	5	3	3	3	5	4	5	5	3	3	4	4	4	4	4	5	5	3	4	4	5	5	3

		gree				Bank																															
35-44 Years	Female	Master's Degree	Self-employed/Freelancer	30001-50000	3-5 years	Digital-Only Bank	Daily	5	5	4	4	3	3	4	5	4	5	5	4	3	3	2	4	3	5	5	5	5	5	2	5	5	5	5	5	5	5
18-24 Years	Female	High Secondary School	Student	10001-30000	1-3 years	Public Sector Bank	Daily	4	4	4	4	4	4	4	5	5	5	5	5	5	5	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
18-24 Years	Male	High Secondary Sc	Student	10001-30000	1-3 years	Public Sector Ba	Daily	2	3	3	3	3	3	3	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4

		hool				nk																															
45-54Years	Male	Doctorate	BusinessOwner	50001-100000	Morethan5years	Digital-OnlyBank	Daily	1	4	5	2	4	3	1	3	5	2	4	5	5	5	3	4	2	3	3	4	5	5	4	1	5	5	5	5	3	4
18-24Years	Male	Master'sDegree	Self-employed/Freelancer	30001-50000	3-5years	Digital-OnlyBank	Daily	4	3	5	5	4	4	4	4	5	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4	5	5	5	5	5
18-24Years	Male	Bachelor'sDegree	Student	30001-50000	1-3years	ForeignBank	Daily	4	4	4	4	3	4	5	3	3	4	4	5	5	5	5	5	4	5	4	3	5	4	5	5	5	4	4	5	5	4
18	Ma	Ma	St	10	1-	Fo	Da	5	3	4	4	4	5	3	4	3	3	5	4	4	5	4	5	5	5	4	5	5	5	5	5	5	5	5	5	5	5

-24Years	le	ster'sDegree	udent	001-30000	3years	reignBank	ily																														
35-44Years	Male	Master'sDegree	Employed	30001-50000	3-5years	ForeignBank	Daily	2	4	4	4	4	4	5	4	4	4	4	5	5	5	4	5	5	5	5	5	5	3	5	5	5	5	5	5	5	5
25-34Years	Male	Bachelor'sDegree	Employed	30001-50000	1-3years	PrivateSectorBank	Daily	3	4	4	3	3	4	4	5	3	4	3	4	4	4	3	3	4	4	5	5	5	4	3	3	4	3	4	4	4	5
25-34Years	Male	Bachelor'sDegree	Employed	30001-50000	3-5years	PrivateSectorBank	Daily	4	4	3	5	5	5	3	4	3	5	4	5	4	4	4	3	3	4	3	4	4	4	4	3	4	5	3	3	4	4
25	Ma	Hi	St	10	1-	Pu	Da	1	2	3	2	4	2	2	4	2	3	5	3	3	4	5	4	3	3	4	4	4	4	4	4	4	4	4	3	3	4

-34Years	le	ghSecondarySchool	udent	001-30000	3years	blicSectorBank	ily																														
25-34Years	Male	Bachelor'sDegree	BusinessOwner	10001-30000	1-3years	PublicSectorBank	Daily	4	3	4	2	4	3	4	3	3	2	5	3	3	4	3	4	3	5	3	3	4	3	3	3	4	3	3	4	3	4
55andaboveYears	Male	Master'sDegree	Employed	50001-100000	Morethan5years	PrivateSectorBank	Daily	3	4	5	4	3	4	4	5	5	5	5	5	5	5	5	4	5	5	4	5	5	5	5	5	5	5	4	5	5	4
25-34Years	Male	Bachelor'sDe	BusinessOwn	50001-100000	3-5years	ForeignBank	Daily	2	3	4	4	4	5	5	5	4	5	5	5	5	5	5	4	5	5	5	5	5	5	5	4	5	4	5	5	5	5

		gree	er																																		
35-44 Years	Female	Master's Degree	Business Owner	30001-50000	3-5 years	Foreign Bank	Daily	1	4	5	5	5	5	4	5	4	1	1	5	5	5	5	1	3	1	2	5	5	5	5	5	5	5	4	4	4	4
25-34 Years	Male	Bachelor's Degree	Employed	30001-50000	3-5 years	Digital-Only Bank	Daily	5	4	4	4	5	4	4	3	5	4	5	3	5	4	4	4	3	5	4	4	4	5	5	3	3	4	4	4	3	4
45-54 Years	Male	Doctorate	Self-employed/Freelancer	50001-100000	3-5 years	Digital-Only Bank	Daily	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4
18-2	Male	Bach	Empl	1000	1-3y	Digi	Dai	1	5	5	5	5	5	5	5	1	5	5	5	5	5	5	5	5	5	5	4	5	4	1	5	5	5	4	3	4	3

4Years		elor's Degree	oyed	1-30000	ears	tal-Only Bank	ly																														
18-24Years	Male	High Secondary School	Student	10001-30000	1-3years	Public Sector Bank	Daily	3	2	3	4	3	4	5	3	3	4	3	2	5	1	2	3	4	4	4	4	5	5	4	5	5	5	5	5	5	3
18-24Years	Male	High Secondary School	Student	10001-30000	1-3years	Public Sector Bank	Daily	2	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
18-24Years	Male	High Secondar	Student	10001-30000	1-3years	Public Sector	Daily	2	4	4	2	4	4	4	2	4	4	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

		ySchool				Bank																															
18-24Years	Male	HighSecondarySchool	Student	10001-30000	1-3years	PublicSectorBank	Daily	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
35-44Years	Female	Master'sDegree	BusinessOwner	50001-100000	Morethan5years	Digital-OnlyBank	Daily	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
25-34Years	Female	Master'sDegree	Self-employed/Freela	30001-50000	3-5years	ForeignBank	Daily	1	4	4	3	4	5	5	4	4	5	5	4	4	3	4	4	4	4	4	4	3	4	4	4	4	4	3	5	4	4

			ncer																																		
55 and above Years	Female	Doctorate	Unemployed	50001-100000	More than 5 years	Digital-Only Bank	Daily	1	4	4	5	4	3	4	4	3	4	4	5	5	5	5	5	5	5	5	4	4	5	4	4	4	5	4	4	4	5
55 and above Years	Female	Master's Degree	Business Owner	50001-100000	3-5 years	Foreign Bank	Daily	3	4	4	3	5	2	3	4	3	3	4	3	4	3	3	4	2	3	4	5	3	3	3	3	4	2	3	4	3	3
35-44 Years	Female	Doctorate	Self-employed/Freelancer	30001-50000	More than 5 years	Digital-Only Bank	Daily	1	1	5	5	5	5	5	5	5	4	3	4	4	4	4	4	3	4	4	4	4	5	4	4	4	4	4	4	4	5
55a	Fem	Mas	Ret	500	3-5	Dig	Dai	1	1	2	2	4	1	5	4	5	4	5	5	3	5	1	1	5	5	5	4	5	4	4	4	4	5	4	2	5	4

ndaboveYears	ale	ter'sDegree	ired	01-100000	years	ital-OnlyBank	ly																														

Questionnaire

Analysing The Impact of Risk on Consumer Trust in Digital Banking Transformation

What is your age?

- 18-24 Years
- 25–34 Years
- 35–44 Years
- 45–54 Years
- 55 and above Years

What is your gender?

- Male
- Female
- Other

What is your highest level of education completed?

- High Secondary School

- Bachelor’s Degree
- Master’s Degree
- Doctorate
- Other

What is your current occupation?

- Student
- Employed
- Business Owner
- Self-employed/Freelancer
- Retired
- Unemployed
- Other

What is your average monthly income?

- Below ₹10,000
- ₹10,001 – ₹30,000
- ₹30,001 – ₹50,000
- ₹50,001 – ₹1,00,000
- Above ₹1,00,000

How many years have you been using online or digital banking services?

- Less than 1 year

- 1–3 years
- 3–5 years
- More than 5 years

Which type of bank do you primarily use for digital banking?

- Public Sector Bank
- Private Sector Bank
- Foreign Bank
- Digital-Only Bank

How frequently do you use digital banking services (e.g., mobile app, internet banking)?

- Rarely
- Occasionally
- Weekly
- Daily

1 - Strongly Disagree, 2 - Disagree, 3 - Neither, 4 - Agree, 5 - Strongly Agree

Continuance Intention to Stay with the Digital Bank

No.	Statement	1	2	3	4	5
1	Continued use of the digital bank's services is intended in the future.					
2	Loyalty to the current digital bank is likely to be maintained over the next year.					
3	The digital bank's services are recommended to others based on experience.					
4	Preference exists to keep using the current digital bank instead of					

	switching providers.					
5	Satisfaction with the digital bank supports long-term continuance of its services.					

Awareness of Security Attacks

No.	Statement	1	2	3	4	5
1	Information about online banking frauds and cyberattacks is regularly encountered.					
2	Awareness exists regarding potential threats in digital banking, such as phishing or hacking.					

3	News and alerts about security breaches in banking systems are frequently followed.					
4	Knowledge of safe online banking practices is sufficient to identify suspicious activities.					
5	Cybersecurity awareness in the context of digital banking is considered important.					

Perceived Risk

No.	Statement	1	2	3	4	5
1	Digital banking involves a high level of uncertainty					

	regarding outcomes.					
2	Use of digital banking may lead to unexpected financial loss.					
3	Digital banking services are perceived to be risky compared to traditional banking.					
4	Trust in the outcome of digital banking transactions is often questioned.					
5	The consequences of security failures in digital banking are perceived to be serious.					

Security Concerns

No.	Statement	1	2	3	4	5
1	Digital banking systems are vulnerable to unauthorized access.					
2	Concerns exist regarding the safety of transactions conducted through digital platforms.					
3	Data transmitted through digital banking platforms may not be secure.					
4	Security technologies in digital banking may not always					

	function effectively.					
5	There is fear of financial fraud due to weak security measures in digital banking.					

Privacy Concerns

No.	Statement	1	2	3	4	5
1	Personal information shared with digital banks may be misused.					
2	Digital banking services may not provide adequate protection of customer data.					
3	There is concern about how digital banks					

	collect, store, and use customer data.					
4	The risk of identity theft exists when using digital banking services.					
5	Disclosure of personal information during digital transactions is viewed as a privacy risk.					

Perceived Trust

No.	Statement	1	2	3	4	5
1	The digital bank is considered reliable in conducting financial transactions.					

2	The digital bank is believed to act in the best interest of its customers.					
3	Informatio n provided by the digital bank is viewed as trustworthy.					
4	The digital bank has a consistent reputation for integrity and honesty.					
5	The digital bank is trusted to resolve issues fairly and transparently.					