

DIGITALISATION IN THE BANKING INDUSTRY – THE FUTURE OF BANKING

by

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Submitted in partial fulfilment of the requirements for the degree of
Master of Laws by Coursework and Research Report
at the University of the Witwatersrand, Johannesburg

Date: 01 December 2023

DECLARATION

I, Kishen Basdewo, declare that this Research Report is my own unaided work. It is submitted in partial fulfillment of the requirements for the degree of Master of Laws (by Coursework and Research Report) at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

I have submitted my final Research Report through TurnItIn and have attached the report to my submission.

Word Count: 9518 [Incl. the body of your report, footnotes **BUT** excl. title page, declaration, abstract, table of contents and bibliography]

Acknowledgment

I want to express my sincere gratitude to everyone who has supported and guided me throughout the journey of completing this research report.

First and foremost, I would like to thank Dr. Matasane, my supervisor, for her amazing support, encouragement, and advice. Your knowledge and experience have greatly influenced this work.

My heartfelt gratitude goes out to my parents, Sheena and Kishorlal, for their unwavering love, sacrifice, and faith in me. Throughout this journey, your constant encouragement and support have been my pillars of strength. I am forever indebted to you for all that you have done.

I would also like to express my gratitude to my family and friends for their companionship, understanding, and for the moments of laughter and joy that have helped me stay balanced throughout this process. Your support has been priceless, and I am grateful that you are in my life.

Without all of you, this journey would not have been possible. Thank you.

Abstract

The South African banking sector has undergone a profound digital transformation due to rapid and continuous technological advancements. Being Africa's largest economy, South Africa offers a unique context for examining the trajectory of digital banking and its ramifications for business and society. The emergence of new technologies has fundamentally changed how banks generate and deliver financial services. In particular, digitalisation has empowered banks to operate predominantly online with minimal physical branches, giving rise to novel intermediaries like peer-to-peer lending platforms and payment service providers. Despite the evident significance of digitalisation in the banking sector, its transformative effects raise concerns about financial inclusion and the security of customers' confidential information. Additionally, while many customers embrace digital platforms, a considerable segment still values the human touch, especially for more intricate transactions.

Against this background, this Research Report seeks to explore the impact of digitalisation on the bank/customer relationship. The research further evaluates how emerging technological innovations are creating novel sources of systemic risk which could in turn pose regulatory and policy challenges. The data for this research report was collected from amongst others, various pieces of relevant legislation, scholarly articles, case law, as well as reports from financial regulators and commentators. The research findings reveal that the technological advancements compel banks to change their operating models to meet customer demands. While this introduces challenges both the consumers and banks, effective implementation holds significant benefits for both parties.

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1. INTRODUCTION

The emergence of technological innovations has significantly transformed the global landscape in terms of how the world conveys, disperses, and consumes data, how to manage monetary exchanges, and even the way in which the world connects.¹ In response to the rapid increase in technological innovations, South African banks have introduced advanced digital banking systems that compete on a global scale and cater to the increasing demand for customer efficiency in financial services. The majority of South African banks are consistently exploring novel approaches to engage with consumers, reduce costs, increase efficiency, and distinguish their offerings through technology.² The digitalization of marketing, customer on-boarding, service channels, processes, products, and features such as saving and deposit management, loan administration, and bill payments are all part of the technological innovation wave.³

In alignment with the drive for innovation, the Financial Sector Conduct Authority (FSCA)⁴ published a Research Report⁵ (the Report) on digital banking in 2021. The Report delved into the landscape of digital banking, exploring various models such as challenger banks⁶, neobanks⁷, and non-banks⁸. According to the Report, challenger banks, equipped with full banking licenses, provide digital services, while neo banks do not have banking licenses and form partnerships with financial institutions in order to provide bank licensed services.⁹ Non-banks, on the other hand, operate without traditional banking licenses, offering financial services through

¹ Thomas Harban “Adapting to and adopting technology: Future proofing your law firm” (2019) *De Rebus – SA Attorneys’ Journal*.

² Ibid.

³ Ibid.

⁴ The FSCA was established to be the dedicated market conduct regulator in South Africa's Twin Peaks regulatory model implemented via the Financial Sector Regulation Act. Their mandate includes all financial institutions that provide a financial product and/or a financial service as defined in the Financial Sector Regulation Act.

⁵ Kagiso Mothibi, Awelani Rahulani *Digital Banking Research Document 2021* (FSCA published research paper).

⁶ A challenger bank is a smaller, newer bank that uses cutting-edge financial strategies to actively compete with and/or challenge existing traditional banks.

⁷ Neo-banks are completely online-based digital banking platforms. Neo-banks do not make use of traditional physical branch networks.

⁸ A financial institution is considered a non-bank if it lacks a full banking license and is unable to take deposits from the general public. For example, insurance firms, currency exchanges, venture capitalists etc.

⁹ Kagiso Mothibi, Awelani Rahulani *Digital Banking Research Document 2021* (FSCA published research paper) 2.

alternative means.¹⁰ The Report concentrated on four key areas namely organizational structure¹¹, products and services¹², operations and technology¹³, and the onboarding¹⁴ of customers.¹⁵ The Report highlighted the benefits and potential drawbacks of digital banking. Among the benefits highlighted were simplified customer processes, convenience and constant access, and lower fees.¹⁶ Conversely, the drawbacks encompassed issues such as system downtime or operational stability, security issues, and technological illiteracy.¹⁷

As emphasised in the Report, the ongoing surge in digitalization, propelled by technological innovation, is profoundly transforming societies and economies.¹⁸ Within the banking sector, this digitalisation has had significant impact across all sectors, introducing new products, services, and distribution models by both established market players and new entrants, including tech companies of varying sizes.¹⁹ The banking sector, which relies heavily on information, continues to be at the forefront of cutting-edge information technology utilization.²⁰ In particular, most banks are introducing self-service technologies to give customers multiple ways to access their products and services.²¹ However, in emerging nations like South Africa, factors such as the degree of information and communications technology development, the high cost of internet usage, and the somewhat restricted bandwidth of mobile networks in certain areas restrict this type of innovation.²² Against this background, this Research Report evaluates the impact of digitalisation in the South African banking sector. In this regard, the Report examines the future

¹⁰ Ibid.

¹¹ In the context of a highly competitive and rapidly evolving fintech environment, digital banks are not only focusing on their consumer experiences, processes, and products but also transforming their organisational culture and organisational setting and attracting critical digital skills and capabilities.

¹² Digital products and services relate to developing new products and services while utilising technology and data to meet client demands.

¹³ Intelligent automation and robotic process automation are being used by digital banks to automate manual or labor-intensive procedures and achieve operational excellence in order to increase speed, quality, and volume.

¹⁴ In order to significantly improve or alter the customer experience, it is necessary to digitise the whole customer journey.

¹⁵ Kagiso Mothibi, Awelani Rahulani op cit note 9 at 6.

¹⁶ Ibid.

¹⁷ Ibid.

¹⁸ OECD (2020) *Financial Consumer Protection Policy Approaches in the Digital Age: Protecting consumers' assets, data and privacy* 6.

¹⁹ Ibid.

²⁰ Irwin Brown, Alemayehu Molla "Determinants of Internet and cell phone banking adoption in South Africa" (2005) 10(1) *The Journal of Internet Banking and Commerce* 1-9.

²¹ Ibid.

²² Ibid.

of banking in light of recent technological innovations and determines whether the current wave of digitalisation can be harnessed to promote financial inclusion in the banking sector.

2. DIGITALISATION IN THE SOUTH AFRICAN BANKING SECTOR

Banks play a crucial role in the economy by performing various essential functions. One of the primary functions involves maturity transformation and liquidity provision which entails collecting short-term deposits and extending long-term loans.²³ This role includes overseeing less transparent loans that may face challenges in obtaining market funding.²⁴ Another vital function is the provision of payment and transaction services.²⁵ Both functions heavily rely on processing information, including intangible and verifiable data as well as intangible information derived from relationship banking.²⁶ The advent of digital revolution has significantly amplified the significance of modifiable information, leveraging tools such as artificial intelligence (AI) and machine learning (ML) primarily fueled by extensive data resources.²⁷

Over the past several decades, the internet and online technologies have expanded and become more widely used, creating numerous prospects for corporate digitalization and the creation of new digital business models.²⁸ As a result of the Fourth Industrial Revolution, businesses all over the world are being redesigned and reorganised, and banks are no exception.²⁹ In the realm of banking, the reliance on technology is increasingly evident, especially in the delivery of customer services through digital channels such as websites, internet banking portals, and smartphone applications.³⁰

By obscuring the conventional distinctions between product, market, and client base, digital technologies are radically altering the global banking sector and freeing and harmonising

²³ OECD.

²⁴ Ibid.

²⁵ Ibid.

²⁶ Ibid.

²⁷ Ibid.

²⁸ Candice Louw, Cecile Nieuwenhuizen 'Digitalisation strategies in a South African banking context: A consumer services analysis' (2020) 22(1) *South African Journal of Information Management* 1-8.

²⁹ Ibid.

³⁰ Ibid.

financial institutions on a worldwide scale.³¹ As a result, when considering banks against a backdrop of profound structural change and technological advancement, they frequently seek out diversification, vertical product differentiation, and consolidation as the reactions to the changing competitive environment.³²

Traditionally, banking operations heavily relied on extensive, encompassing physical branches and ATM machines.³³ However, recent developments in technology have revolutionized the way bank's function. Specifically, the move to digitalisation now enables banks to operate and expand without the need for physical infrastructure, ushering in the era of "branchless banking" through internet and mobile banking, as well as digital terminals.³⁴ This transformation can be attributed to various factors, including the fast growth of technology, the emergence of new markets, and the requirement for a new strategic direction.³⁵ Adapting to change becomes crucial, as it ensures that businesses remain profitable and relevant amidst evolving economic conditions.³⁶ The banking industry is no exception to this rule, with the rapid technological development in digital banking becoming essential for its sustained growth and relevance.³⁷ In response to this growth, South African banks have created cutting-edge digital banking platforms that compete globally and satisfy client aspirations for financial efficiency.³⁸ The distribution of banking services has changed since the mid-1990s, moving from traditional branch banking to self-service channels to internet banking, cell phone banking, and mobile banking applications.³⁹ The focus of bank strategy has turned towards technical developments in digital banking, which allow banking to be made easier, controllable, and less time consuming, in order to remain competitive within the sector and to remain relevant to clients.⁴⁰

³¹ Ibid.

³² Ibid.

³³ Goga "Digitalisation, Data and Open Banking: A South African Perspective" (2017) *Discussion Paper for Expert Panel on Regulating Digital Platforms for Economic Development* 6.

³⁴ As above.

³⁵ S Maharaj, R. I. D. Poore 'Overcoming challenges associated with managing change towards Digital Banking – a case of a South African bank' (2021) 18(1) *Journal of Contemporary Management* 70-92.

³⁶ Ibid.

³⁷ Ibid.

³⁸ Ibid.

³⁹ Ibid.

⁴⁰ Ibid.

i. *Digital banking services*

Globally, digitalisation in the banking sector means offering consumers convenient access to financial services.⁴¹ Traditional brick-and-mortar banking is being complemented and sometimes replaced by digital banking services. This includes online banking platforms, mobile applications, and other digital channels that allow customers to perform various banking transactions, such as checking account balances, transferring funds, paying bills, and even applying for loans and mortgages.⁴²

As a result of digitalisation, South African banks are now able to provide Internet banking to its rural customers, allowing them to conduct bank transactions via the bank's website rather than visiting a physical branch.⁴³ Because of population variables and Internet infrastructure, the distribution of Internet banking infrastructure in South African rural regions differs from that in metropolitan areas or other nations.⁴⁴

In terms of innovation, more banks are now starting to incorporate Artificial Intelligence (AI) into their digital banking services. John McCarthy, who is known as the father of AI, defines AI as “*the science and engineering of making intelligent machines*”⁴⁵. The science of training computers to learn, think, observe, infer, communicate, and make decisions like people do, is at the heart of AI.⁴⁶ With the advancement of super intelligence, it is clear that AI represents the pinnacle of the current technological era.⁴⁷ Technology was once thought to be “science fiction”.⁴⁸ However, fundamental shifts in work practices are taking place. As a consequence of this, machines are effectively performing manual labour at a rate that humans simply cannot match.⁴⁹

In recent years, AI applications in the financial sector have grown in popularity. These institutions have used their enormous power to provide business solutions for front- and back-end

⁴¹ Thinamano C. Ramavhona, Sello Mokwena “Factors influencing Internet banking adoption in South African rural areas” (2016) 18(2) *South African Journal of Information Management*.

⁴² Ibid.

⁴³ Ibid.

⁴⁴ Ibid.

⁴⁵ Akshar Joshi, Gautam Mishra “Artificial Intelligence” (2010) *Association for Computing Machinery* 1.

⁴⁶ Sara Tony “Understanding the legal risks associated with artificial intelligence” (2020) *De Rebus – SA Attorneys’ Journal*.

⁴⁷ Ibid.

⁴⁸ Ibid.

⁴⁹ Ibid.

processes to increase efficiency and customer satisfaction.⁵⁰ Recent events have shown how computational intelligence is the most effective tool for gaining a competitive edge through the use of its decision-making skills.⁵¹ With outstanding outcomes, we can see that AI is poised to completely transform the banking sector before our very eyes.⁵² The majority of a bank's business operations, including traditional deposit taking and lending as well as investment banking and asset management, depend on data.⁵³ Therefore, banks have a lot of chances to increase speed, accuracy, and efficiency through autonomous data handling without human intervention.⁵⁴

Natural language processing (NLP)-powered chatbots⁵⁵ enhance online conversations and engage customers round-the-clock. Even though the idea of chatbots is not new, they use very advanced AI. Furthermore, chatbots may now be employed in creative ways thanks to machine learning algorithms. In order to respond to queries and facilitate productive discussion, chatbots employ both text- and speech-based language processing technologies.⁵⁶ This suggests that technology is scrutinizing user behaviour and routines. In order to understand the consumer and reply appropriately, chatbots are helpful.⁵⁷

AI has also proven to be useful in the prevention and detection of fraud. The term "anti-money laundering" (AML) refers to a set of procedures, laws, or regulations that are meant to stop people from making money illegally.⁵⁸ Most banks utilize AI-based systems, which are more resistant and knowledgeable about AML trends.⁵⁹ These systems are expected to advance in accuracy and speed thanks to ongoing advancements in the field of artificial intelligence.⁶⁰

⁵⁰ Praveen Donepudi "Machine Learning and Artificial Intelligence in Banking" (2017) 5(2) *Engineering International* 83.

⁵¹ Ibid.

⁵² Ibid.

⁵³ Orçun Kaya: Deutsche Bank Research Report "Artificial intelligence in banking – A lever for profitability with limited implementation to date" (2019) 5.

⁵⁴ Ibid.

⁵⁵ A chatbot is "a technology service powered by algorithms that interacts with a customer in a natural (human-like) manner, either by voice or text".

⁵⁶ E Mogaji et al 'Emerging-market consumers' interactions with banking chatbots' (2021) 65 *Telematics and Informatics*.

⁵⁷ Khyati Kochhar, Purohit Harsh, Ravisha Chutani "The rise of artificial intelligence in banking sector" (2019) *The 5th International Conference on Educational Research and Practice (ICERP)*.

⁵⁸ Praveen Donepudi op cit note 50 at 11.

⁵⁹ Ibid.

⁶⁰ Ibid.

Banks are also using AI to automatically analyse customer behaviour patterns and segment customers, which enables targeted marketing and enhanced customer interaction and experience. The banking industry now has a new approach to satisfy the needs of its clients, who want easier, more accessible, and safer ways to access, save, spend, and invest their money.⁶¹ The financial institutions must thus answer the demand of the new era.⁶²

ii. *Mobile banking*

A "first wave" of digital financial services has been provided by mobile money by taking advantage of the widespread use of mobile phones in many developing nations.⁶³ With over a fifth of the adult population having a mobile money account, Sub-Saharan Africa has emerged as the market leader in mobile money.⁶⁴ Additionally, this region has demonstrated that these accounts can serve as the foundation for more advanced financial services like digital lending and insurance.⁶⁵ Digital finance's ability to make it easier to pay for services like loans, insurance, and "pay-as-you-go" solar energy, has been used by large e-commerce platforms and telecom operators.⁶⁶

South Africa has a high mobile penetration rate, and mobile banking is becoming a dominant way for customers to interact with their banks. Mobile applications offer convenience and accessibility, enabling users to manage their finances on the go. Historically, 31 426 people signed up for mobile banking in August 2002, when it was first provided in South Africa.⁶⁷ Mobile banking initially only supported a small number of transactions. At this point there was only one functionality – balance checking.⁶⁸ Absa was the first bank to provide this service. Following that, mobile banking was offered by FNB, Standard Bank, and Nedbank.⁶⁹

Mobile banking is the newest delivery channel established by retail and microfinance banks in many developed and developing countries. Although automated teller machines (ATM),

⁶¹ Praveen Donepudi op cit note 50 at 11.

⁶² Ibid.

⁶³ Ibid.

⁶⁴ Ibid.

⁶⁵ Ibid.

⁶⁶ Ibid.

⁶⁷ Rabelani Dagada 'Digital banking security, risk and credibility concerns in South Africa' (2013) In *The Second International Conference on Cyber Security, Cyber Peacefare and Digital Forensic (CyberSec2013)*.

⁶⁸ Ibid.

⁶⁹ Ibid.

telephone, and Internet banking offer effective delivery channels for traditional banking products, mobile banking is likely to have a significant impact on the market.⁷⁰ Particularly, the increased use of smartphones has increased the demand for mobile banking services.⁷¹ As a result, more banks, microfinance organisations, software firms, and service providers are now offering this cutting-edge service alongside new sets of products and applications that are intended to increase market share, improve customer retention, increase operational efficiency, reach previously unbanked populations, and create new job opportunities.⁷²

In both developed and developing nations, retail and microfinance banks generally provide four points of access to mobile banking services: firstly, mobile applications that can be downloaded to a smartphone; secondly, mobile browsers that work with any smartphone or mobile device that has a Web browser; thirdly applications that can be downloaded to a tablet; and fourthly, short messaging services (SMS) that give account information notifications.⁷³ The first three methods depend on a mobile device having an Internet connection, whereas SMS uses the Global System for Mobile Communication (GSM) networks as usual.⁷⁴ Overall, however, mobile banking has altered the financial landscape, and portable devices are now regarded as Alternate Delivery Channels that employ various apps to provide customers with financial and non-financial services and goods.⁷⁵

Mobile banking services have proliferated across the globe as a result of the quick adoption of mobile devices, with particular significance in African and other developing nations where the poorest citizens have historically been unbanked or have not had a bank account.⁷⁶ So, in both established and emerging economies, including many African economies, mobile phones has helped to increase financial inclusion for underprivileged individuals.⁷⁷ Over the past 20 years,

⁷⁰ A.A. Shaikh, H Karjaluo 'Mobile banking adoption: A literature review' (2015) 32(1) *Telematics and Informatics Journal* 129-142.

⁷¹ Ibid.

⁷² Ibid.

⁷³ Ibid.

⁷⁴ Ibid.

⁷⁵ Ibid.

⁷⁶ R Pankomera, D Van Greunen 'Challenges, benefits, and adoption dynamics of mobile banking at the base of the pyramid (BOP) in Africa: A systematic review' (2018) 21 *The African Journal of Information and Communication* 21-49.

⁷⁷ Ibid.

mobile devices have significantly proliferated in rural areas throughout Africa.⁷⁸ Due to mobile connectivity Africa has the fastest rates of internet penetration, with a more than 20% increase in internet users throughout the continent since 2017.⁷⁹

Due to its fundamental nature, a mobile phone may be used constantly or is always portable, enabling users to connect while engaging in activities like travelling or meeting new people. Internet access is also available for transactions made using mobile devices.⁸⁰ Mobile phones are widespread, and the Global Positioning System (GPS) could have been developed to recognise them and attempt to personalise the user experience based on already available services.⁸¹ The ability to pinpoint Internet users' whereabouts gives mobile commerce an edge over wired e-commerce.⁸² The mobile commerce providers will be able to transmit and receive information to a specific location using this technology.⁸³

Moreover, people have access to electronic activities without being constrained by time or place.⁸⁴ For instance, consumers who are standing in line or delayed in traffic will be able to use mobile commerce applications to manage their daily transactions or purchase their preferred online activities.⁸⁵ Customers may become aware of a unique comfort that might enhance their quality of life. The consumer become more devoted if services are more comfortable.⁸⁶ Compared to desktop computers, mobile phones have a far greater effect.⁸⁷ Mobile commerce developers should provide more original and personalised lifestyle tools.⁸⁸ For instance, more precise advertising may be done utilising demographic data gathered by cellular service providers and details on the location of mobile users right now.⁸⁹ The information obtained via discussion with the user's initial or past buying patterns can be used to tailor advertising messages.⁹⁰

⁷⁸ Ibid.

⁷⁹ Ibid.

⁸⁰ Zahra Rahmani, Atusa Tahvildari et al 'Mobile Banking and its Benefits' (2012) 2(5) *Arabian Journal of Business and Management Review*.

⁸¹ Ibid.

⁸² Ibid.

⁸³ Ibid.

⁸⁴ Ibid.

⁸⁵ Ibid.

⁸⁶ Ibid.

⁸⁷ Ibid.

⁸⁸ Ibid.

⁸⁹ Ibid.

⁹⁰ Ibid.

It is submitted that mobile banking provides quick, round-the-clock access to financial services, making it simple to conduct transactions, pay bills, and manage accounts. It is a useful tool for modern, mobile lifestyles since it increases productivity, frees up time, and enables users to keep track of their funds in real-time.

3. THE IMPACT OF DIGITILISATION ON FINANCIAL INCLUSION

Financial inclusion in the context of enhancing the economic well-being of individuals, particularly those with lower incomes, involves providing them with affordable and practical financial goods and services offered by the governmental bodies, financial institutions, and other relevant stakeholders.⁹¹ To improve the quality of life for financial consumers, both the government and financial institutions must create an environment conducive to sustainable economic investment.⁹² Achieving broader financial inclusion in South Africa requires leveraging cutting-edge technology to ensure that a significant portion of the population can access financial institutions and their services.⁹³ Innovative technology includes new goods, procedures, and technical improvements applied to existing financial products and services.⁹⁴ Examples of such technology include mobile banking, online banking, internet banking, online marketing, and automated teller machines (ATMs).⁹⁵ The banking industry actively adopts innovative technology because it provides a convenient, easy, quick, and affordable means for conducting transactions while also promoting transparency and reducing operational expenses.⁹⁶

In South Africa, the majority of low-income earners continues to battle challenges in accessing basic financial goods and financial services. This is particularly prevalent among those who live in rural regions and informal settlements.⁹⁷ This is due to a number of factors, including the lack of a financial inclusion policy, the distance between financial institutions and the majority of low-income earners, strict identity documentation requirements, the high cost of financial

⁹¹ H Chitimira, PT Magau 'A Legal Analysis of the Use of Innovative Technology in the Promotion of Financial Inclusion for Low-Income Earners in South Africa' (2021) 24(1) *Potchefstroom Electronic Law Journal*.

⁹² Ibid.

⁹³ Ibid.

⁹⁴ Ibid.

⁹⁵ Ibid.

⁹⁶ Ibid.

⁹⁷ Ibid.

services, financial illiteracy, unemployment, poverty, and over-indebtedness, as well as the lack of reliable and affordable internet access for low-income earners living in rural and informal settlements.⁹⁸ However, modern financial institutions in South Africa frequently leverage cutting-edge technology to provide financial services and products to their customers.⁹⁹ Therefore, the advent of digital banking has transformed the operational dynamics of banks and expanded their customer outreach, encompassing individuals residing in rural areas. Internet banking allows customers to access their bank accounts from any location with Internet connectivity. This not only enhances convenience but also contributes to customer safety by reducing the necessity to carry significant amounts of cash.

Recently, there have been some admirable technological advancements and modifications to the way banking services are provided to South African financial clients throughout the years. These advancements include the use of websites and mobile banking applications that simplify banking, particularly for the poor and low-income earners living in informal settlements and rural regions who cannot always afford to travel to use the financial services given by conventional bank branches.¹⁰⁰

In addition, a significant portion of South Africans with lower incomes, living in rural and informal settlements, have cellphones with Internet connectivity that they may use to transact or access a variety of financial services and financial products.¹⁰¹ Such financial customers, however, find it challenging to access a variety of financial services and financial products without having to visit the physical offices of the financial service providers due to the inadequate Internet connectivity in their locations.¹⁰² As a result, inadequate Internet access has a detrimental impact on South Africa's efforts to promote financial inclusion for low-income people.¹⁰³

The landscape of banking has been reshaped by online banking, leading to an expansion of customer bases that now encompass individuals in rural regions.¹⁰⁴ Users of internet banking can

⁹⁸ Ibid.

⁹⁹ Ibid.

¹⁰⁰ Ibid.

¹⁰¹ Ibid.

¹⁰² Ibid.

¹⁰³ Ibid.

¹⁰⁴ T Ramavhona, S Mokwena op cit note 41 at 10.

conveniently access their bank accounts from any location with internet connectivity, contributing to enhanced customer safety by minimizing the need to carry substantial amounts of cash.¹⁰⁵

It is submitted that for South Africa to achieve both economic prosperity and social fairness, there is a need to advance financial inclusion. By increasing access to banking services and promoting financial education, the country can empower its citizens and foster a more inclusive and resilient economy that benefits.

4. REGULATORY APPROACH TO DIGITAL BANKING IN SOUTH AFRICA

Technology has completely changed how the contemporary economy runs and this trend is expected to accelerate significantly during the fourth industrial revolution.¹⁰⁶ In the aftermath of the 2008 global financial crisis, both national and international authorities have redefined the parameters governing activities predominantly propelled by technology, exerting direct impact on day-to-day operations of banks.¹⁰⁷ This has placed considerable pressure on regulators, whose primary task is to establish legal frameworks that allow financial institutions to operate and manage risks while allowing room for innovation.¹⁰⁸

Nonetheless, South Africa boasts robust governance and regulation within its financial industry.¹⁰⁹ According to the World Economic Forum, South African banks have consistently ranked among the most reliable globally, securing a position in the top 10 since 2009.¹¹⁰ With the approval of the Financial Sector Regulation Act,¹¹¹ South African banks have adopted the Twin-Peaks regulatory structure. Consequently, banks are now subject to oversight from both the Financial Sector Conduct Authority (addressing market conduct in the provision of financial services) and the Prudential Authority (ensuring compliance with prudential criteria).¹¹² This regulatory and

¹⁰⁵ Ibid.

¹⁰⁶ Johan Coetzee 'Strategic implications of Fintech on South African retail banks' (2018) 21(1) *South African Journal of Economic and Management Sciences*.

¹⁰⁷ Ibid.

¹⁰⁸ Ibid.

¹⁰⁹ Ibid.

¹¹⁰ Ibid.

¹¹¹ Financial Sector Regulation Act 9 of 2017. Prior to the FSRA, financial institutions other than banks were regulated by the Financial Services Board, while banks and mutual banks were regulated by the Registrar of Banks as part of the South African Reserve Bank.

¹¹² Johan Coetzee op cit note 106 at 17.

supervisory framework aims to instill confidence in the system, reassuring local customers who rely on the stability of the industry for their deposits, and corporate South Africa, which depends on a stable and reliable banking environment.¹¹³ Emphasizing the importance of building trust is essential to a functioning economy and cannot be overstated.

Despite having a well-established banking sector, South African banks have a historical tendency of being risk averse.¹¹⁴ This has extremely significant effects on how Fintech is adopted by the sector.¹¹⁵ However, this does not imply that banks are indifferent to Fintech solutions or resistant to their integration.¹¹⁶ Instead, South African banks need to make sure they take a cautious approach, keeping in mind both the industry's strict legal and regulatory standards as well as the socioeconomic background of the economy.¹¹⁷

Furthermore, banks are increasingly pressured by authorities to realign their organisational cultures to better serve the needs of their customers.¹¹⁸ Following the global financial crisis, the importance of enforcing regulations on market activity under the guise of "treating customers fairly" has increased, particularly in order to eliminate any potential for moral hazard and conflicts of interest.¹¹⁹ Additionally, banks in the technological age face a significant risk when it comes to cybersecurity and the protection of customer information because of the abundance of information that is available to the public.¹²⁰

Thus, cybersecurity is a critical regulatory issue, particularly with regard to safeguarding confidential client data.¹²¹ The capacity of so-called Fintech businesses to use big data analytics to find patterns and trends and provide technology-based solutions on a large scale depends heavily on this client data.¹²² Failure to implement regulatory changes to safeguard such data poses a risk to the public trust in the financial system, potentially escalating systemic risk issues.¹²³ These

¹¹³ Ibid.

¹¹⁴ Johan Coetzee op cit note 106 at 17.

¹¹⁵ Ibid.

¹¹⁶ Ibid.

¹¹⁷ Johan Coetzee op cit note 106 at 17.

¹¹⁸ Johan Coetzee 'Risk aversion and the adoption of Fintech by South African banks' (2019) 14(4) *African Journal of Business and Economic Research* 134 – 146.

¹¹⁹ Ibid.

¹²⁰ Ibid.

¹²¹ Ibid.

¹²² Ibid.

¹²³ Ibid.

regulatory reforms signal a shift in the operating landscape for banks, placing increased pressure on regulators to ensure compliance.¹²⁴ While technological disruptions present unprecedented opportunities for reforming regulations in the financial services industry, regulators must balance this with the imperative of preserving public confidence in a robust regulatory framework.¹²⁵ This is essential to prevent the emergence of heightened systemic risks and potential economic crises.¹²⁶ In essence, embracing advanced and integrated technology requires a simultaneous commitment to ensuring the stability of banks.

It is submitted that technology aids banks in creating strong regulatory frameworks that support development and innovation. The banking industry has significant challenges due to the rising regulatory framework, but it also presents significant opportunity. Effective use of technology will be essential for reducing operating costs, optimising compliance and risk management procedures, and creating strong regulatory frameworks that support innovation and expansion.

5. CHALLENGES PRESENTED BY DIGITALISATION IN THE BANKING SECTOR

As observed from the discussion above, digitalisation has brought about significant changes to the banking sector, offering various benefits such as increased efficiency, improved customer experiences, and enhanced services. However, it has also introduced several challenges that banks need to address in order to navigate this transformation successfully.

i. Data Privacy and Compliance

Globally, the issue of privacy is increasingly becoming the most pervasive issue on the internet worldwide.¹²⁷ The upsurge in technological developments and digitalisation in the banking sector has brought about concerns regarding the protection of consumer information. The digitalisation of banking involves the collection, storage, and analysis of vast amounts of customer data. Digital banks rely on data to serve customers, therefore, improved data privacy and security measures are

¹²⁴ Ibid.

¹²⁵ Ibid.

¹²⁶ Johan Coetzee op cit note 118 at 18.

¹²⁷ Feng & Papadopoulos 'Student (K-12) Data Protection in the Digital Age: A Comparative Study' (2018) *The Comparative and International Law Journal of Southern Africa* 262.

necessary.¹²⁸ Customers should be able to see what data is collected about them, how it is used, and whether it is shared with a third party from digital banks.¹²⁹ Digital banks must be able to identify where data were improperly used or accessed in the event of a security breach, and a clear liability framework must be in place to ensure that the responsible party is held accountable for data security and for harm caused by breaches of its duties of care.¹³⁰ There should be safeguards in place to prevent the inappropriate use of customer data outside of the scope of their consent.¹³¹

In South Africa, the right to privacy is entrenched in the Constitution of the Republic of South Africa¹³². In terms of section 14 of the Constitution: *'Everyone has the right to privacy, which includes the right not to have: (a) their person or home searched; (b) their property searched; (c) their possessions seized; (d) the privacy of their communications infringed'*.

There are also other pieces of legislation that give effect to the constitutional right to privacy such as the Electronic Communications and Transactions Act¹³³ (ECTA), which regulates the electronic collection of personal information; the Regulation of Interception of Communications and Provision of Communication-Related Information Act¹³⁴ (RICA), which deals with the interception of communications; and the Protection of Personal Information Act¹³⁵ (POPIA) which deals with data protection and affects all people who process personal information within South Africa.

However, despite all these measures, theft of data and data security continue to be key problems for financial organisations.¹³⁶ With the rise in popularity of mobile banking, the issue of data security is becoming even more crucial.¹³⁷ Phishing attacks are becoming more frequent every day. Phishing is when a person receives an email seeming to be from a genuine company but actually comes from someone else.¹³⁸ The pretender's goal in sending this email is to get the

¹²⁸ Kagiso Mothibi, Awelani Rahulani op cit note 9 at 6.

¹²⁹ Ibid.

¹³⁰ Ibid.

¹³¹ Ibid.

¹³² Section 14 of the Constitution of the Republic of South Africa, 1996.

¹³³ Electronic Communications and Transactions Act 25 of 2002.

¹³⁴ Regulation of Interception of Communications and Provision of Communication-Related Information Act 70 of 2002.

¹³⁵ Protection of Personal Information Act 4 of 2013.

¹³⁶ Lindsay Mitchell, Maeve Kolitz "Phishing and spoofing" (2012) 26(6) *Tax Planning Corporate and Personal*.

¹³⁷ Ibid.

¹³⁸ Ibid.

recipient to divulge sensitive and personal information that will be utilized against them.¹³⁹ The number of customers who have been affected by phishing attempts has increased since the early 2000s, despite efforts to prohibit them.¹⁴⁰ However, most attempts are increasingly failing to steal money from consumer bank accounts, but those people who do are more specifically targeted.¹⁴¹

Criminals are skilled at intercepting emails from senders, adding their own bank information, and sending the email so that it seems to be coming from the real sender and has the same email address.¹⁴² The sender's money is stolen after it reaches these bogus accounts, and will still be obligated to pay the person, business, or supplier who was originally meant to receive the money.¹⁴³

In *Galactic Auto (Pty) Ltd v Venter*¹⁴⁴, a businessman purchased a Ford Ranger that he desperately needed for a new venture. In response to an email he got and was anticipating from the vehicle dealership, he performed an EFT. It was then discovered that the transfer had been made to a fake account after he had already taken receipt of the Ford Ranger. The dealership then demanded R380 000 from him as the purchase price. In this case, the court determined that he should have confirmed the account number before transferring funds, and that he still owed the money to the auto dealer.¹⁴⁵

ii. Cybercrime concerns

As banking operations become more reliant on digital systems, the risk of cyberattacks and data breaches increases. Digital banking will necessitate procedures to mitigate the risks associated with Anti-Money Laundering (AML) / Combating the Financing of Terrorism (CFT), electronic Know Your Customer (eKYC), and cybersecurity.¹⁴⁶ Multifactor authentication, cyber risk

¹³⁹ Ibid.

¹⁴⁰ Andre Redlinghuis, Chris Rensleigh 'Customer perceptions on Internet banking information protection' (2010) 12(1) *SA Journal of Information Management*.

¹⁴¹ Ibid.

¹⁴² Ibid.

¹⁴³ Ibid.

¹⁴⁴ *Galactic Auto (Pty) Ltd v Venter* 2019 JOL 45546 (LP).

¹⁴⁵ Ibid.

¹⁴⁶ Ibid.

assessment, cyber insurance, and employee training should all be part of a multi-pronged strategy to reduce cybersecurity risk.¹⁴⁷

In the case of *Fourie v Van der Spuy and De Jongh Inc*,¹⁴⁸ the Applicant who was a client of a law firm, applied to the High Court seeking an order for damages against the Respondents, who were two practicing Attorneys and the law firm. This was as a result after one of the Attorneys mistakenly transferred the Applicants funds into several bank accounts held by one or more unidentified hackers, from the law firms trust account.

The Attorney was keeping the money in the law firm's trust account for the benefit of the Applicant, who had given the Attorney instructions to hold the money on his behalf.¹⁴⁹ The Attorney had previously represented the Applicant. The Attorney thereafter got a series of emails that appeared to have been sent from the Applicant's email address, telling her of the "Applicant's" updated banking information and giving instructions to deposit the monies into various bank accounts.¹⁵⁰ Without checking the new banking information with the Applicant, the Attorney paid the monies as directed.¹⁵¹ After the Attorney had mistakenly deposited the monies into the new bank accounts, it was revealed that one or more unidentified hackers had gained access to the Applicant's email and given the information for their own bank accounts.¹⁵²

The High Court held: “[t]he [Attorney] was negligent and failed to exercise the requisite skill, knowledge and diligence expected of an average practicing attorney and thus failed to discharge her fiduciary duty to the Applicant by transacting via e-mail whilst full-well knowing that fraud is prevalent in her profession and not employing any measures to ensure that neither she, nor the Applicant will fall victim to fraud.”¹⁵³

The court found that the attorney was in fact accountable for her negligence and rejected the attorney's argument that a fraud had been committed, relieving her of her obligation to be accountable to her client. The Applicant sustained a loss, for which the Respondents were deemed

¹⁴⁷ Ibid.

¹⁴⁸ *Fourie v Van der Spuy and De Jongh Inc* 2019 JOL 45848 (GP).

¹⁴⁹ Ibid.

¹⁵⁰ Ibid.

¹⁵¹ Ibid.

¹⁵² Ibid.

¹⁵³ *Fourie v Van der Spuy and De Jongh Inc* [30].

jointly and severally liable, and the High Court ordered the Respondents to reimburse the Applicant for that loss, plus interest.¹⁵⁴

The *Fourie* case mainly focused on the rules governing trust accounts and the duty of care that an attorney must take while representing a client, but it also brought to light the potential harm that cybercriminals may be able to inflict. The Court summed up this point well whereby it held that:

*“This is a judgment on a matter pertaining to cybercrime, it is a matter of innocent people being dragged into cases where emails are hacked, and payments are made to unknown hackers. The victims then litigate against one another”.*¹⁵⁵

*“The rate at which cybercrime occurs makes the internet a very unsafe working area.”*¹⁵⁶

Theft of a digital identity¹⁵⁷ – the financial sector makes use of a multi-layered strategy that incorporates intelligent data use, continuous behavioural monitoring, and advanced identity verification which can be used to combat digital identity theft.¹⁵⁸ Due to its somewhat sparse efforts to control the problem, Africa has earned the label as the "safe haven for cybercrime and cybercriminals."¹⁵⁹ African internet users express unusual concerns about the spread of cybercrime.¹⁶⁰ The African Union (AU) claims that the continent of Africa has experienced the world's fastest increase in internet penetration, which has led to a tripling of digital connectivity over the past five years and alleged experiences of a rising trend of cyberattacks against stakeholders in the public and private sectors.¹⁶¹ Due to the rise in cybercrime and the continent's advancement in information and communication technology, reservations have been raised about it.¹⁶² According to the Centre for Strategic and International Studies' study on cybercrime, South

¹⁵⁴ *Fourie v Van der Spuy and De Jongh Inc* 2019 JOL 45848 (GP).

¹⁵⁵ *Fourie v Van der Spuy and De Jongh Inc* [1].

¹⁵⁶ *Fourie v Van der Spuy and De Jongh Inc* [25].

¹⁵⁷ Systems, services, and apps can identify the person or subject they are communicating with thanks to the unique identifiers that make up a digital identity. Examples of these unique identifiers could be usernames, passwords, email addresses, biometric data etc.

¹⁵⁸ Kagiso Mothibi, Awelani Rahulani op cit note 9 at 6.

¹⁵⁹ Eboibi, Felix E 'Concerns of cyber criminality in South Africa, Ghana, Ethiopia and Nigeria: rethinking cybercrime policy implementation and institutional accountability' (2020) 46(1) *Commonwealth Law Bulletin* 78-109.

¹⁶⁰ *Ibid.*

¹⁶¹ *Ibid.*

¹⁶² *Ibid.*

Africa loses 0.14% of its GDP as a result of cybercrime.¹⁶³ According to the South African Risk Information Centre, cybercrime related to debit card theft costs South Africa 1 billion Rand annually.¹⁶⁴ The majority of people believe that victims of cybercrime are unaffected by cybercrime.¹⁶⁵ Trauma to the body, mind, and pocket are some adverse effects of cybercrime on victims.¹⁶⁶ Since it results in the loss of value in the form of money, property, peace of mind, and safety, cybercrime has a sinister undertone.¹⁶⁷ Due to breaches of consumer privacy and information, internet users who engage in online shopping, electronic commerce, and internet business activities are concerned about their safety, which undermines their faith in the security of the internet.¹⁶⁸

Concerns of internet users who have encountered cybercrime are characterised by emotional effects; they feel irate, frustrated, deceived, and self-blame for being assaulted, especially when it becomes clear that the hackers will escape punishment, denying them justice.¹⁶⁹ Additionally, the expense of protecting oneself from cybercrime has forced business organisations to identify risks, put together more secure operating systems, and buy risk-free equipment and software.¹⁷⁰ The reality is that customers implicitly pay these expenses since prices for products and services have increased.¹⁷¹

The recent increase in cybercrime in Africa has put great strain on these African governments' regulatory structures.¹⁷² Even the best cybercrime laws and regulations cannot stop the spread of these crimes throughout these African nations and the world.¹⁷³ Making sure the legal framework and policies are properly implemented to the latter is the other most crucial but difficult component, or half, of the process.¹⁷⁴ These African governments have passed cybercrime laws and given those entities power, but they anticipate that the regulations would be carried out

¹⁶³ Ibid.

¹⁶⁴ Ibid.

¹⁶⁵ Ibid.

¹⁶⁶ Ibid.

¹⁶⁷ Ibid.

¹⁶⁸ Ibid.

¹⁶⁹ Ibid.

¹⁷⁰ Ibid.

¹⁷¹ Ibid.

¹⁷² Ibid.

¹⁷³ Ibid.

¹⁷⁴ Ibid.

independently.¹⁷⁵ Although the failure to execute cybercrime laws and regulations is a widespread issue, it is unique to certain African States and contributes to the growth of cybercrime in these nations and the continent of Africa as a whole.¹⁷⁶ Users of the internet and those working to reduce the threat of cybercrime are very concerned about the implementation gap.¹⁷⁷ Laws and policies pertaining to cybercrime can only be effective if political will is used to guide the entire process.¹⁷⁸ Without it, every new cybercrime law that is passed will further widen the implementation gap rather than putting an end to the threat of cybercrime it was intended to address.¹⁷⁹

In addition, the pandemic has had a significant impact on how individuals utilise technology. Many individuals today carry out daily tasks including work, school, shopping, health appointments, and enjoyment via a connection to the Internet from their homes.¹⁸⁰ Cybercrime has drastically increased as people spend more time online.¹⁸¹ Cybercrime has developed from a sinister pastime of lone hackers into a highly organised, global economic network that includes black marketplaces for stolen data and every part of cyberattack activity.¹⁸² A wide variety of attack "services" may be acquired through cybercrime markets on the dark web or hacker forums thanks to the widespread acceptance of the cybercrime-as-a-service paradigm, and minimal technical knowledge is required.¹⁸³ Breaking into a house or company to steal money traditionally leaves plenty of evidence, including DNA, fingerprints, shoeprints, and security camera recordings. A cybercriminal, in contrast, hides their identity and has a very minimal chance of being apprehended or imprisoned.¹⁸⁴

By focusing on attacks that take advantage of human weaknesses, cybercriminals are using the new chances brought about by the fast rise in work from home and pandemic-related anxieties.¹⁸⁵ Similar to genuine developers, organised cybercriminals of today profit from new

¹⁷⁵ Ibid.

¹⁷⁶ Ibid.

¹⁷⁷ Ibid.

¹⁷⁸ Ibid.

¹⁷⁹ Ibid.

¹⁸⁰ Monteith, Scott, et al 'Increasing cybercrime since the pandemic: Concerns for psychiatry' (2021) 23 *Current psychiatry reports* 1-9.

¹⁸¹ Ibid.

¹⁸² Ibid.

¹⁸³ Ibid.

¹⁸⁴ Ibid.

¹⁸⁵ Ibid.

software and hardware advancements.¹⁸⁶ Cybercriminals may use machine learning, for instance, to create false information such as text, images, videos, and voices, or to bypass CAPTCHA¹⁸⁷.¹⁸⁸

When it comes to cybercrime, people frequently actively take part in the fraudulent scheme from which they suffer, for example, by replying to a phishing email and disclosing sensitive information.¹⁸⁹ People might not be vigilant enough, be able to spot fake messages, or pay close enough attention to halt a fraudulent operation.¹⁹⁰ Decision-making errors are a component of falling for a scam, and the spammers' objective is to set up circumstances that make judgement errors more likely.¹⁹¹ Spammers utilise persuasive techniques that have been proven successful in genuine emails to make their offers appear as though they are from trustworthy organisations or reputable companies.¹⁹²

Powerful tools are made available by technology, but they must be utilised with the proper safety precautions.¹⁹³ Human factors play a key role in cybersecurity because they have an influence on vulnerability.¹⁹⁴ These elements include individual behaviours, personality traits, online activities, and attitudes towards technology.¹⁹⁵

Recent events have shown that the South African government, the defence sector, and business are all growing more conscious of the dangers and consequences of utilising the cyber environment.¹⁹⁶ It is also obvious that dangers are evolving and growing more complex when utilised in cybercrime and warfare, particularly because cyber defence frequently needs to deal with an invisible threat.¹⁹⁷ Cyber terrorists are able to disrupt bank transactions, cut off South Africa's power supply, and conduct crimes to fund their physical activities.¹⁹⁸ Internet use by

¹⁸⁶ Ibid.

¹⁸⁷ A computer programme or system designed to differentiate between human and automated input, often as a defence against spam and computerised data extraction from websites.

¹⁸⁸ Monteith op cit note 180 at 25.

¹⁸⁹ Ibid.

¹⁹⁰ Ibid.

¹⁹¹ Ibid.

¹⁹² Ibid.

¹⁹³ Ibid.

¹⁹⁴ Ibid.

¹⁹⁵ Ibid.

¹⁹⁶ M Grobler, J.J van Vuuren, J Zaaiman 'Preparing South Africa for cybercrime and cyber defense' (2013) 11(7) *Journal of Systemics, Cybernetics and Informatics* 32-41.

¹⁹⁷ Ibid.

¹⁹⁸ Ibid.

organised crime is rising as a way of communication and generating income.¹⁹⁹ It is submitted that Cybersecurity is an important consideration as it defends against threats to the nation's economy, infrastructure, and sensitive data. In addition, in order for a country to be stable, resilient, and prosperous, it is crucial that systems are put in place in order to uphold public trust.

iii. *Digital literacy*

Digital literacy is "the ability to understand and use information in multiple formats from a wide variety of sources when it is presented via computers"—and, more specifically, through the internet.²⁰⁰ Although this definition served as a good place to start, digital texts and practices have grown increasingly intricate.²⁰¹ One illustration of how varied and different digital practices are the emergence of mobile media, particularly in poor countries.²⁰²

Technology development has produced intelligent tools and multipurpose gadgets that have transformed cultures in the Information Age.²⁰³ These technologies have affected people and society in both positive and harmful ways.²⁰⁴ On the one hand, better and more inclusive services are provided to the public thanks to the use of technology and the Internet, which has enhanced communication, brought information to people's fingertips, and increased applications and research.²⁰⁵

However, how the innovations are used in a society is a challenge because of individual disparities in ability and digital competency.²⁰⁶ For instance, a person from an industrialised country with a higher per capita level will be better positioned to benefit from these advancements than someone from a developing country with a lower per capita level that is less industrialised.²⁰⁷ To properly employ Information Communication Technology (ICT) developments for the

¹⁹⁹ Ibid.

²⁰⁰ Luci Pangrazio, et al 'What is digital literacy? A comparative review of publications across three language contexts' (2020) 17(6) *E-learning and Digital Media* 442-459.

²⁰¹ Ibid.

²⁰² Ibid.

²⁰³ P Reddy, B Sharma, K Chaudhary 'Digital literacy: a review in the South Pacific' (2022) 34 *Journal of Computing in Higher Education* 83–108.

²⁰⁴ Ibid.

²⁰⁵ Ibid.

²⁰⁶ Ibid.

²⁰⁷ Ibid.

numerous benefits connected with them, the developing nations lack the structural and technical capabilities.²⁰⁸

Each and every citizen has to be literate in this information age. Literacy has traditionally been seen as the capacity for reading and writing.²⁰⁹ With the development of technology, the idea of literacy has changed; in other words, the Internet and new technologies have altered the definition of literacy.²¹⁰ With the advent of new digital channels, literacy has evolved into digital literacy.²¹¹

The inability to use mobile banking services is caused by high levels of illiteracy.²¹² Various individuals are unable to completely comprehend and interpret mobile banking services due to high rates of illiteracy in various regions of Africa, especially in rural areas.²¹³ Literate persons are more likely to understand the concept of mobile banking and to be familiar with at least basic mobile banking services.²¹⁴

Communities that employ contemporary technologies that allow regular people to be agents of their own empowerment experience transformational change, given that they recognise the value in technology to support and supplement their daily activities.²¹⁵ Participation in and understanding of the contribution made by technology depends on having the ability to harness and utilise digital technologies.²¹⁶ The digital divide has increasingly been characterised as a skills gap in recent years. These days, it's essential to have digital abilities since everything will soon be "digital by default."²¹⁷

²⁰⁸ Ibid.

²⁰⁹ Ibid.

²¹⁰ Ibid.

²¹¹ Ibid.

²¹² R Pankomera, D Van Greunen 'Challenges, benefits, and adoption dynamics of mobile banking at the base of the pyramid (BOP) in Africa: A systematic review' (2018) 21 *The African Journal of Information and Communication* 21-49.

²¹³ Ibid.

²¹⁴ Ibid.

²¹⁵ AJ Mwanza, JM Molepo and N Goduka 'Addressing the digital literacy gap in the use of information and communication technologies in the dissemination of indigenous knowledge: a rural community experience' (2018) 17(2) *Indilinga African Journal of Indigenous Knowledge Systems* 154.

²¹⁶ Ibid.

²¹⁷ Ibid.

iv. *Customer Experience*

Although the adoption rates of digital channels have not been as great as anticipated, there are clear cost advantages for clients when choosing to conduct banking through a digital channel.²¹⁸ "Trust" is the primary element that impacts customers.²¹⁹ Trust is a significant obstacle to the use of digital financial channels.²²⁰ The readiness of one person to accept that another person or institution will accomplish a certain duty, such as banks safely conducting transactions at the request of their clients, might be a vague definition of trust.²²¹ "Resistance to change" is the second factor that influences customers' decisions.²²² Technology mistrust can contribute to reluctance to change. There are certain people who, given the culture of the country, won't alter their behaviours.²²³

"Customer service" is the third factor that affects customers' decision.²²⁴ Customer service, it was found, was a key factor in why clients choose to do their banking at a branch. When a branch staff is available, they can provide each customer the level of individualised attention they need to complete their transaction.²²⁵ The level of service at a branch is another aspect of trust.²²⁶ A bank's capacity to cross-sell its digital channels was directly related to the calibre of the service offered at a branch.²²⁷ Customers are compelled to utilise face-to-face banking channels because digital channels that are difficult to use or lack safety features lose the factor of confidence.²²⁸

However, a variety of circumstances might affect a customer's decision to bank online. Each will be covered in brief below. "Satisfaction" is the primary element influencing a customer's decision to bank electronically.²²⁹ Convenience would be the most noticeable advantage.²³⁰ The

²¹⁸ R Shanton, M Hattingh 'Baby Boomers' intention to use branch or digital banking channels in South Africa: An exploratory study' (2020) *SAICSIT '20: Conference of the South African Institute of Computer Scientists and Information Technologists* 74-84.

²¹⁹ *Ibid.*

²²⁰ *Ibid.*

²²¹ *Ibid.*

²²² *Ibid.*

²²³ *Ibid.*

²²⁴ *Ibid.*

²²⁵ *Ibid.*

²²⁶ *Ibid.*

²²⁷ *Ibid.*

²²⁸ *Ibid.*

²²⁹ *Ibid.*

²³⁰ *Ibid.*

digital channels may be viewed at any time, from any location, and are not restricted to working hours or days.²³¹ This has to do with the degree of control a consumer has over their bank accounts and transactional operations.²³² Clients may now create a new account, make payments to other bank clients, and buy airtime without leaving their house thanks to this and the improvements in functionality offered via digital channels.²³³

"Usefulness" is the second aspect that affects a customer's decision to bank electronically.²³⁴ One of the most important factors in behaviour with relation to technology acceptance is perceived to be the value that a digital channel delivers to a client.²³⁵ Customers are more likely to accept digital banking when it comes to technology since the factor of perceived utility emphasises how much the technology may enhance their capacity to complete a task.²³⁶ According to this notion, perceived usefulness and performance expectations are tightly related.²³⁷ Speed of the digital channel to complete a transaction was considered as a deciding factor, while not being directly connected.²³⁸ Customers' likelihood of sticking around on a digital channel decreases the longer they must wait for secure pages to load.²³⁹

"Trust and security" is the third aspect that affects customers' decision to bank online.²⁴⁰ The most important factor for the adoption of digital banking channels is considered to be trust.²⁴¹ If clients do not trust technology, there is a low chance that they will use it.²⁴² Through security, internet and mobile banking channels foster trust. The development of solutions that upheld data privacy and awareness is essential for persuasion during adoption.²⁴³

²³¹ Ibid.

²³² Ibid.

²³³ Ibid.

²³⁴ Ibid.

²³⁵ Ibid.

²³⁶ Ibid.

²³⁷ Ibid.

²³⁸ Ibid.

²³⁹ Ibid.

²⁴⁰ Ibid.

²⁴¹ Ibid.

²⁴² Ibid.

²⁴³ Ibid.

"Reliability" is the fourth aspect which influences a customer's decision to bank electronically.²⁴⁴ Reliability functions as a linked aspect inside the trust factor.²⁴⁵ Utilising online or mobile banking systems is influenced by a platform's ability to fulfil its job without error, which helps build user confidence in digital channels.²⁴⁶

"Social influence" is the fifth aspect which influences customers' decisions to bank online.²⁴⁷ The adoption of a digital banking channel, especially online banking, was thought to be significantly influenced by a person's social contacts.²⁴⁸ When choosing to embrace and utilise a digital channel for banking, an individual's friends, family, and peers have a significant impact.²⁴⁹

Customers desire both the ease of the Internet and the individualised service of a branch.²⁵⁰ Offering exceptional customer service is sometimes what separates a decent bank from an amazing one.²⁵¹ The fact that just a third of Internet users are happy with the service they are receiving is concerning.²⁵²

Since internet banking includes money and individuals are used to doing financial transactions in person, people from underdeveloped nations are typically more cautious while utilising these services.²⁵³ If a provider is regarded as reliable and able to minimise privacy risk and its impacts, people are said to be more willing to use online banking services.²⁵⁴ In this way, banks ought to attempt to assemble the confidence in their clients by expanding and enforcing banks' security.²⁵⁵

²⁴⁴ Ibid.

²⁴⁵ Ibid.

²⁴⁶ Ibid.

²⁴⁷ Ibid.

²⁴⁸ Ibid.

²⁴⁹ Ibid.

²⁵⁰ AM Singh 'Trends in South African internet banking' (2004) 56(3) *Aslib Proceedings: Emerald Group Publishing Limited*.

²⁵¹ Ibid.

²⁵² Ibid.

²⁵³ M Selvanathan, et al 'The Impact of Cost, Customer Experience, Ease of Use, and Trust towards Adoption of Online Banking' (2016) 9(11) *International Business Research* 235-241.

²⁵⁴ Ibid.

²⁵⁵ Ibid.

Banks urgently need to boost the loyalty of their clients in light of the heightened competition in the global banking sector.²⁵⁶ Customer loyalty is influenced by the customer experience.²⁵⁷ Customer experience influences consumers' cognitive and emotional well-being to like the product or brand in a way that removes or minimises the behavioural effect of switching products.²⁵⁸ Customers develop loyalty as a result of their interactions with service providers at different contact points.²⁵⁹ As a result, many businesses today are putting an emphasis on giving their clients long-lasting experiences and deeper customer involvement.²⁶⁰ Businesses cannot risk losing the high customer retention and increased sales that come with loyalty.²⁶¹

It is submitted that a positive online experience has a financial impact on banking businesses, thus bank service providers must concentrate on improving the digital experience of their goods and services.

6. THE FUTURE OF BANKING IN THE DIGITAL ERA

As observed from above, there are a lot of commendable initiatives and developments implemented by banks to keep up with the evolving technological development. However, the realization of these initiatives will not fully achieve their purpose if they do not reach the intended target market.²⁶² Despite the valuable information provided by most financial institutions on their websites and banking applications, accessibility remains a challenge for individuals residing in informal settlements and remote areas with insufficient Internet connectivity.²⁶³ Consequently, it is imperative for the government and other relevant stakeholders to collaborate in bringing financial services and products offered by institutions closer to those in informal settlements and rural regions, facilitating internet access to prevent the necessity for these individuals to travel to

²⁵⁶ Forbes Makudza 'Augmenting customer loyalty through customer experience management in the banking industry' (2020) 28(3) *Journal of Asian Business and Economic Studies* 191-203.

²⁵⁷ Ibid.

²⁵⁸ Ibid.

²⁵⁹ Ibid.

²⁶⁰ Ibid.

²⁶¹ Ibid.

²⁶² H Chitimira, PT Magau op cit note 91 at 15.

²⁶³ Ibid.

urban areas for essential financial services and products. This effort will contribute significantly to shaping the future of banking in the digital era.

Technology-based channels that are more affordable and effective are posing a threat to the conventional distribution channels' structure and design.²⁶⁴ As a result, banks' future interactions with customers will differ from their prior interactions with them.²⁶⁵ Emerging rivals that are not traditional are also becoming increasingly prominent.²⁶⁶ They put technology at the centre of their business operations and defy conventional thought in the banking industry.²⁶⁷

Legacy systems make it difficult for Fintech companies to provide quick and effective client-facing interfaces, which frees them up to take on more risk.²⁶⁸ Due to Fintechs' capacity to provide profitable goods on their own, banks and Fintech businesses have discovered that their ability to collaborate is limited by the incompatibility of traditional systems.²⁶⁹ South African banks adhere to strict worldwide capital norms and are subject to extensive regulation by the SARB.²⁷⁰ Despite the SARB's role in propelling this, banks have over time adopted a relatively conservative and risk-averse approach to banking, which has become ingrained in the industry.²⁷¹ Financial institutions in South Africa are obligated to make sure they take a measured approach, considering both the industry's strict legal and regulatory standards as well as the socioeconomic background of the country.²⁷²

7. CONCLUSION

The digitalisation of South Africa's banking industry has resulted in transformational developments, altering the way financial services are accessed and delivered. The benefits of digitalisation, such as enhanced accessibility, cost reduction, and financial inclusion, have significantly improved the banking experience for individuals and businesses. Mobile banking

²⁶⁴ Johan Coetzee op cit note 106 at 17.

²⁶⁵ Ibid.

²⁶⁶ Ibid.

²⁶⁷ Ibid.

²⁶⁸ Johan Coetzee op cit note 118 at 18.

²⁶⁹ Ibid.

²⁷⁰ Ibid.

²⁷¹ Ibid.

²⁷² Ibid.

apps, internet platforms, and digital payment solutions have offered users across the country simplicity, efficiency, and expanded financial options.

However, the digital transformation of the financial system raises issues that must be addressed. The digital divide, characterised by disparities in internet access, digital literacy, and smartphone penetration, remains a significant obstacle to achieving widespread adoption of digital banking services. Efforts should be made to overcome this gap through infrastructure development, digital literacy programs, and boosting device and connectivity affordability.

Furthermore, digital banking service security and client data protection are key considerations. To develop trust and confidence in digital transactions, banks must prioritize building rigorous security measures, integrating encryption technology, and educating clients about online safety.

To remain competitive, the banking business has been digitalized, allowing banks to offer tailored services, harness data analytics, and work with fintech start-ups. Banks should continue to embrace fresh innovations like artificial intelligence and blockchain to achieve additional advances in financial services.

Lastly, the digital transformation of South Africa's banking industry has cleared the path for a more inclusive, accessible, and efficient financial environment. Addressing the digital gap, maintaining security and privacy, and stimulating continued innovation, on the other hand, are critical for realizing the benefits of digitalisation and ensuring that all persons and communities may participate in and benefit from a digitally transformed banking sector. By doing so, South Africa can enhance its financial infrastructure, stimulate economic growth, and empower its people in the digital era.

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