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The global COVID-19 impact on the financial services industry in South Africa

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Background: In December 2019, coronavirus disease 2019 (COVID-19) was detected in Wuhan, China. This virus quickly spread throughout different regions and was declared a pandemic late in January 2020. The spread of the virus has affected every aspect of human life as previously known.

Objectives: This study aimed to investigate the impact of COVID-19 on the adoption of fintechs in South Africa.

Method: Eighteen financial services experts were interviewed using semi-structured interviews to collect data, and ATLAS.ti 28 was used to analyse the data.

Results: During the lockdowns, the industry expedited the implementation of fintech to sustain business operations. Online shopping, mobile payments, and digital banking experienced a surge in adoption as individuals steered clear of crowded stores and bank branches. The upswing in online shopping influenced the embrace of mobile payments and contactless cashless transactions. Moreover, with limited access to physical bank branches, there was a marked shift towards digital banking.

Conclusion: Fintech companies have introduced consumers to alternative financial technologies. The pandemic has accelerated the adoption of fintech as an essential means of transacting and banking. One limitation of the study is its timing because it was conducted during and immediately after the pandemic, therefore, it does not account for the long-term effects of the pandemic on the financial services industry. Consequently, future research could explore the impact of COVID-19 on the industry 5-10 years after the pandemic to evaluate any significant influence on the industry's transformation.

Contribution: This study will assist the financial services industry to better respond to catastrophes such as COVID-19.

Keywords: fintechs; financial technologies; impact; COVID-19; adoption; lockdown; convenience; accelerate adoption.

Introduction

In recent years, numerous industries have undergone substantial transformational changes driven by organisations' efforts to enhance their services and products. The financial services industry, for example, has embraced technology to improve financial products and services, leading to the emergence of financial technologies (fintechs; Cele & Mlitwa 2024a). This industry comprises companies involved in various financial activities such as retail banking, commercial lending, insurance, credit cards, mortgage banking, brokerage, investment advisory and asset management (Hatzkis, Nair & Pinedo 2010). Despite the significant investments made by financial institutions in fintechs and the potential benefits they offer to customers, their adoption remains low, particularly in developing countries such as South Africa (Sharma, Singh & Sharma 2020). It is not unusual for individuals to be hesitant about embracing new technologies. Often, they need some form of motivation to facilitate adoption. This might involve incentives or, in some cases, a compelling event such as a catastrophe such as the coronavirus disease 2019 (COVID-19) pandemic that necessitates the adoption of new technologies for survival.

Coronavirus disease 2019 is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which was first detected in Wuhan, China's Hubei Province, in December 2019. The virus is primarily spread through direct contact with an infected person. It can cause flu-like symptoms and common colds (e.g. fever, cough, fatigue and body aches) with

an incubation period of 2–14 days and more severe health effects on infected individuals (Zhai et al. 2020). In mid-January 2020, the spread of the virus escalated rapidly. On 30 January 2020, the World Health Organization (WHO) declared COVID-19 a global emergency (Kabadayi, O'Connor & Tuzovic 2020), and on 11 March 2020, the WHO officially declared the COVID-19 outbreak to be a global pandemic (Zhang, Hu & Ji 2020). By mid-March 2020, the virus had spread to more than 140 countries, and 168 826 cases and 6503 deaths worldwide had been confirmed (Zhai et al. 2020), and by 31 January 2021, the confirmed cases had exponentially increased to 101 917 147, including 2 205 515 deaths (WHO 2021). This pandemic has had a detrimental effect on global healthcare systems, with a ripple effect on every aspect of human life as we know it (Nicola et al. 2020). By the end of July 2022, there were more than 562 600 000 cases confirmed and more than 6.3 m deaths (WHO 2022). Babuna et al. (2020) likened the outlook of the pandemic to that of a global recession.

In response to this health crisis, in 2020, governments were forced to impose national lockdowns to restrict people's movements and maintain social distancing to manage the spread of the virus. These measures assisted in containing the virus. However, they had a detrimental effect on people's livelihoods as scores of people lost their jobs, some died and some became ill. Industries worldwide had to find ways to mitigate the negative effects of the pandemic. The financial services industry was no exception as it grappled with the resources to find ways that could allow business continuity.

The global impact of the pandemic has demonstrated the potential for catastrophic economic harm. Businesses were compelled to rely heavily on automated and technology-driven processes in response to these challenges. The sudden changes brought about by the pandemic made the use of technology a necessity (Dwolatzky & Harris 2020). As a result of social distancing, remote work and travel restrictions, there was a surge in demand for digital business approaches. This shift accelerated the adoption of technology-enabled businesses with minimal human-to-human contact, such as mobile or Internet banking and contactless payment methods (Sandeep et al. 2020).

The COVID-19 pandemic has been extensively documented for its impact on various industries, economies and livelihoods. However, there remains a need to investigate how this global crisis has influenced the adoption of financial technologies, particularly in developing countries like South Africa where people may be hesitant to embrace new technologies because of challenges such as inadequate access to data, cost associated with it and unreliable network connectivity. Considering these developments, the aim of this article was to investigate the impact of the COVID-19 pandemic on the adoption of financial technologies in South Africa. The main research question is whether the COVID-19 pandemic impacted the adoption of fintechs in South Africa.

Literature review

Impact of COVID-19 on business

Even though humankind has faced natural catastrophes such as floods, earthquakes, civil wars and other large-scale catastrophes, the global financial crisis and the great depression, the COVID-19 pandemic was somehow unique (Kells 2020; Sandeep et al. 2020). Its effect differs from the effects of other diseases, such as severe acute respiratory syndrome (SARS) or Middle East respiratory syndrome (MERS). These epidemics' effect was largely limited to specific regions of the world, while the novel coronavirus, COVID-19, affects people from all walks of life globally (Brem, Viardot & Nylund 2021).

Its (COVID-19 pandemic) emergence in December 2019 (Zhai et al. 2020) disrupted the world economy and led to governments all over the world calling for social distancing (Nicola et al. 2020) and encouraging a contactless business approach to manage the spread of the virus (Wójcik & Ioannou 2020). These new ways will have a permanent impact on the workplace's nature and how work is done in the future (Dwolatzky & Harris 2020).

Coronavirus disease 2019 sent global economic shock waves affecting the stock markets, consumer confidence and global supply chains in just a few weeks of the outbreak (Kabadayi et al. 2020; Nicola et al. 2020). Compared to previous pandemics, the rapid spread of the virus resulted in stricter responses like a complete lockdown of countries, a ban on travel and public gatherings, and the closure of industries and schools (Babuna et al. 2020). These responses, in turn, caused a decline in the need for commodities and manufactured products. On the contrary, a surge in demand for medical supplies and food was observed (partly because of panic buying and stockpiling of food products; Nicola et al. 2020). These challenges are just the tip of the iceberg, as all indicators have illustrated that the COVID-19 crisis will have significant long-term consequences on industries worldwide, more than what has been witnessed already. Some of the effects include companies running into financial trouble after using all their reserves and depleting their safety margins. The macroeconomic impacts and risks, including the competing dangers of inflation and deflation, posed a serious threat to economic growth (Kells 2020).

The impact of COVID-19 on the financial services industry is provided in the following sections.

Financial markets

Financial markets react to natural catastrophes such as earthquakes, floods and volcanos (Goodell 2020). It was not a surprise that the negative economic impacts of COVID-19 were reflected in financial markets which experienced significant volatility (Kells 2020). The severe economic effects put excessive pressure on the already fragile international financial markets (Szalay 2020). The COVID-19 pandemic exacerbated fears about high rates of defaults on loan

repayments and the prospect of connecting risks such as market risk and settlement risk that are normally not interrelated and thereby increase financial risks (Kells 2020).

Insurance

Generally, during a crisis or catastrophe, people usually seek remission from destruction from the insurance industry. However, the COVID-19 pandemic brought serious challenges to this industry, as the pandemic inundated many institutions and weakened some insurance companies financially. The challenges were because of the rapid increase in infection cases greater than the recovery of infected people (Babuna et al. 2020). Therefore, there was a sharp rise in insurance claims.

Banking

Large pandemics have a significantly negative effect on the banking industry in developing countries. The increase in the number of infected individuals in the population results in the banking industry's downfall and puts pressure on the banks to use their reserves (Lagoarde-Segot & Leoni 2013). Banks are usually vulnerable during times of economic downturns because of the likelihood of nonperforming loans and the possibility in the extreme case of bank runs (Goodell 2020). As the population grappled with the pandemic's effects, microfinance institutions and banks felt the pressure in their lending to the poor (Skoufias 2003).

Responses to COVID-19

The COVID-19 catastrophe and its global economic destruction impact illustrated that natural catastrophe could cause economic damage on an unprecedented scale (Goodell 2020). At the height of the pandemic in year 2020, world economies saw the sharpest drop in gross domestic product (GDP) in living memory (Kells 2020).

Overcoming the challenges of COVID-19, including an extended period of social distancing and a contactless or minimum contact business approach, led to greater dependence on automated solutions in different industries. For example, online shopping saw a significant boost because of mobile technologies. Restrictions on travel in many countries meant that millions of workers work from home with computer technologies such as mobile learning, mobile banking and web-based communications (Microsoft Teams, Zoom, WebEx, Skype meetings; Sandeep et al. 2020). These interventions enabled institutions like banks to continue operating (Kells 2020). The pandemic taught industries new ways that they could use to sustain organisational resilience in the face of pandemics and build operating models, such as alternative work arrangements (Dwolatzky & Harris 2020).

The main strategy to manage the spread of COVID-19 was restricting people's movement and confining them to their homes (Cohen & Kupferschmidt 2020). Therefore, organisations were required to develop business models that would allow employees to work remotely. Several response strategies evolved to assist organisations survive the business onslaught from the pandemic. Most of these strategies are technology-driven, and they have resulted in the development of new solutions to future problems. These technologies had a fundamental role in responding to the health emergencies of the COVID-19 pandemic. Some of these technologies had an essential role in maintaining industries and functioning during the lockdown of many economies (Brem et al. 2021). Even though some of the technological interventions have existed for a very long time, even before the emergence of COVID-19, their usefulness and application have been vastly accelerated considering this crisis. The rapid adoption of digital technology was one of the most important responses to the impact of COVID-19. It was highly driven by necessity as the world has been forced into rapid transformation (Dwolatzky & Harris 2020). Baret et al. (2020) argue that the COVID-19 pandemic acted as a catalyst to accelerate the move to digitally based business models.

The 'new normal' with people confined to their homes with limited movement forced people to change their behaviours. Some technologies that allowed life to continue despite the disruption are discussed in the following sections.

Online shopping

The COVID-19 pandemic changed people's lives in many ways, including how they shop (Grashuis, Skevas & Segovia 2020). The containment measures like limitations on mobility, social distancing, isolation and self-quarantine to prevent the spread of COVID-19 meant that people should change the way they purchase groceries and other items (Hassen, El Bilali & Allahyari 2020). As the virus spread and more households stayed home, the number of new COVID-19 cases influenced consumers to rethink their shopping habits. In areas with high infection rates, more people stayed at home and started to investigate alternative shopping methods to shopping inside the stores (Grashuis et al. 2020) to reduce the necessity to leave their homes and thus curb the spread of the virus (Guo et al. 2020). Consequently, consumer buying patterns shifted to online shopping (Grashuis et al. 2020), and e-commerce platforms became the new 'food basket' for consumers (Guo et al. 2020).

Even though e-commerce has been steadily rising since the late 1990s, the COVID-19 pandemic has played the biggest role in consumers accepting online shopping as a viable option (Yeganeh 2021). Since the emergence of COVID-19, more consumers have made their first online purchases (Naeem 2020). The rise in online shopping saw online shopping platforms like Amazon's sales grow significantly (Yeganeh 2021). Many businesses, including traditional (brick and mortar) businesses, started investigating ways to introduce e-commerce in their strategies to sell their products and services to consumers (Yeganeh 2021).

E-commerce, which allows consumers to maintain social distance through online activities, emerged as a critical force in ensuring that people could still do shopping without

exposing themselves to infection during the outbreak (Guo et al. 2020). Online shopping provides several other benefits, including providing a convenient shopping venue that eliminates customers' risk of getting infected in crowded physical stores (Hao et al. 2020). Customers can also use online platforms to gather information on good prices or price deals offered by retailers, allowing customers to make comparisons across retailers and products in terms of costs; this comparison information assists customers make optimal purchasing decisions (Naeem 2020).

The transition to online shopping by consumers is expected to continue beyond the COVID-19 crisis. More consumers are expected to embrace online shopping as an alternative to physical store shopping (Rosenbaum & Russell-Bennett 2020). This trend is likely to extend to other services like booking reservations and appointments online to minimise health risks associated with waiting in enclosed spaces with others and as a means of convenience (Guo et al. 2020; Rosenbaum & Russell-Bennett 2020). As people switched to online shopping, this move also impacted the adoption of fintechs.

Cashless payment

When COVID-19 began to spread exponentially worldwide, different institutions like central banks started investigating precautionary measures to prevent the rapid spread of virus and protect their businesses. For instance, the People's Bank of China began disinfecting banknotes in the most virus-affected regions. The Federal Reserve started quarantining money, and the Reserve Bank of India advised people to use electronic payments (Filipiak 2020) because physical cash handling could expedite the spread of virus (Sreelakshmi & Sangeetha 2020). As the virus continued to spread incessantly, more businesses adopted low-contact or contactless payment (Ardity 2020), and the transition to a cashless society started gaining momentum (Filipiak 2020).

Banks and retailers globally began raising the limits to their contactless transactions to allow consumers to use these platforms to make higher-value payments. For instance, at the beginning of April 2020, in the United Kingdom, the per transaction limit was increased from £30 to £45, and the leading retailers in Australia increased their contactless limit to $200, all in a bid to reduce the need for pin entry on the point-of-sale devices (Buchel 2020). More large and small retailers also started using quick response (QR) code-based payment methods, where consumers use an app on their mobile phone to scan a QR code of the merchant. Adopting a QR code ensures that no physical contact is needed and has high customer convenience (Buchel 2020).

Thus, adopting cashless payments accelerated digital payments (Ardity 2020; Luthi 2020) by replacing face-to-face services (Fujiki 2021). Although the transition from cash to cashless payments has been on the rise before the emergence of COVID-19, nothing accelerated this move quite like the COVID-19 pandemic (Yocco 2020). The number of cashless businesses (more than 95% of transactions come from debit or credit cards) increased at rates never seen before (Luthi 2020). According to Luthi (2020), cashless businesses increased from 8% at the beginning of March 2020 to 31% in April 2020. The impracticality of cash transactions brought about by COVID-19 has transformed a technology that was once seen as a medium of convenience into a necessity (Girling 2020; Sreelakshmi & Sangeetha 2020). Lee (2020) posits that the COVID-19 pandemic significantly reduced cash usage because of the associated risk of contamination. As familiarity with mobile payments increases, their use could also increase beyond the COVID-19 crisis (Brem et al. 2021). This transition will be driven by younger generations who enjoy the convenience of contactless payments (Lee 2020) and financially literate consumers, as most financially literate consumers prefer to use non-face-to-face financial services and cashless payments following the COVID-19 pandemic (Fujiki 2021). Other beneficiaries of the surge in demand for contactless payment were fintech companies offering contactless payment platforms (Lee 2020). They benefited through more swipe fees, which Luthi (2020) believes may ultimately lead to higher service prices.

If various stakeholders continue to move towards greater interoperability, there will be an increase in payment offerings that effectively and efficiently answer customer needs. This transition will also address the concerns around minimising contact during the COVID-19 pandemic and beyond. Subsequently, customer experience will improve, the adoption of digital payments will increase, and there will be a decline in cash dependency and contact (Buchel 2020). Though the contactless and cashless measures were originally intended to improve public hygiene during the COVID-19 outbreak, they will become permanent post-COVID-19 as they would have proven their worth to the consumers through their benefits such as increased efficiency (Yeganeh 2021) and improvement in financial access worldwide (Buchel 2020).

Online banking

The COVID-19 pandemic shaped the way people worldwide live their daily lives (Lake 2020). Social distancing and calls to stay at home to avoid unnecessary interactions meant rethinking how people live their lives, including managing their finances (Lake 2020). Consumers were made to consider online banking – Internet-based banking where banking services are offered remotely via online and telephone channels – as an alternative to branch banking (Shahabi et al. 2020).

Even though before the emergence of COVID-19, banks were encouraging their customers to start using online banking services (Lake 2020) and in some regions, online services had already become an integral part of retail banking (Deloitte 2020), the emergence of COVID-19 further amplified the need for online banking and caused a decline in traditional

banking (Ul Haq & Awan 2020), and it resulted in a substantial rise in online banking (Yeganeh 2021). Many banks' customers switched to digital or electronic banking as a part of social distancing against COVID-19 restrictions (Baldwin & Di Mauro 2020; Wójcik & Ioannou 2020). Furthermore, banks' closures because of the precautionary national shutdowns in several countries and several banks' employees becoming infected meant consumers could not access the branches as they normally would and therefore had to start using online banking (Shahabi et al. 2020). Global reports exhibit that the existence of traditional branches has long been questioned even before the emergence of COVID-19, as the number of branches per 100 000 people had already dramatically declined (Shahabi et al. 2020).

By the end of 2020, the use of online banking had surged by 50% since the beginning of the year (Lake 2020). This transition was amplified by consumers' fears of becoming infected by the virus at the branches (Sreelakshmi & Sangeetha 2020). These events may result in more traditional banks reducing their branch activities and instead focusing on digital operations (Yeganeh 2021), a trend that is likely to continue even post-COVID-19 (Deloitte 2020). As more consumers switch to online banking, banks' branches will lose their worth, and there may be no need for branch banking (Yeganeh 2021).

Research methods and design

Research methodology details the methods and procedures used to collect and analyse data for the research (Saunders, Lewis & Thornhill 2019). It provides credence to the methods used to gather research and analyse data (Ade Bilau, Witt & Lill 2018). An inductive approach was used, where common themes and relationships were sought after enough data had been collected to develop theories and explain discovered patterns. Furthermore, a qualitative method was used for this study in which semi-structured interviews were used to collect data. The qualitative method was used because of its ability to allow the researcher to study variables in their natural environment (Astalin 2013) and to provide rich data (Leung 2015).

The research employed qualitative methods, focusing on gathering non-quantitative information. This approach enabled the researcher to gather insights from participants in their natural settings, resulting in comprehensive data collection. Qualitative research also supported the development of theories based on the words and meanings derived from smaller samples. It allowed for the creation of a detailed narrative description of the phenomenon under study, capturing the thoughts, feelings and interpretations of the individuals involved. The flexibility of this approach, guided by data, facilitated a thorough exploration of meaning.

Instrument

In this study, the researchers collected primary data to obtain accurate answers to the research question. Researchers conducted interviews with 18 industry experts using semi-structured interview techniques. Semi-structured interviews were chosen because they allowed for openness and the generation of new ideas during the interviews based on the interviewees' responses. Open-ended questions were also used to facilitate discussions with the interviewees (Appendix 1).

Data collection

The researchers used purposive non-probability sampling to select participants who matched the characteristics of the population of interest. The study involved interviewing industry experts from regulatory bodies, fintech companies and traditional financial institutions (banks). Each participant was chosen for their specific role in the financial services industry, providing the researchers with different insights. The interviews were conducted via Microsoft Teams, with each interview lasting 30 minutes.

Validity and reliability

To ensure the validity of the data collected, the researchers established five critical aspects of trustworthiness: credibility, dependability, confirmability, transferability and authenticity:

- Credibility: Interviews were conducted at different times and in various settings.
- Dependability: An external audit was used to demonstrate adherence to standards.
- Confirmability: Data collection, analysis and interpretation were meticulously documented.
- Transferability: A comprehensive report detailing the data collection process was created.
- Authenticity: The participants were informed that their consent was required for the interviews to proceed. The researchers also built a positive relationship with the participants to encourage their active participation.

Data analysis

The interviews were recorded and transcribed for further data analysis. The researchers used ATLAS.ti 24 to effectively organise and group the data based on similar themes and ideas. The researchers used thematic analysis to analyse the data, resulting in a comprehensive and detailed depiction of the findings.

Ethical considerations

Before commencing data collection, ethical clearance was obtained from the scientific review committee and ethics committee of the University of South Africa (ethics clearance reference number: 2021_SBL_DBL_016_FA).

Results

Demographics

A total of 18 financial services industry experts consisting of fintech, bank and regulatory experts were interviewed. Six of these experts were fintech companies' executives,

eight were incumbent banks' executives and four were executives from regulatory. Of the 18 experts interviewed, 3 were female. The industry experience of the experts interviewed ranged from 3 to 35 years. Their combined industry experience was 274 years. The industry experts interviewed included four regulatory experts with industry experience of 10 (Male), 3 (Male), 14 (Male) and 19 (Female) years; eight incumbent experts with industry experience of 12 (Male), 13 (Male), 35 (Male), 11 (Female), 5 (Male), 9 (Male), 11 (Female) and 25 (Male) years; and six fintech experts with industry experience of 7 (Male), 10 (Male), 35 (Male), 17 (Male), 3 (Male) and 35 (Male) years. (Cele & Mlitwa 2024b).

Impact of COVID-19

Industry experts interviewed agreed that the COVID-19 pandemic affected the financial services industry significantly.

Industry expert (IE) 3 argued:

> 'It's changed everything for good.' (IE3, male, 35 years experience)

These changes were both positive and negative.

IE9 argued:

> 'We will look at this pandemic and say, what were the negatives about it. But we will recognise there are lots of positives.' (IE8, male, 25 years experience)

IE3 continued:

> 'As much as the pandemic has been bad, it has helped industries transform quicker.' (IE3, male, 35 years experience)

In agreement, IE4 contended:

> 'It presented many challenges, but it also given us many opportunities.' (IE4, female, 11 years experience)

> 'Lots of industries have benefited by reinventing themselves to support and grow business.' (IE3, male, 35 years experience)

The changes forced the industry to investigate different approaches and different business models.

IE6 argued:

> 'Business continuity was a big thing for us. Being able to operate away from the office, being able to serve our customers remotely. So, it improved our capability in that regard.' (IE6, male, 9 years experience)

IE7 added:

> 'The whole business has been disrupted and we must rethink many things. We must rethink many processes. We had to find the most optimal way to deliver products and services.' (IE7, female, 11 years experience)

The pandemic forced financial services institutions to launch products that were in the pipeline and could have taken them a longer period to test and launch.

TABLE 1: Impact of COVID-19 on the financial services industry.

Impact of COVID-19
New opportunities
The pandemic accelerated the transformation of many industries.
It accelerated digital adoption and the adoption of fintechs.
It redefined the role of the branch.

COVID-19, coronavirus disease 2019.

IE9 posited:

> 'I think maybe this last couple of years with COVID-19 has shown us how quickly things can change.' (IE9, male, 25 years experience)

IE2 argued:

> 'It allowed us to accelerate strategies that we had on the shelves like digital adoption. We had those strategies, but we just never accelerated them. COVID-19 allowed us to do that.' (IE2, male, 13 years experience)

IE7 agreed:

> '[*T*]he impact of COVID-19, particularly around payments which is, in fact, what financial services is. What we expected to happen four or five years from now has already happened or is happening today.' (IE7, female, 11 years experience)

Regulatory expert (RE) 3 added:

> 'One of the other biggest impacts was the removal of cheques out of the system after many decades of existence, maybe even more than 100 years.' (RE3, male, 14 years experience)

The opportunities brought by the COVID-19 pandemic are tabulated in Table 1.

The pandemic accelerated the transformation of many industries

The pandemic accelerated the transformation of the financial services industry. During the height of the pandemic, the banks realised that customers do not need to visit the branches for tasks such as collecting their bank cards and other transactions. Therefore, they started forming partnerships with other industries like the retail and courier industry, for example, partnerships with courier services like DSV, whereby DSV delivers the new bank cards to the customers instead of them coming to the branch to collect the cards. Even though this collaboration existed before the emergence of the COVID-19 epidemic, when people could not go to the branches because of the epidemic, this collaboration was amplified. The banks also formed partnerships with retail outlets like Pick 'n Pay. This partnership enabled customers to collect their new bank cards at Pick 'n Pay supermarkets.

IE2 posited:

> 'It forced us to think about other partnerships like with Pick n Pay … You can get your card at Pick n Pay.' (IE2, male, 13 years experience)

Accelerated the adoption of fintech

Fintech expert (FE) 6 argued:

> 'COVID-19 has changed the landscape.' (FE6, male, 35 years experience)

'The fintech development, the use of technology in the way businesses deliver services. I think that's one of the great positives.' (IE9, male, 25 years experience)

When people were confined to their homes, it meant they had to start using online platforms for activities such as shopping and banking.

FE3 posited:

'It [*the COVID-19 pandemic*] accelerated the adoption of seeing the internet as a mechanism to sell products effectively.' (FE3, male, 35 years experience)

People started adopting online services like online shopping. The move to online shopping then acted as a precursor for mobile payments.

RE1 agreed:

'The pandemic has accelerated and kind of pushed the impetus for digitalisation for digital payments, whether it's digital identity, verification, e-commerce, online retailers, online payments, and online marketplaces.' (RE1, male, 10 years experience)

IE5 argued:

'Social distancing forced us to start transacting digitally, and companies all around the world were forced to become digital companies.' (IE5, male, 5 years experience)

IE6 agreed:

'We have had to prioritise contactless solutions.' (IE6, male, 9 years experience)

In support, IE7 added:

'We started prioritising things like contactless and digital payment capabilities.' (IE7, female, 11 years experience)

'The amount of growth that we saw in internet banking and the mobile banking app was phenomenal … COVID-19 only served to accelerate.' (IE4, female, 11 years experience)

The pandemic did not only result in a surge in mobile payments but also created an impetus towards the adoption of digital banking. When people could not go to the physical branches, they were forced to adopt digital banking.

IE3 posited:

'Online is taking the dramatic step, digital capabilities dramatically improved.' (IE3, male, 35 years experience)

FE4 argued:

'Customers don't want to go into physical branches and fintechs operate in the digital space and there has been an opportunity for a lot of fintechs.' (FE4, male, 17 years experience)

Therefore, FE5 added:

'There's a lot more electronic payments or tap-and-go sort of things that have been adopted.' (FE5, male, 3 years experience)

IE4 continued:

'We really did see an acceleration of the number of people that were adopting digital banking and starting to do their banking online … We saw more of our clients adopting some of the more innovative solutions that we offered. If you think about a virtual card as an example. Because many clients were purchasing online, they started trying those sorts of services out and we have seen growth.' (IE4, female, 11 years experience)

IE4 continued:

'I think COVID-19 simply accelerated that.' (IE4, female, 11 years experience)

IE7 reiterated:

'COVID-19 has fast-tracked adoption of fintech.' (IE7, female, 11 years experience)

In tandem, RE2 posited that:

'COVID-19 is going to accelerate the fintech at a greater pace than it was going to naturally evolve when there was no COVID-19.' (RE2, male, 3 years experience)

IE9 argued:

'People want to have the contactless financial services … COVID-19 pushed that as well. It accelerated the pace at which the shift from physical channels to digital channels has taken place.' (IE9, male, 25 years experience)

FE2 also agreed:

'We have seen increased digital or digital adoption as a result of COVID-19.' (FE2, male, 10 years experience)

FE3 argued:

'In South Africa, there has not been a real adoption of online capabilities until COVID-19. It's only now that we kind of seeing the spiking growth.' (FE3, male, 35 years experience)

In support, FE6 added:

'Our growth in the last two years (2021 and 2022) is tremendous … Every month more people are using fintechs.' (FE6, male, 35 years experience)

In conclusion, RE3 added:

'It (the pandemic) forced a greater reliance on digital payments and electronic payments.' (RE3, male, 14 years experience)

After the pandemic, more people switched to fintechs as posited by IE4:

'We had seen an increasing number of clients, uh, showing preference to bank on our digital channels. I mean, the amount of growth that we saw in internet banking and the mobile banking app was phenomenal.' (IE4, female, 11 years experience)

Redefined the role of the branch

Before the emergence of this epidemic, the banks were over-reliant on their branches to deliver services. However, the emergence of the COVID-19 pandemic pushed them to think about alternative ways to deliver their services.

IE4 argued:

> 'COVID-19 brought some challenges in terms of how we managed our physical infrastructure, keeping clients and staff safe.' (IE4, female, 11 years experience)

IE4 added:

> 'We see a change in terms of what clients would be coming to do at the branch because there are some things that they would be able to do themselves. We see more and more clients doing that. If you think about getting a statement, you no longer need to go to a branch to get a statement, you can view that yourself on a digital platform. So, we see that clients would go to the branch for something that is a little bit more complex.' (IE4, female, 11 years experience)

To this end, IE2 contended:

> 'It allowed us to think about what are the things that are pushing customers to go to the branch.' (IE2, male, 13 years experience)

IE7 argued:

> 'It forced us to change much quicker than maybe we thought to bring forward some of the things that were on the back burner that maybe we were planning to do two years from now.' (IE7, female, 11 years experience)

The pandemic, therefore, showed that there are services that the customers do not need to go to the branch for.

Discussion

The aim of this study was to investigate the impact of the COVID-19 pandemic on the adoption of fintech in South Africa. The results illustrate that the emergence of the pandemic created opportunities that had a positive impact on the adoption of fintechs.

The study illustrated that during lockdowns, people had to find ways to carry on with their lives. Even though online shopping was already available before the pandemic, its adoption increased when people could not leave their homes. The success of online shopping also impacted the financial services industry. As more people started shopping online, they also began using mobile payments to make their purchases. Thus, this led to a faster adoption of fintechs. The research by Candy et al. (2022) aligns with these findings. They discovered that the COVID-19 pandemic restricted activities outside the home, creating a favourable opportunity for fintech to promote the adoption of technology-based financial services. The prolonged social restrictions have resulted in more people using innovative technology for everyday transactions, which has become a major driver of growth in financial technology during the pandemic.

During the pandemic, people began using more contactless payment methods like QR code scanning and tap-and-pay to avoid physical contact and reduce the risk of virus transmission. With restrictions in place, individuals could not go to physical banks, leading to a surge in digital banking adoption. This is in line with the findings of Shahabi et al. (2020) that as the virus spread rapidly and social distancing measures were implemented, consumers were compelled to switch to online banking instead of branch banking. Financial institutions were also pushed to launch fintech solutions more quickly than they would have in normal circumstances. This shift away from physical branches prompted them to explore alternative platforms for consumer interaction and service delivery. The study results suggest that the COVID-19 pandemic has hastened the introduction and uptake of many financial technologies. These findings are consistent with Ramasamy's (2020) argument that the pandemic compelled the financial services industry to adopt unconventional methods to deliver services.

Conclusion

The Fourth Industrial Revolution brought technology into businesses and people's lives. However, many people were sceptical about transitioning to technology-enabled systems. For example, in developing countries, particularly South Africa, there was hesitation to adopt financial technologies. Nevertheless, the COVID-19 pandemic has changed this by compelling people to embrace technology. Consequently, the pandemic has accelerated the adoption of fintech.

This study has illustrated that during the pandemic, people turned to financial technologies like digital banking to avoid visiting bank branches. They also adopted cashless payment methods such as scan and pay to minimise the handling of cash and promote contactless payments. The research also found that as people started shopping online, they began using mobile payments for their purchases.

The research also revealed that the pandemic prompted banks to explore alternative ways to provide services to their customers. They partnered with courier and retail companies to deliver bank cards and facilitate transactions outside of traditional branches. Additionally, banks allowed customers to download their bank statements at ATMs.

Despite the pandemic expediting the adoption of fintech, several challenges hindered seamless adoption. In their study, Cele and Mlitwa (2024a) identified key determinants of fintech adoption, including facilitating conditions, perceived trust, perceived costs, self-efficacy and perceived risk. Similarly, factors such as insufficient facilitating conditions, distrust in digital platforms, apprehensions about using fintech, associated risks and costs, high data costs and poor connectivity discouraged adoption. Additionally, many

people did not trust digital banking because of the perceived risks of cyber fraud and did not believe in the ability to use fintechs.

The study contributed to the body of knowledge about fintechs by demonstrating that the COVID-19 pandemic has accelerated the adoption of fintechs in South Africa. The study also highlighted the significant role of fintechs in achieving Sustainable Development Goal 9, which focuses on industry, innovation and infrastructure. It emphasises that technological progress is crucial for addressing economic and environmental challenges.

This study could be expanded to examine how the COVID-19 pandemic has affected other industries and countries. Additionally, there is potential for future research to evaluate the impact of COVID-19 on the fintech industry 5–10 years after the pandemic, to determine any lasting influence on its transformation. Another potential area for future research involves comparing the adoption rates of young consumers with those of older consumers.

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Competing interests

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Authors' contributions

S.K.C. conceptualised the idea, developed the structure and key issues of the article, identified research articles that resonated with the study, did the fieldwork and data analysis, and wrote the manuscript. N.B.W.M. edited the manuscript and acquired funds for page fees. S.K.C. handled the submission of the article.

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Data availability

The data that support the findings of this study are available on request from the corresponding author, S.K.C. The data are not publicly available because of their containing information that could compromise the privacy of research participants and their institutions.

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Appendix 1 starts on the next page→

Appendix 1

Interview questions

RQ: Has the COVID-19 epidemic impacted the adoption of fintechs in South Africa?

Sub-questions:

1. At the beginning of 2020, the world was affected by the COVID-19 pandemic, which has affected every aspect of our lives. Tell me about the impact of the COVID-19 pandemic on the financial services industry.
   a. Tell me about the relationship between COVID-19 and fintech if there is any.
2. How has the pandemic affected your organisation?
3. How is your organisation responding to the COVID-19 pandemic?
4. Do you think things will go back to the old normal once the pandemic is over?