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THE ROLE OF FINANCIAL TECHNOLOGIES IN FINANCIAL INCLUSION IN SOUTH AFRICA

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Abstract: South Africa has a history of exclusion and exploitation of the majority by the minority. The post-apartheid dispensation has involved redress and ensuring inclusion of those historically excluded. The financial services sector is critical for inclusion, at least as far as banking services are concerned. Technology has played a significant role in the transformation of the financial services sector, ensuring that the previously excluded or underserved consumers receive banking services. It is in this context that the paper examines the role of financial technologies (fintechs) in financial inclusion in South Africa, drawing from qualitative research that was carried out by interviewing 18 industry experts and 17 financial services customers. The findings confirm that fintechs enhance financial inclusion by creating access to financial services for previously excluded people and to small businesses, among other advantages brought about by and through fintechs. The paper argues that fintechs play a significant role in expanding the reach of financial services and contribute to the achievement of some sustainable development goals. Therefore, policies and initiatives aimed at broadening access to financial services should leverage through fintechs.

Keywords: Financial inclusion, financial technologies, access, cost reduction

JEL: N27, O16, O33

INTRODUCTION

Although financial inclusion is crucial for economic growth, experts are yet to agree on a universally accepted definition (Baber, 2019). Ozili (2018)

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defines it as providing affordable financial services to those living in poverty for sustainable integration into the formal economy, while Deb & Agrawal (2017) describe it as the cost-effective delivery of diverse financial services to the entire population. Van Hove & Dubus (2019) view it as access to appropriate, affordable, and easily accessible financial services.

Financial inclusion is undoubtedly important in all societies, but more important for societies that have a history of exclusion. South Africa since the dawn of democracy has attempted inclusion given its history of inequalities and exclusion. It is in this context that the financial services sector is relevant because it plays a role in financial inclusion which is a critical aspect of economic inclusion. Economic inclusion is about ensuring that as many people as feasible are included in mainstream economic activities. We have investigated the impact of financial technologies on financial inclusion in South Africa, and we find that financial technologies play a significant role towards financial inclusion in South Africa.

BACKGROUND

To start with, the financial services industry in South Africa has undergone three distinct phases of development due to historical events (Mckenzie *et al.*, 2015). These phases are shaped by global economic growth, democracy in South Africa, and the rise of fintechs. From 1850 to 1914, international trade increased from $1 billion to $88 billion, and South Africa rose to the occasion by producing wool and discovering minerals (Jones, 1994). This laid the foundation for South Africa's financial system, with twenty-eight banks operating by the early 1830s. The dominance of the imperial banks continued until the 1970s, with Standard Bank, Barclays Bank DC & O, the Netherlands Bank, and Volkskas dominating the banking sector (Mckenzie *et al.*, 2015; Verhoef, 2011). As time progressed, five major banks dominated the banking industry in the early 1980s: First National Bank (FNB), Standard Bank, Nedcor, Bankorp, and Volkskas. In 1991, Allied Bank, Trust Bank, United Bank, and Volkskas Bank merged to create the Amalgamated Bank of South Africa (ABSA) (Verhoef, 2011).

As far as the phase pertaining to democracy in South Africa is concerned, with the advent of democracy, the financial services industry in South Africa underwent significant changes to expand its services to a considerable number of South Africans who had previously been excluded from formal financial provision. As the changes emerged, the number of banks decreased sharply

between 2001 and 2002 (Hawkins, 2004). However, significant changes were observed in 2001 when Capitec Bank was established. In subsequent years it quickly became the fastest-growing bank in South Africa, disrupting the industry with innovative banking models that targeted the lower end of the market. By 2018, Capitec had surpassed the 'traditional big four banks' and became the largest bank in South Africa, with about 9 million customers. According to Businesstech (2023), Capitec's customer base had increased to 20 million by the first quarter of 2023.

Lastly, advancements in technology, such as social media, mobile phones, artificial intelligence, big data, and the Internet of Things have caused a digital revolution. This change has transformed business models and value propositions in various industries, including financial services (Mungai & Bayat, 2018). Fintechs have emerged as a result, significantly enhancing the industry by improving distribution speed and access to capital (Hutton *et al.*, 2019). In South Africa, mobile phone usage grew significantly in the early 2000s, which led to the introduction of online banking options by major banks (Brown *et al.*, 2003). ABSA was the first to introduce internet banking in South Africa, followed by Nedbank, Standard Bank, First National Bank, and Mercantile Bank (Singh, 2004). The banks introduced various services, such as e-procurement, foreign exchange, share trading, international banking services, and encrypted email statements (Camarate & Brinckmann, 2019; Singh, 2004).

Fintechs as Driver of Financial Inclusion

Although financial inclusion plays a crucial role in empowering the global economy, it has not received the attention it deserves from the financial industry, regulators, and policymakers (Salampasis & Mention, 2018). The significance of financial inclusion in reducing poverty cannot be overstated, particularly for those living in poverty (N'dri & Kakinaka, 2020). Nonetheless, fintech is revolutionising the financial services industry, breaking down traditional barriers and challenging the dominance of banks and non-bank financial institutions that have failed to provide adequate financial services to underprivileged populations, especially in developing countries (N'dri & Kakinaka, 2020). For example, a few decades ago in South Africa, a large percentage of the population was unbanked. However, the emergence of fintech has increased in recent years, increasing the number of banked individuals (Lawack, 2013). This presents a unique opportunity to bridge the gap between

unbanked and under-banked societies, paving the way for a global digital economy and creating long-term societal transformation for the financially excluded and underserved. Ultimately, inclusive economic growth can bring about positive change on a global scale (Salampasis & Mention, 2018).

Types of Fintechs and their Role in Financial Inclusion

Fintechs encompass different categories, including digital banks, online lending, peer-to-peer lending, cryptocurrency, mobile payments, and computer-generated investment advice, each with distinct roles (Najaf *et al.*, 2022). The most used financial technology globally is mobile money (de Luna *et al.*, 2019), and it's has been hailed as a solution to the challenges associated with limited access to traditional financial institutions. It has also been identified as a tool for promoting financial inclusivity on a global scale, particularly in developing countries where a significant portion of the population lacks access to conventional banking services due to inadequate infrastructure. Mobile money has effectively promoted individual financial inclusion, particularly in rural communities (Jack & Suri, 2011; Munyegera & Matsumoto, 2016). By employing simple Short Messaging Service (SMS) technology, users can transfer money at a low cost, even over long distances. Moreover, mobile money contributes to achieving 11 of the 17 United Nations Sustainable Development Goals (SDGs), helping reduce inequality by empowering underserved populations and enabling households to improve their financial position (N'dri & Kakinaka, 2020).

One of the ways that mobile money is promoting financial inclusion is by providing financial services institutions with an opportunity to expand into emerging markets where 2 billion individuals and 200 million small businesses have limited access to savings and credit. Osafo-Kwaako *et al.* (2018) argue that to achieve success in promoting financial inclusion, it is necessary to develop products that go beyond payments and significantly enhance people's financial well-being.

Secondly, there are digital banks. The banking industry has experienced a notable shift with the advent of digital banking. This type of fintech provides customers with the option of doing various banking activities, such as account opening, bill payments, and bank transfers digitally. This means they can carry out their banking activities digitally from the comfort of their homes (Mukherjee & Nath, 2003; Sathye, 2008). Digital banks have revolutionised the way customers bank, as noted by Buckley *et al.* (2016), granting them the

freedom to bank at their convenience from any place. This shift has eradicated the limitations of traditional banking methods and provided unprecedented access and convenience to customers.

Thirdly, there is sharing economy. Yu & Shen (2019) define the sharing economy in financial services as digital platform-based activities, such as online lending and peer-to-peer (P2P) funding (crowdfunding or crowdlending). This type of fintech allows groups of individuals to finance other individuals or businesses who may not qualify for bank loans. It promotes economic democracy and inclusion for lenders and borrowers, significantly contributing to the growth of the economy (Yu & Shen, 2019). Crowdfunding has become an innovative way for entrepreneurs to secure funds without relying on venture capital or traditional financial institutions (Mollick, 2014), while online lending provides intelligent, personalised, low-cost financial services that promote financial inclusion (van den Broek & van Veenstra, 2018).

Fourthly, there is blockchain technology. Esmaeilian *et al.* (2020) describe blockchain technology as a distributed ledger that facilitates data sharing through a peer-to-peer network. Petrov (2020) notes that the financial sector, which often faces cumbersome, inefficient, and costly processes, will gain significantly from the potential of blockchain to revolutionise the industry. The technology offers the potential to streamline financial products, automate manual document processing, and promote financial inclusion. Cennamo *et al.* (2020) further suggest that blockchain technology can significantly reduce transaction costs, enabling more individuals to participate in financial transactions at lower costs.

Fifthly, there are more than 22,932 cryptocurrencies globally, with a total market capitalisation of $ 1.1 trillion (Coryanne & Adams, 2023). These digital currencies rely on blockchain technology to record transactions, allowing for secure transfers without the involvement of a financial institution (Cennamo *et al.*, 2020; Chatham & Duncan, 2020; Nakamoto, 2008). The potential of virtual currencies to revolutionise the financial services industry is vast, and Ripple is a prime example (Hashemi Joo *et al.*, 2019). Its use in the global remittances market is expected to revolutionise global money transfer services and play a significant role in financial inclusion. This can be credited to Ripple's remarkable speed of settling transactions in just three to five seconds (Ripple, 2020). Acting as a link between fiat currencies during cross-border transactions, it offers a faster and more cost-effective alternative to traditional platforms (Mason, 2021).

Then there is artificial intelligence and machine learning. Fintech platforms have revolutionised the lending industry by adopting innovative approaches to evaluate a consumer's creditworthiness. Unlike traditional financial institutions that rely solely on a customer's credit score derived from explicit information to make lending decisions, fintech platforms analyse a customer's personal information such as social media activity, age, education, and other social behavioural activities (Jagtiani & Lemieux, 2018). Artificial intelligence, machine learning and big data analytics are used to gather this soft information. As a result, customers with little or no credit history who may not be eligible for bank loans can benefit from fintech lending processes (Nguyen *et al.*, 2021).

With regard to big data, the financial services industry is undergoing a noteworthy transformation propelled by the widespread use of big and alternative data (Chen *et al.*, 2017). Big data has empowered the financial services sector to create customer-centric services, enhance financial management, improve operational processes, and devise new financial products, ushering in financial inclusion (Edu, 2022). It has notably made a significant contribution in less developed nations where this technology has enabled the establishing of an inclusive financial system (Jagtiani & Lemieux, 2018).

Big data enables precise financial decisions based on factual data and statistics, eliminating personal biases or intuition. This level of accuracy in financial services allows more people to access services who may have been discriminated against based on biases associated with traditional financial services (Das, 2019; Miskam *et al.*, 2019). By collecting vast amounts of data from various platforms, such as social media and online searches, the industry can study people's behaviour in making financial decisions rather than solely relying on credit scores used by traditional institutions.

Lastly, the financial services industry has incorporated robots to streamline processes, cut down on costs, increase convenience, and broaden the provision of financial services fees (Jagtiani & Lemieux, 2018). Robots are used in wealth investments, for instance, to make it possible for more people to invest by reducing management fees. While traditional financial service providers usually charge 1 percent or more on managed assets, robots-driven fintechs charge between 0.15 and 0.3 percent. Additionally, robots act as chatbots to assist clients, allowing more clients to be assisted in a shorter period of time. This task is traditionally performed by brokers and financial advisors at insurance companies, which may take more time (Magnuson, 2018). The use of robots

also removes space and time constraints by providing services that can be accessed at any time and from anywhere, thus expanding financial services to more people, regardless of how remote their location is (Seasongood, 2016).

METHODOLOGICAL APPROACH

An inductive approach was applied because there was not enough data available to create a new theory about the phenomenon being investigated which is relatively new in South Africa. Relevant data was collected and common themes and relationships identified among their observations, using a bottom-up approach to develop explanations and theories to explain those patterns. Interviews with industry experts from incumbent banks, fintech organisations, financial services regulators, and financial services customers were conducted. These interviews explored various dimensions of the financial services industry, including the participants' everyday lives, views, and experiences. The phenomenology research strategy was used to understand the shared experiences of different participants and gain a deeper understanding of the phenomena being studied.

Purposive non-probability sampling was used to select individuals from a chosen group of incumbent financial institutions, fintech organisations, regulatory institutions and customers. This allowed the option to choose cases that could answer research questions and meet research objectives. Eighteen industry experts and seventeen customers were interviewed. Atlas.ti helped in the qualitative aspects of the study and thematic analysis was used to effectively group and organise similar themes and ideas.

FINANCIAL INCLUSION

The interviewees confirmed that fintechs enhance financial inclusion in South Africa. Finctech Expert 2 (FE2) posited that "*the biggest role fintechs or digital banks play is around creating access. Financial inclusion and access for mass customers are massively important to us; it will always be why we started the (fintech) bank*". Incumbent Expert 5 (IE5) added: *"fintech opens the industry. It gives more people in the country more access to financial products like more access to loans"*, and *"once we can reach more people, we are able to encourage economic trade. We are able to encourage participation and financial inclusion. We can alleviate poverty"* (IE7). In support, Regulatory Expert (RE3) claimed: *"A lot of customers have been brought on board that would otherwise have not been able to get easy access to the national payment system"*. For example: *"people who*

stay in rural areas who could not access financial services, can access it now because of fintechs" (FE5). This shows that *"different fintechs can help and assist the banks in increasing financial inclusion for all the people of South Africa"* (FE6). IE7 contended: "*Remember, if people can participate in the economy, people can trade much easier, better, and cheaper. And then it does positively affect the economy because it speaks directly to things like financial inclusion".*

IE7 elaborated: *"In South Africa, we have got a problem with underbanked people. It is believed that fifteen million people in South Africa are bankable. Therefore, it is important to encourage greater participation. We need to open more flows with which payments can flow. If you think about the township economy or rural areas, all we must do is open those floors... There is a big industry project now called rapid payments, and effectively, it wants to digitise low-value, high-frequency payments because it is believed that in South Africa, nine out of ten payments are made in cash. Moreover, the average amount spent is, I think, under one hundred and fifty rands (R150). So, that is significant because it says that people want to trade. Moreover, what we know is that people do hold debit cards even more than one but they do not use them. You know, when you are at the township, you can see that there is a speed point, but when you ask to use it, the owner says, no, do not use it. Pay me in cash. Those are the things we are talking about when we talk about disruption and economic participation in the under-banked, et cetera, that we need to solve".*

In agreement, RE2 argued: "*They (fintech) are going to areas where the incumbents cannot normally go because the incumbents normally perceive that area margin-wise to be very thin. So, these guys can go there and take advantage of that market and revolutionise that market".* RE2 added: *"I mean, some of these fintechs, for example, can lend to SMEs. They always say SMEs are the backbone of every economy, and if you want a great economy, you must grow the SME sector. Moreover, we know in South Africa how SMEs struggle to get financing from traditional banks, but these fintechs are willing to lend to them.,,,You see these SMEs growing so much because of the finance they get from these fintechs. So, they are driving growth in the financial sector, which is also trickling down to the real sector of the economy".* In addition, IE8 argued that *"they (fintechs) effectively facilitate money flow and facilitate granting of credit, which then stimulates the economy".* RE3 added: *"there are 100,000 new merchants that have access to the payment systems and accept card payments that otherwise would not have taken place with the banks".* The preceding arguments corroborate that fintechs benefit consumers, other industry participants and the industry by expanding

the industry reach, thus benefiting economic growth. This also supports Senyo and Osabutey (2020) and Magnuson (2018) assertions that fintechs open new markets by extending financial services to places previously excluded by traditional financial institutions or underserved customers. RE1 emphasised the importance of inclusion and asserted that "*by including more people in the economy, you are strengthening financial stability because you diversify and broaden the base. It has got potential benefits from a tax and social development perspectives, obviously massive impacts".* IE9 reiterated: *"I think it (fintech) creates new opportunities, and similarly, I think for banks, and the whole financial sector, the fact that we will be able to use all these new technologies, everything from artificial intelligence to blockchain and cloud, etc., really gives us new opportunities in terms of how we provide services to our customers".*

According to the interviews, fintechs enhance financial inclusion through the following:

- New growth opportunities
- Increase in choices for the consumers
- Reduction of costs
- Customisation of financial services
- Provision of convenient financial services

New growth opportunities: According to industry experts, fintechs offer the financial services industry and the entire economy new opportunities for economic growth. FE2 argued*: "Fintechs will provide more growth opportunities because their focus is around speed to market and innovation at the product level".* FE3 added: "*The economic opportunity is that they play a role in enabling an economy. They can enable the economy by providing services that may not necessarily be available in the traditional sense".* IE7 contended: *"If people can participate in the economy, people can trade much easier, better, and cheaper. And then it does have a positive effect on the economy itself".* RE2 added: *"If you want a great economy, you must grow the SME sector. We know in South Africa how SMEs struggle to get financing from traditional banks, but these fintechs are willing to lend to them, and you see these SMEs growing so much because of the finance they get from these fintechs".*

These arguments strengthen the argument that fintechs play an essential role in the growth of the economy. RE2 argued: *We have got fintech companies that are manufacturing point-of-sale (POS) devices that are being used by spaza shops (a term for an informal shop often operated from a private house) and people in the salons. Soon or later, you will find that these POS devices are everywhere, and*

we become a cashless society". In doing so, the fintechs are helping these SMEs to grow, which has a ripple effect on the economy's growth.

Increase in choices for consumers: RE3 and FE2 argued that increased competition and the variety of choices brought by fintechs are significant for the industry's growth. FE2 argued that *"in my mind, there is nothing more powerful than the choice for people. Multiple choice when trying to decide, I think, is massively important. So, fintechs add one more aspect of choice to the end-user".* RE3 elaborated: *"If I look back over the decades that I have been involved in payments in South Africa. In about the mid-nineties or even the early nineties, payments were 100 percent in a bank's gain. So, only banks were involved in payments. They controlled the value chain end to end. There were about two or three bureau services that did debit orders. However, they were associated with the big insurance companies…If we look at where we are now. Thirty-two banks are involved in the payment system. Moreover, there are three designated clearing participants that are not banks that are in the clearing system. Moreover, there are a few more that are in the pipeline that I am aware of. There are over one hundred what we call system operators; those are infrastructure providers in the payment system, and over three hundred payment service providers and TPPP (third-party payment providers). So, if you add those together, you are talking about over four hundred companies that are now playing or involved in the payments value chain… they bring many services, many infrastructures, and much support to the national payment system that banks would not always have been able to do themselves. So that is why many fintechs have been able to find pieces in the value chain where there is a gap or there is an underserviced environment that they have been able to follow very effectively".*

Reduction of costs: FE3 posited: *"Through fintech, you can eliminate a lot of your operational cost".* Therefore, in tandem, IE5 and FE1 contended that *"because of their (fintechs) cost structure, they can then charge less price and attract more customers".* FE3 added that *"our (fintech's) price point for customers in terms of being able to transact is very much lower".* FE6 supplemented: *"Our (fintech's) offering to customers is much more than what the banks can do, e.g., our fee structures… they (incumbents) will not get there because they are too expensive. They (incumbents) cannot make these payments for that same fee we are asking our customers".* Thanks to financial technologies, financial institutions can lower their operational expenses, enabling them to provide more cost-effective financial services and products to customers. As a result, more customers get access to financial services and products.

Customisation of financial services: According to FE4, *"Through technology, you can offer better services and propositions to customers"*. RE2 agreed: *"They (fintechs) are offering them (consumers) personalised products"*. RE2 added: *"We are already seeing the revolution in the insurance sector. We are seeing that data of people generated is being used to assess risk. People are no longer doing the risk assessment based on just looking at age and gender. People are being risk-rated based on their behaviour"*.

Provision of convenient financial services: *"Fintechs have simplified banking"* (IE2). They have broken down the barriers of space and time in banking, allowing people to bank from anywhere and anytime (Lin *et al.*, 2018). People can now choose whether to visit a bank branch or access services on their phones or other electronic devices, thanks to fintechs (Buckley *et al.*, 2016). IE7 concurred: *"If you think about it, you had to go to the bank branch for everything then (in the past). We must justify having a human and branches now because fintechs are there, and typically, financial services are delivered through your handset. The need to do many things at the branch is no longer there". "Fintechs provide convenience. There was a point when I had to go to a branch to do these things, but now I can do it here. It is at my fingertips. Yes, there was a point where I had to carry cards in my wallet. However, now they are digital"* (IE6). RE2 agreed and said, "*the bottom line is fintechs are offering consumers convenience…they are enhancing the customer experience".* This corroborated the findings of Stoica, Mehdian and Sargu (2015) that fintechs improve customer convenience by making transactions easier and faster. As a result, according to FE2: *"people have realised the amount of value and convenience digital adds to their lives"* and are motivated to use fintechs. Fintechs have expanded the reach of financial services to everywhere, including the most remote areas which has greatly enhanced financial inclusion.

In order to examine the assumptions that guided the investigation and look into the relationships between variables, the study also used the structural equation modeling (SEM) method. To test model hypotheses and conduct a path analysis, Amos 27 was utilised. Assessing the suggested model's goodness of fit to the data is a crucial stage in the structural equation modeling process (Shi, Lee and Mayday-Olivares, 2019). The most used model fit measures for SEM ($\chi 2/df$) =1.54 (the ratio of chi-square to degrees of freedom), p =0.00, CFI =0.885 (0.900) (Comparative Fit Index), TLI =0.900 (Tucker–Lewis Index), and RMSEA =0.068 (Root Mean Square Error of Approximation) were used to test the goodness of fit of the model. A CFI ranging from 0.611

to 0.972 (Shi, Lee and Maydeu-Olivares, 2019) and an RMSEA less or equal to 0.06 are considered acceptable (Hu and Bentler, 1999).

Table 1: Model fit of Fintech Adoption in South Africa

Parameters	*Overall fit of model value*	*Rounded off to the nearest hundredth*
χ2/df	1.540	1.540
CFI	0.885	0.900
TLI	0.845	0.900
RMSEA	0.068	0.068

Given the importance of fintechs in expanding access to financial services, it is important to quantify the extent to which there is fintech adoption in South Africa and which factors affect fintech adoption. The path coefficient, or connection strength, represents the dependent variable's response to a unit change in an explanatory variable. A positive coefficient indicates that a unit increase in one variable causes a direct increase in the activity measure of the explanatory variable, whereas a negative coefficient indicates that an increase in one variable causes a direct, proportional decrease in the activity measure of an explanatory variable (McIntosh and Gonzalez-Lima, 1994). Figure 1 depicts the SEM of the factors as well as the path coefficients. This model indicates that perceived risk and perceived cost reduce fintech adoption while self-efficacy, ubiquity, perceived trust and facilitating conditions increase fintech adoption (as expected). These factors, therefore, should be taken into account when access to financial services is to be increased because they influence fintech adoption.

THE ROLE OF FINTECHS

The study was aimed at investigating the role of fintechs in financial inclusion. The findings showed that fintechs play an essential role in expanding the delivery of financial services to previously excluded individuals. Essentially, fintechs extend financial services to new markets and boost economic development. This is very important for impoverished individuals because inclusive financial service is essential in fighting poverty. It empowers individuals to save and borrow, which is essential for active participation in the economy. In some instances, fintechs have been helping small businesses by lending them money to expand their operations. This, in turn, allows these businesses to employ more people and, therefore, play a key role in economic growth.

The findings showed that because of their innovative and adaptive business models, fintechs can lend money to small businesses that usually find it hard or impossible to borrow from traditional financial institutions. Further, fintechs assist financial institutions in decreasing operational expenses by getting rid of the necessity for physical buildings and infrastructures like ATMs. The lowered operational costs are then transferred to consumers, providing them with more reasonably priced products and allowing more individuals to access financial services. Although this means reduced profits for financial institutions due to lower prices, it also allows them to attract more customers, resulting in increased volumes that offset the negative impact on profits. This supports Gomber *et al.* (2017) that fintechs create affordable and cost-effective technology-based business models. As a result, they can lower service and product fees.

The research indicates that the rise of fintechs has expanded the range of options for customers, enabling financial institutions to cater to their unique needs. Consequently, more consumers are inclined to engage in financial transactions. This is in line with Lenz (2016), Truong (2016), and Vasiljeva and Lukanova (2016), who argue that fintechs have altered the expectations and demands of consumers towards financial services providers. They offer innovative products and services that enhance and customise the customer experience while increasing process efficiency and transaction speed. In lending, fintech platforms use AI and big data to gather personal information about customers for lending decisions. At the same time, traditional institutions rely on credit scores and explicit/implicit information. As a result, they offer customised credit scores that reflect individual creditworthiness. This consequently result in more people accessing the financial services.

The results also show that financial institutions can respond quickly to market changes and customer needs, thanks to the flexibility provided by technology. This leads to more efficient service provision, which in turn enables them to reach more customers in a shorter time frame while also conserving resources.

The other key finding is that fintechs are enhancing convenience for customers by overcoming the traditional limitations of distance and time in financial services. Fintechs are making it possible to provide financial services even in the most remote regions where traditional banks may not be able to establish branches due to infrastructure issues. Fintechs have made it possible for consumers to access financial services at any time and from anywhere.

The findings also support the claims made by Lenz (2016), as well as Vasiljeva & Lukanova (2016), that fintechs introduce innovative business models, personalise financial products and services, and improve efficiency, accessibility, and transaction speed to provide customers with personalised experiences. As a result, fintechs create a more inclusive financial system with diverse participants.

It is important to also highlight that perceived risk and perceived cost reduce fintech adoption while self-efficacy, ubiquity, perceived trust and facilitating conditions increase fintech adoption (as expected). These factors, therefore, should be taken into account when access to financial services is to be increased because they influence fintech adoption.

CONCLUSION

The fintechs offer a variety of opportunities in the financial services industry. They can lower the costs of services and products, boost efficiency, and provide personalized offerings that improve customers' experiences. Moreover, these companies bring financial services to underserved clients and increase options for customers who want to switch to other institutions. Fintechs also offer convenience by allowing customers to access financial services on mobile devices, making the industry more innovative and competitive. These benefits lead to greater financial inclusion, allowing more people to participate in the financial services industry.

Our research adds to the understanding and application of financial services by highlighting the important contribution of fintechs in promoting financial inclusion. This knowledge can be used by policy makers and practitioners to build a more inclusive financial industry, which can play a significant part in achieving sustainable development goals like reducing poverty, addressing economic inequalities within nations, and creating inclusive societies. By promoting financial inclusivity, conditions that encourage sustainable and inclusive economic growth and shared prosperity can be stablished. Lastly, the various factors that affect fintech adoption should be taken into account when initiatives or policies aimed at increasing access to financial services are pursued.

Note

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