

The use of FinTech products and services by SMEs in an underserved community



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Background: Financial technology (FinTech), integral to any economy, transcends banking, sparking innovation and accessibility. Its global impact facilitates financial market globalisation. But, for underserved and underdeveloped communities, FinTech offers more: a path to financial inclusion and the removal of historical barriers.

Objectives: This research aims to explore the current FinTech adoption landscape and barriers to financial inclusion for small and micro enterprises (SMEs) in underserved communities like the townships of Soweto, South Africa.

Method: The study explores the pivotal role of research in advancing knowledge. Employing a pragmatic approach and a deductive reasoning framework, the study focuses on FinTech adoption challenges among SMEs in underserved communities, utilising an online survey design for data collection.

Results: Insights around FinTech adoption by Soweto SMEs are revealed, discussing challenges, trust dynamics, and operational implications. It explores the transformative role of FinTech in township economies.

Conclusion: This study explored FinTech adoption in underserved communities, emphasising tailored solutions, financial inclusion, evolving acceptance, and the need for financial education campaigns.

Contribution: This research contributes insights that can facilitate the achievement of critical mass for FinTech products and services in South African townships, fostering financial emancipation in underserved communities.

Keywords: FinTech; information services; SMEs; financial inclusion; underserved communities; township economies.

Introduction

Within the South African established banking system (Redlinghuis & Rensleigh 2010), the online financial technology (FinTech) industry is characterised by both significant benefits and potential risks, prompting regulators to seek a more distinct understanding of the landscape to strike a balance that fosters innovation without compromising stability (National Treasury 2019). The intersection of finance and technology, commonly referred to as FinTech, has witnessed rapid evolution globally, propelling financial markets to new heights in developed regions. However, in emerging markets such as South Africa, specifically the underdeveloped parts, the adoption of FinTech lags, presenting a distinctive set of challenges and opportunities (Kagan 2023; Mazambani & Mutambara 2020).

Carlin, Olafsson and Pagel (2019) highlight the pivotal role of access to information services in shaping economic activity, decision-making and overall welfare. The Information Age and the increasing integration of FinTech into consumers' lives are believed to enhance informed decision-making. Yet, quantifying the impact of online information technology (IT) adoption on the economy transcends measurement; it necessitates a nuanced examination of its effects across different generations and demographic backgrounds (Carlin et al. 2019).

In South Africa, the adoption of financial information products, FinTech innovations, and digital channels faces impediments within a market dominated by low-income consumers relying on the informal economy (Shipalana 2019). Digital products and services must cater to the unique needs of this informal economy, heavily dependent on cash transactions.

Despite efforts to achieve financial inclusion, Shipalana (2019) highlights that a significant portion of financially included adults are not effectively served through online financial products and services. Inadequate knowledge regarding financial products, services and digital channels further hampers the consumption of FinTech information services.

The FinTech information services industry offers a diverse range of products and services, potentially impacting individuals' lives without their explicit knowledge. Embracing FinTech developments can unlock opportunities for informal and small businesses, particularly in underserved communities, by enabling them to provide improved services at lower costs.

Literature review

Financial technology

Financial technology has emerged as a driving force in the modern economy, revolutionising not only the banking sector but also infiltrating into non-financial institutions. Románova and Kudinska (2016) assert that FinTech has become an intrinsic part of the economic landscape, contributing significantly to a country's gross domestic product (GDP). Beyond banking, FinTech's influence has sparked innovation and accessibility, encouraging non-financial institutions to offer diverse products and services.

The transformative impact of FinTech extends beyond national borders, facilitating the globalisation of financial markets (Au 2022). Its inception has stimulated the development and innovation of domestic enterprises, fostering competition and making capital more accessible. This evolution serves as a foundation for a dynamic and competitive financial landscape in both developed and emerging economies.

Literature suggests that financial market flaws, such as transaction costs and limited access to information (Chen & Rensleigh 2009), historically hindered marginalised groups from escaping poverty (Demir et al. 2020). However, FinTech, especially through mobile financial services, possesses the potential to reverse this trend by enhancing financial inclusion for underserved communities. The demand for FinTech is driven by technological advancements and increased consumer accessibility in sustainable, more inclusive markets (Mazambani & Mutambara 2020).

Nicoletti (2017) identifies FinTech's disruptive impact, highlighting its ability to unbundle services from traditional financial institutions, offering more innovative products, enhancing customer experience, providing competitive pricing, and catering to marginalised groups. South Africa, despite its challenges, boasts a well-regulated banking sector, fostering a conducive environment for the emergence of FinTech start-ups (EMCompass 2017; National Treasury 2019). The integration of technology and finance is expected to gain further momentum with ongoing support from innovation hubs.

FinTech inclusion in underserved communities

Financial inclusion, a multifaceted concept, undergoes a paradigm shift in its definition and measurement. Simatele and Maciko (2022) observe a historical focus on accessibility, measured by factors such as credit access and ATM distribution. However, this study adopts a contemporary perspective, aligning with Sarma's (2008) definition that considers not only ease of access but also the availability and usage of financial technologies.

Shipalana (2019) provides insights into South Africa's informal economy, revealing large, underserved communities where a substantial portion of the working-age population is seeking economic opportunities. These communities, accounting for a significant percentage of South Africa's unemployed citizens, form the focal point for financial inclusion initiatives. Technology, facilitating transactions without the constraints of distance, becomes a viable tool for achieving financial inclusion (Simatele & Maciko 2022). What is imperative is ensuring access to financial services, making them cost-effective, and preventing these communities from being bypassed by the digital evolution.

Growth and development of small and micro enterprises

The landscape expands further with the exploration of small and micro enterprises (SMEs) as catalysts for sustainable development. Small and micro enterprises are regarded as the future of developing economies globally, bearing unique challenges that demand dedicated research attention (Masocha 2019). Resource constraints pose a significant challenge for SMEs, requiring government intervention to strike a balance between support and preserving their independence (Bhorat et al. 2018).

The interplay between FinTech, financial inclusion, and SME development in South Africa reveals a complex yet transformative journey. Recognising the unique challenges within underserved communities, this article aims to explore the current landscape of FinTech adoption, barriers to financial inclusion, and the potential of SMEs to drive sustainable development. The subsequent sections delve into these dimensions, providing a comprehensive understanding of the intricate dynamics at play in South Africa's evolving economic landscape.

Research problem

While FinTech online products and services have garnered considerable attention and optimism regarding their transformative potential in the financial information services sector (Arner, Barberis & Buckley 2016), a substantial portion of the community, still reliant on cash transactions, may exhibit reluctance to integrate these technologies because of perceived constraints (National Treasury 2019).

Aims and objectives

Small and micro enterprises are a crucial contributor to the South African economy; however, they are faced with

several challenges, with limited access to finances and FinTech services being the primary concern (Bvuma & Marnewick 2020). This research aims to contribute insights that can facilitate the achievement of critical mass for FinTech products in South African townships, particularly in areas such as Soweto, fostering financial emancipation in underserved communities.

The following objectives were identified as a roadmap to achieve the aim of this study:

- Identify the current use of FinTech products and services in underserved communities
- Understand the barriers to FinTech products and services adoption in these communities
- Assist the financial services industry by providing insight into FinTech products and services for underserved communities.

Research methods and design

Research serves as the catalyst for evolving concepts, understandings, and approaches, fostering the creation and expansion of knowledge (Western Sydney University 2020). A structured research methodology becomes the compass guiding researchers through the systematic process of data collection, analysis, and interpretation, ensuring the reliability, validity, and ethicality of the study (Jones 2018; Smith 2019).

This study embraces a pragmatic approach, resonating with the idea that practical outcomes and the use of multiple research methods are essential for real-world problem-solving (Creswell 2014). Pragmatism aligns with the study's focus on understanding constraints and trust in FinTech adoption by SMEs in underserved communities, making it a suitable philosophical foundation.

Research approach

In this study, a deductive approach was adopted, rooted in the analysis of specific observations and data to develop theories. The focus is on understanding challenges faced by SMEs in FinTech adoption, making deductive reasoning appropriate for capturing nuanced insights.

A survey design, employed in this study, emerged as the preferred strategy to gather extensive data on FinTech adoption by SMEs in underserved communities. A survey (questionnaires), administered online, facilitated straightforward data collection and subsequent analysis and interpretation (Creswell 2018; Saunders, Lewis & Thornhill 2019).

Ethical considerations

Ethical clearance to conduct this study was obtained from the University of Johannesburg College of Business and Economics Research Ethics Committee (No. 2022SCiS037). This was coupled with participant anonymity, informed

consent, and citation integrity to uphold the ethical fabric of the study. The meticulous consideration of ethics underscores the commitment to research integrity (Evans et al. 2021).

Results

The culmination of methodological rigour and investigative prowess materialises in the results, a narrative that unravels the intricacies of FinTech adoption by SMEs in Soweto. This section not only presents quantitative data but also interprets the implications, providing an in-depth understanding of the challenges and opportunities within this landscape.

Demographic insights

Before delving into FinTech adoption, a snapshot of the SMEs in Soweto offers valuable context. The study focused on 265 SME owners with a diverse representation, from within the community, consisting of 44% male owners, 51% female owners, and 5% owners indicating 'other'. While generalisability is limited to Soweto, the findings can resonate with similar underserved communities.

Figure 1 shows that owners aged 18–44 years represented 70% of the respondents, followed by those aged 45–64 years at 27%. It is interesting to note that both the owners younger than 18 years and those aged 65 years and older constituted 2% each.

The languages spoken in Soweto are quite diverse, with isiZulu spoken by 24% of the respondents, followed by Sesotho (16%), Setswana (13%) and isiXhosa and Tshivenda at 11%, interesting to note that English represented only 7% with no Afrikaans-speaking respondents. The 3% other language speakers spoke Shona, Yoruba, Portuguese, Amharic, Urdu and Swahili. In terms of completed education, 40% of the respondents had completed matric, 31% had completed undergraduate studies and 7% had completed postgraduate studies.

Business operations

The following is an overview of the diverse business activities of the respondents, showcasing a wide array of products and services across various sectors:

- *Food-Related Businesses:* Approximately 21% of respondents operate food-related businesses, including street vendors, bakeries, butcheries, restaurants, and food trucks.
- *Retail and Stores:* Roughly 15% of respondents own or manage retail stores, convenience stores, general stores, or supermarkets.
- *Personal Services:* About 16% of participants provide personal services, such as salons (hair, nails, makeup), barbershops, and tailoring services.
- *Transport and Logistics:* Approximately 6% of businesses are involved in transport, taxi fleets, or logistics services.

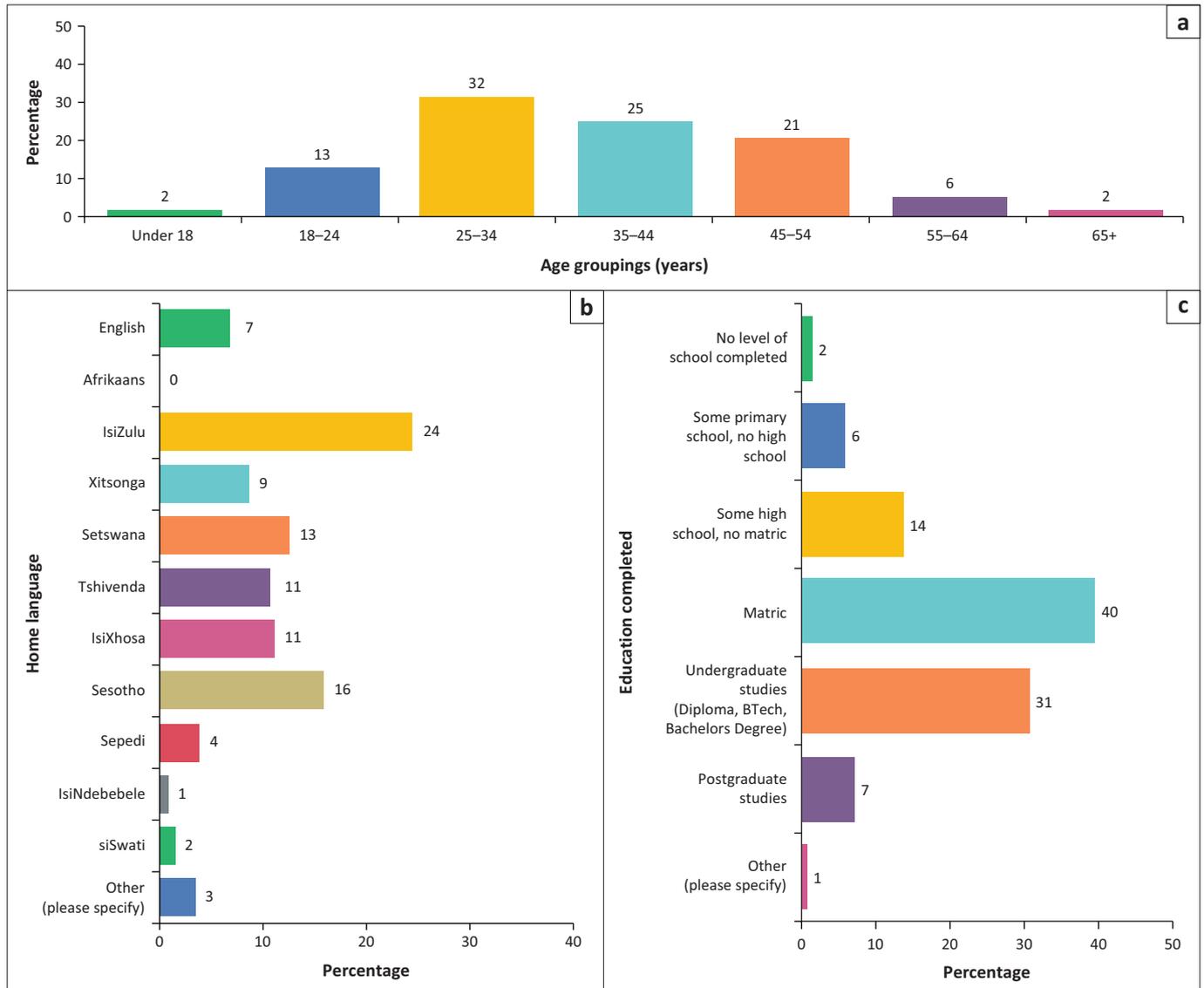


FIGURE 1: Respondents' demographics in terms of age, home language and language and education completed.

- **Educational Services:** A small percentage of respondents (around 2%) offer educational services, including tutoring, coding schools, and operating Internet cafes.
- **Childcare and Day Care Services:** A few businesses (around 1%) provide childcare and day-care services.
- **Event Planning and Entertainment:** Approximately 5% of businesses are involved in event planning, disc-jockey (DJ) services, music and entertainment, party hire, and photography.
- **Craftsmanship:** Around 5% of participants are engaged in craftsmanship, including welding, carpentry, wire craft, and woodwork.
- **Health and Beauty Services:** About 4% of businesses are related to health and beauty services like makeup artistry, nail tech, eyelash extensions, and perfume sales.
- **Clothing and Fashion:** Roughly 5% of respondents are involved in clothing and fashion, including clothing retail, alterations, and headboard manufacturing.
- **Automotive Services:** Approximately 4% of businesses offer automotive-related services, such as car washes, mechanics, and vehicle fleet operations.
- **Home Improvement:** Around 2% of respondents are involved in home improvement services, including plumbing and construction.
- **Financial Services:** A small percentage of businesses (around 1%) provide financial consultancy.
- **Technology and Internet:** About 3% of respondents operate technology and Internet-related businesses, including Internet cafes, computer schools, and content creation services.
- **Miscellaneous Services:** Miscellaneous services, such as printing, DJ services, gardening, trampoline and snack services, and personal protective equipment (PPE) sales, account for approximately 3% of businesses.
- **Alcohol and Beverages:** Businesses related to alcohol and beverages, such as taverns and bottle stores, were mentioned by about 2% of respondents.
- **Precious Metals:** A unique mention of dealing with minerals and precious metals was reported by one respondent.
- **Gift and Personalised Services:** A few businesses offer personalised services like curated gift boxes and personalised plaques.

In terms of ownership of and accessibility to digital devices, 97% of the respondents indicated having access to a cell phone, while 14% possessed a tablet, and 25% laptops or computers. Regarding banking institutions, the respondents indicated 49% using Capitec, 16% ABSA, 16% FNB, 12% Standard Bank, and 5% Nedbank and TymeBank, respectively.

Figure 2 shows the respondents' preferred method of conducting banking activities. Thirty-nine per cent indicated a preference for using cash, followed by 34% mobile banking (cellphone app). Seventeen per cent showed a preference for branch-based banking (during banking office hours), and 10% made use of online banking (computer-based).

Financial technology adoption landscape

From Table 1, showing the respondents' knowledge about FinTech products and services, 97% and 91% were 'Extremely well' or 'Very well' informed about cash transactions and ATM, respectively, while only 5% and 6% considered themselves similarly informed about Blockchain and Robotic trade. The heart of the results lies in the quantifiable insights garnered from the SMEs' responses. This table succinctly captures the prevalence and challenges of FinTech adoption.

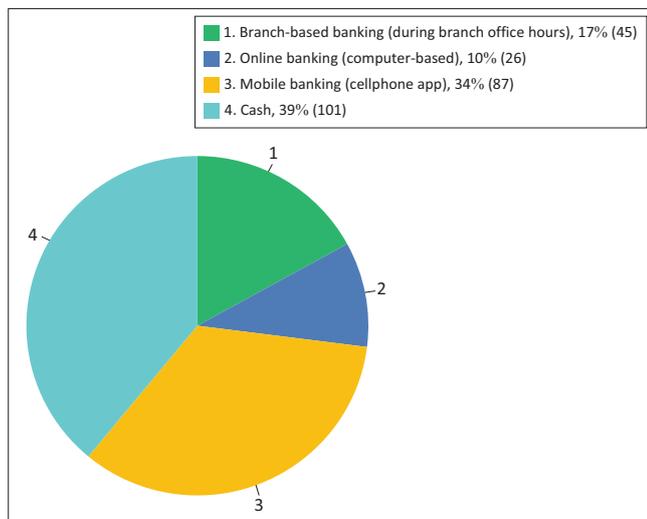


FIGURE 2: Respondents' preferred banking method.

TABLE 1: Level of respondents' knowledge about the financial technology products and services.

FinTech products and services	Extremely well (%)	Very well (%)	Moderately (%)	Slightly (%)	Not at all (%)
ATM	62	29	7	2	>1
Cell phone banking	56	21	16	4	4
Branch-based banking	52	28	16	2	2
Electronic payments	36	26	17	7	15
Cash transactions	83	14	2	>1	1
Cashless payments	66	18	12	3	>1
Peer-to-peer credit platforms	10	13	17	11	48
Robotic trade	2	4	12	25	56
Crowdfunding	3	5	11	12	70
Blockchain	1	4	5	12	78

FinTech, financial technology; ATM, automated teller machine.

Barriers to financial inclusion

Constraints

The quantitative data are augmented by a qualitative exploration of the constraints faced by the SMEs. Through open-ended questions, the study unveils the nuanced challenges inhibiting seamless FinTech integration. Common threads and unique narratives emerge, painting a comprehensive picture of the obstacles within the adoption journey.

Navigating reliability concerns

Trust, a cornerstone in any financial ecosystem, emerges as a central theme. The study explores the trust dynamics within FinTech adoption, deciphering the factors influencing SMEs' trust in digital financial services. These insights not only highlight existing apprehensions but also pave the way for much-needed strategies to enhance trust in the FinTech landscape.

Operational implications

Beyond numerical insights, the results delve into the operational implications drawn from the study. Recommendations for policymakers, financial institutions and SMEs themselves are woven into the narrative, providing actionable insights to foster a more conducive environment for FinTech adoption.

Comparative analysis

A comparative analysis, drawing parallels with existing literature and industry benchmarks, enhances the interpretative depth of the results. This section contextualises the findings within the broader FinTech landscape, identifying areas of alignment and deviation that contribute to the evolving discourse on SMEs in underserved communities.

Discussion

In the complexity of South Africa's financial landscape, digital financial services and FinTech innovations emerge as potent tools for dismantling the barriers of financial exclusion.

Addressing financial access challenges

Small and micro enterprises in underserved communities face diverse challenges, with limited financial access standing out prominently. A staggering 84% preference for cash transactions among respondents emphasises the deeply ingrained reliance on traditional payment methods (Figure 3). This poses a formidable barrier to the integration of FinTech solutions. Beyond financial access, several obstacles, from infrastructure deficits to market penetration difficulties, weave a narrative of challenges hindering SME growth. Effective public policies and regulations aimed at enhancing financial access and dismantling these obstacles emerge as pivotal catalysts for SME adoption success.

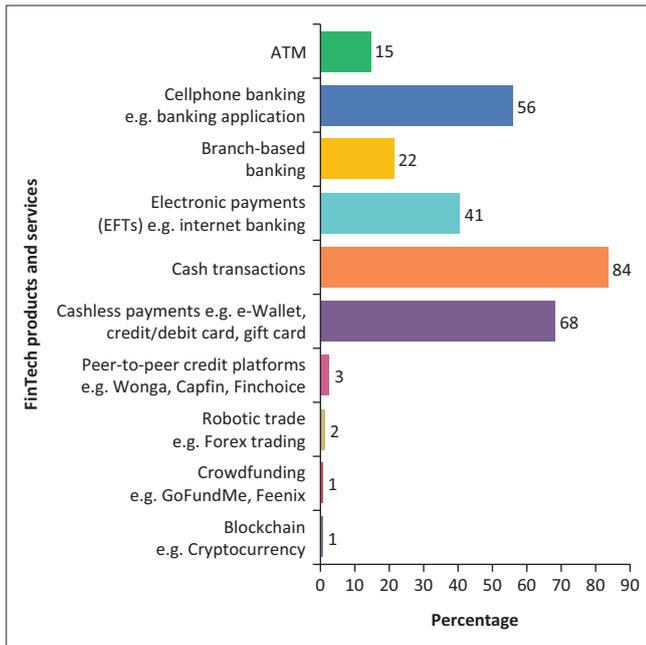


FIGURE 3: Financial technology products and services recommended as a minimum requirement.

The imperative of financial education

The survey revealed a critical need for targeted financial education and awareness campaigns. To unlock the true potential of FinTech in bridging the financial inclusion gap, concerted efforts are imperative to enhance financial literacy across diverse demographics. These efforts should span from elucidating the benefits of digital financial services to demystifying the functionalities of FinTech solutions.

Digital financial services

The potential of FinTech lies in its ability to address financial inclusion challenges, especially for the smaller businesses in underserved communities. However, the journey towards widespread adoption necessitates overcoming barriers rooted in financial illiteracy. The study's revelation that 84% of respondents initially favoured cash transactions signals a reluctance to embrace digital financial solutions. Bridging this gap requires a comprehensive approach, encompassing awareness campaigns, targeted education and a gradual transition towards digital financial practices.

Unlocking underdeveloped communities' economic potential

The extensive representation of businesses and services cited by respondents underlines the transformative role FinTech can play in stimulating growth within underdeveloped and township economies. From digital payment alternatives to online marketing facilitation, FinTech emerges as a catalyst for empowering local, smaller businesses. Recognising this potential underscores the pivotal role FinTech plays and can play in revitalising township areas, fostering economic development, and contributing to a more inclusive financial ecosystem.

Empowering demographic diversity

The demographic landscape of SME owners, with a significant representation of women and younger individuals, carries profound implications. To enhance financial access and inclusion, tailored FinTech solutions aligning with the preferences and needs of these groups become imperative. User-friendly mobile applications and digital banking services emerge as potential tools in the entrepreneurial landscape to empower women and young entrepreneurs, fostering diversity, innovation, and dynamism.

Conclusion

This study explored the FinTech adoption landscape in underserved communities, specifically focusing on Soweto, in adopting FinTech products and services. The analysis and interpretation of gathered data have led to several key conclusions.

Underserved communities in South Africa, characterised by the informal economy and limited access to formal financial services, present both challenges and opportunities for FinTech adoption. While there is a palpable potential for FinTech to drive financial inclusion and empower SMEs, significant barriers related to financial literacy, awareness, and a prevailing preference for cash transactions hinder widespread adoption.

The research underscores the importance of tailored FinTech solutions that cater to the specific needs and preferences of underrepresented demographic groups, for example, women and young entrepreneurs. These groups play a crucial role in fostering economic growth and diversification within these communities, and FinTech can serve as a powerful mechanism to support their endeavours.

The study revealed an evolving acceptance and gravitation towards FinTech solutions over time, indicating a gradual shift towards the adoption of digital FinTech. This shift is encouraged by changing consumer needs and an increasing awareness of the benefits of FinTech, highlighting its potential for further growth and innovation in this sector.

While the potential for FinTech to bolster economic development in underdeveloped township areas is substantial, there is an urgent need for targeted financial education and awareness campaigns. Efforts to enhance financial literacy and comprehension across the population are essential to fully realise the advantages of FinTech and attempt to bridge the gap of FinTech inclusion between formal and informal economies.

Recommendations

Based on the acquired insights, the study proposes several recommendations aimed at facilitating FinTech usage and advancing financial inclusion in underserved communities:

- *Targeted Financial Education*

Collaboration between the government, financial institutions, universities, and non-profit organisations should be encouraged to develop and implement thorough financial education programmes specifically tailored to the unique needs of underserved communities. These programmes should focus on raising awareness regarding the benefits of FinTech products and services, enhancing financial literacy, and promoting responsible financial behaviour.

- *User-Friendly FinTech Solutions*

Financial technology providers should design user-friendly, accessible, and relevant digital financial products and services. These solutions should address the specific needs and preferences of underserved communities, including the simplification of mobile applications and digital banking services.

- *Public-Private Partnerships*

To create an environment conducive to the growth of FinTech in township areas, collaboration between the private and public sectors should be actively encouraged. Offering financial incentives, investing in innovation hubs, and providing regulatory support to promote responsible FinTech development can help nurture this evolving industry.

- *Entrepreneurial Support*

Robust support programmes for SMEs operating within underserved communities, including access to finance, mentorship, and training in business management and digital tools, should be implemented. These initiatives are critical in enabling SMEs to thrive, thus contributing to local economic development.

- *Digital Payment Ecosystem*

Considerable investments should be made in developing a resilient digital payment ecosystem within townships and informal areas. This entails ensuring reliable Internet access, secure digital payment platforms, and accessible point-of-sale systems.

In conclusion, this transformative journey towards financial inclusion and economic empowerment in underserved communities requires a systematic approach. The recommendations presented here serve as a call to action for stakeholders to collaborate, innovate and advocate for FinTech's widespread adoption and usage. By addressing financial literacy deficits, understanding the unique challenges faced, and implementing recommended strategies, stakeholders can collectively unlock the transformative potential of FinTech, contributing to a more equitable and prosperous future for all.

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Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article. The author, C.R., serves as Editor-in-Chief of this journal. The peer review process for this submission was handled independently, and the author had no involvement in the editorial decision-making process for this manuscript. The authors have no other competing interests to declare.

Authors' contributions

T.P. did the data collection and wrote up the research. The research article is a part of a Master's study undertaken by T.P. at the University of Johannesburg, supervised by J.A. and C.R.

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Data availability

The data that support the findings of this study are available from the corresponding author, J.A., upon reasonable request.

Disclaimer

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