COSTECH

D4T
DIGITAL FOR TANZANIA

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FINTECH FOR WHO?

Demand for Digital Financial Services and FinTech in Tanzania

ABOUT UNCDF

The United Nations Capital Development Fund (UNCDF) is the United Nations' flagship catalytic financing entity for the world's 46 Least Developed Countries (LDCs). With its unique capital mandate and focus on the LDCs, UNCDF works to invest and catalyse capital to support these countries in achieving the sustainable growth and inclusiveness envisioned by the 2030 Agenda for Sustainable Development and the Doha Program of Action for the least developed countries, 2022–2031.

UNCDF builds partnerships with other UN organizations, as well as private and public sector actors, to achieve greater impact in development; specifically by unlocking additional resources and strengthening financing mechanisms and systems contributing to transformation pathways, focusing on such development themes as green economy, digitalization, urbanization, inclusive economies, gender equality and women's economic empowerment.

A hybrid development finance institution and development agency, UNCDF uses a combination of capital instruments (deployment, financial & business advisory and catalysation) and development instruments (technical assistance, capacity development, policy advice, advocacy, thought leadership, and market analysis and scoping) which are applied across five priority areas (inclusive digital economies, local transformative finance, women's economic empowerment, climate, energy & biodiversity finance, and sustainable food systems finance).

ACKNOWLEDGEMENTS:

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ABOUT THE DIGITAL4TANZANIA (D4T) PROGRAM

In March 2022, The European Union launched the Digital4Tanzania (D4T) Program, which aims to contribute to the impact of digital transformation on Tanzania's inclusive economic growth and citizen wellbeing. With a budget of EUR 35 million, its specific objectives include:

1. Digital government: improving the digital economy and the use of e-government and eservices.
2. Inclusive connectivity: increasing accessible and equitable connectivity services in rural and peri-urban areas, in particular for social services.
3. Digital trade support: developing the fintech sector and innovation ecosystems in the country and the region.

The program will be jointly implemented by The Ministry of Information, Communication and Information Technology (MICIT), EU Member States and the UN Capital Development Fund (UNCDF).

ABOUT TANZANIA INCLUSIVE DIGITAL ECONOMY (D4T-IDE) PROJECT

With support from the European Union through its Digital4Tanzania (D4T) Action, UNCDF is currently implementing the Tanzania Inclusive Digital Economy (D4T-IDE) project. Launched in September 2022, D4T-IDE is a four-year project that aims to increase access to and usage of digital payments and digital financial services in Tanzania, while enabling the innovation ecosystem to better support entrepreneurs and further drive digital innovation. The project will contribute to the development of a national digital economy strategy, as well as other policies and regulations that enable innovation; support small digital financial service providers' integration to the national payment system (TIPS); and support inclusive innovation to ensure no-one is left behind.

ABOUT COSTECH

The Tanzania Commission for Science and Technology (COSTECH) envisions a nation driven by science, technology, and innovation. It ensures utilization of knowledge-based products through coordination and promotion of science, technology and innovation for rapid social-economic development.

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Abbreviations

ADDOs	Accredited Drug Dispensaries Outlet
AI	Artificial intelligence
B2B	Business-to-business
B2C	Business-to-customer
BOT	Bank of Tanzania
COSTECH	Tanzania Commission for Science and Technology
DFS	Digital financial services
DFSP	Digital financial service provider
FI	Financial institution
FSDMP	Financial Sector Development Master Plan
FSP	Financial service provider
FYDP	Five-Year Development Plan
HCD	Human-centered design
ICT	Information and communications technology
KII	Key informant interview
KYC	Know Your Customer
MICIT	Ministry of Information, Communications, and Information Technology
MSMEs	Micro-, small-, and medium-sized enterprises
NFIF3	National Financial Inclusion Framework
P2P	Person-to-person
SKU	Stock-keeping unit
SMS	Short Message Service
SSA	Sub-Saharan Africa
TAM	Technology Acceptance Model
TIPS	Tanzania Instant Payment System
TSA	Tanzania Start-up Association
TWCC	Tanzania Women's Chamber of Commerce
TZS	Tanzanian Shilling
UNCDF	United Nations Capital Development Fund
USD	US dollar
USSD	Unstructured Supplementary Service Data

Figures and tables

Key definitions

Digital financial services

di•jə•tᵊl fə•ˈnan(t)•shəl ˈsər•vəs

financial services (e.g., payments, savings, credit, remittances, others) accessed and delivered through digital channels, including through mobile devices.

Fintech

ˈfin•ˌtek

technologically enabled financial innovation that could result in new business models, applications, processes, or products with an associated material effect on financial markets and institutions and the provision of financial services.

Executive Summary

Tanzania's digital financial sector has grown rapidly since mobile money was first introduced to the country in 2008, largely thanks to an enabling regulatory environment and a competitive market.

While mobile money account ownership has grown rapidly in recent years —from 32 percent of the adult population in 2014 to 45 percent in 2021— and while advancements in financial technology have allowed providers to offer increasingly innovative and value-added services, millions of Tanzanians remain excluded or under-served by the financial sector.*

- **Still, the potential for digital technology to enable more meaningful usage of financial services remains high, especially for women, people living in rural areas, and owners of micro-, small- and medium-sized enterprises.** Realizing this potential will depend on new partnerships between financial institutions, mobile network operators, and digital financial service providers, and the application of new technology that promote affordable and relevant products and services, build consumer trust in digital financial systems, and challenge traditional social norms.

- **Fintech companies are gaining relevance in Tanzania, but it is still early stages and start-ups face several challenges when it comes to growth, raising questions around demand for these products and services, especially among customers at the last mile.** This paper explores the drivers of demand for digital financial services and fintech: perceived cost, perceived usefulness, perceived ease of use, perceived risk, and social norms. While these drivers are interlinked—they depend on and reinforce one another—by looking at the data in these areas (and comparing these to other markets), we gain insights into which constraints are the most concerning, and potential approaches for overcoming them.

* World Bank, The Global Findex Database 2021

Key Recommendations for Increasing Demand for DFS and Fintech in Tanzania	
Driver	Recommendation
Perceived Cost	• Government review of the impact of sector-specific taxes and levies on the affordability of digital financial services and mobile devices. • Continued and expanded public and private sector promotion of merchant payments and/or access to affordable point-of-sale devices to incentivize digital transactions. • Continued public sector investment in broadband infrastructure, coupled with private-sector efforts to increase quantity and quality of connectivity and reduce the cost of data. • Market-led initiatives to increase affordability of digital finance and fintech services.
Perceived Usefulness	• Private sector development of savings products that use traditional savings groups as entry points and that encourage targeted savings for group-specific needs. • Private sector development of digital credit and/or other products with repayment plans aligned with specific business needs and agricultural cycles. • Increased use of artificial intelligence (AI) and alternative data sources for credit scoring individuals and businesses without a formal credit history. • Private sector development of more embedded finance solutions that integrate lending, payments, and other products into customer journeys and third-party platforms. • Greater incorporation of human-centered design in product development from end-to-end.

Key Recommendations for Increasing Demand for DFS and Fintech in Tanzania	
Driver	Recommendation
Perceived Ease of Use	• The elimination of jargon and technical terms and translation of customer interfaces, instructions, terms of service, etc. to meet the needs of that first-time customers and/or people with limited financial literacy. • The delivery of financial and digital education through a variety of channels, both digital and non-digital, including through products and services themselves. • Increased attention to customer support, also delivered through digital and non-digital channels. • Public-sector led revision of primary and secondary school curricula to incorporate courses on core digital skills, enhanced teacher training in digital skills, and investment in basic digital skills programs in other social centers.
Perceived Risk and Trust	• Public sector led efforts to improve implementation of financial consumer protection regulation. • Private sector led efforts to improve consumer protection policies and procedures. • Public and private sector led efforts to incorporate consumer protection tips into financial/digital skills-building interventions.
Social Norms	• Private sector led efforts to promote gender-intentional product design and service delivery. • Public-private partnerships to implement behavioral change interventions that encourage men and other norms-influencers of the benefits of women's participation in the digital economy.
For DFS and Fintech Providers	• Public and private sector-led efforts to build financial service providers' capacity to leverage administrative and transactional data to design and refine customer-centric products—especially for customers at the last mile. • Increased focus among start-ups on first-principles thinking to solve niche problems. • Increased collaboration among service providers.

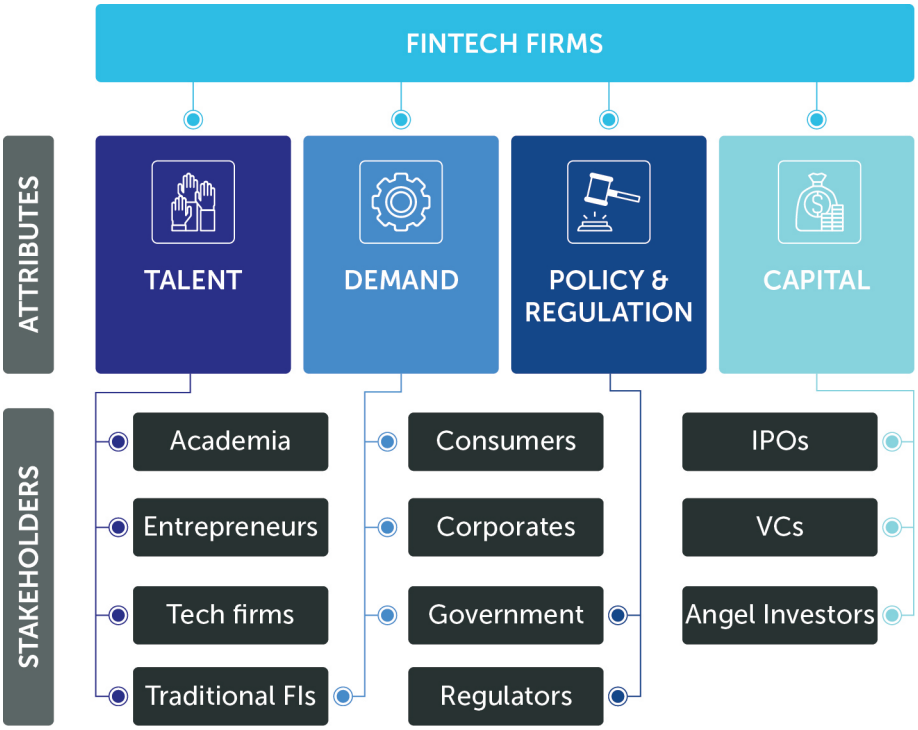
INTRODUCTION

Motivation

In 2021, the United Nations Capital Development Fund (UNCDF) conducted a landscape study that examined enablers and inhibitors to fintech sector growth in four areas: demand, talent, capital, and policy and regulation.

While none of these areas exist in a silo—they all depend on each other in a market system — widening gaps between available digital infrastructure and digital usage and in converting trial use of DFS into regular use suggests that demand-side constraints are some of the most significant.[1] This paper dives deeper into these constraints, exploring demand for digital financial services and fintech from both a consumer and provider perspective. The goal is to provide insights on consumer behavior in Tanzania, especially among the currently excluded and as compared to other markets, to identify opportunities for increasing demand for affordable, relevant, and meaningful digital financial services.

Figure 1 | Fintech landscape mapping



[1] Finscope 2023 shows that while 33 percent of adults have ever use mobile money to purchase goods, only 14 percent have done so in the last month

Research Questions

Specific research questions include:

- **What are the key factors affecting consumer demand for DFS and fintech in Tanzania, and how does this compare to other countries in the region and more advanced economies on the continent?** We explore cost, relevance, financial and digital literacy, trust, and social norms.

- **What does this mean for addressable market sizes for different fintech products in Tanzania, and how does this compare to other countries in the region and more advanced economies on the continent?** For example, given relative levels of smartphone penetration and digital literacy, what are challenges and opportunities for scaling fintech solutions?

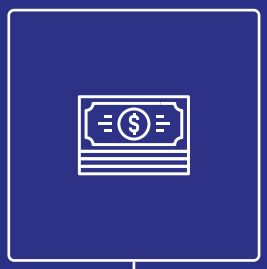
- **What challenges do providers face in understanding and meeting consumer needs, especially at the last mile?**

- **What policy and/or regulatory changes can increase demand for DFS and fintech in Tanzania and/or help financial service providers better-meet demand?**

Data collection and analysis methods

This paper takes a mixed methods approach, leveraging qualitative and quantitative data, including anecdotal evidence from experts in relevant fields. Most of the analysis relies on secondary data, reports, and publications such as the World Bank Global Findex Database 2021 (2023), FSDT FinScope (2023), several reports by the GSMA, and others. Primary key informant interviews (KIIs) with fintech founders, financial service providers, and innovation ecosystem facilitators--all of whom are consumers of DFS and fintech in Tanzania--complement this analysis. Gender is mainstreamed throughout data collection and analysis, with special attention paid to the use of sex-disaggregated data and gender differentials of key findings.

DEMAND FOR DFS AND FINTECH

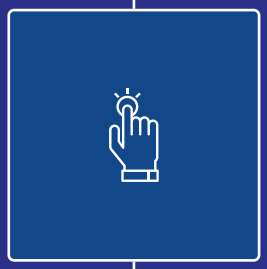


PERCEIVED COST

The extent to which a person believes that using mobile banking could cost money, such as service fees or mobile network charges. Low-income people have a low purchasing power and are particularly price sensitive.

PERCEIVED USEFULLNESS

Associated with productivity that comes from the use of technology; the degree to which a person believes that using a particular system will enhance his or her productivity and/or make life easier.



PERCEIVED EASE OF USE

The degree to which a person believes that using a particular system will be free of effort.

PERCEIVED RISK AND TRUST

Risk: the degree to which there is uncertainty or the potential for loss or security compromise.
Trust: the extent to which a user believes the service provider has their interests and wellbeing (financial or otherwise) in mind.

SOCIAL NORMS

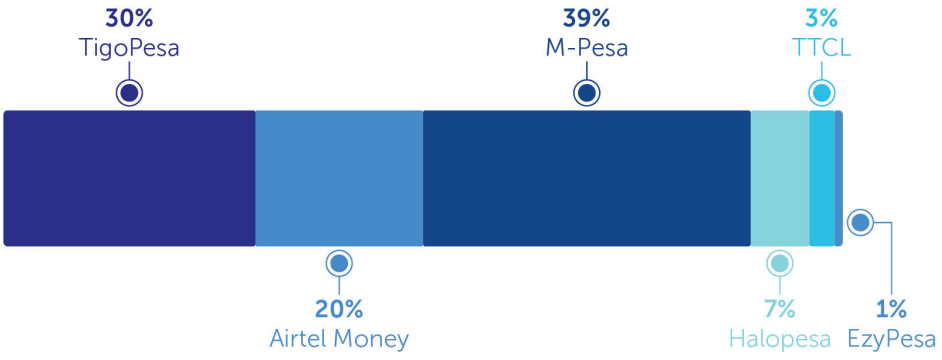
The extent to which familiar people (people one knows and trusts) use and consciously or sub-consciously encourage adoption of a new technology.

Tanzania's digital financial sector

Tanzania's digital financial sector has grown rapidly since mobile money was first introduced to the country in 2008, largely thanks to an enabling regulatory environment and a competitive market.

Vodacom was the first telecom to offer mobile money with M-Pesa, and others quickly followed: Zantel with Z-Pesa (later changed to EzyPesa), Tigo with TigoPesa, Airtel with Airtel Money, Halotel with Halopesa and TTCL with T-Pesa[2]. In 2014, when the industry-led initiative for mobile money interoperability, endorsed by the Bank of Tanzania (BOT), was introduced, customers of different providers benefitted from cheaper and more convenient services that allowed them to make person-to-person (P2P) transfers instantly. That six major players competed for customers while sharing an agent network was unique on the continent and commonly cited as a key driver of demand—and in turn, growth—in account-ownership. Just one year after the introduction of interoperability, service costs were lower than other countries in the region, awareness of mobile money among the 79 percent of Tanzanians with access to mobile phones had risen to 95 percent, and 63 percent of adults used mobile money.[3,4] In the last decade, mobile money providers have expanded their product and service offering to include savings and loans, bill payments, and integration with mobile banking (e.g., send money to bank). Today, almost half of the adult population has a mobile money account, and a total of 23.9 million active users conduct at least one transaction per month.[5,6]

Figure 2 | Mobile Money Subscriptions Market Share (2020)



[1] Lema, "Factors influencing the adoption of mobile financial services in the unbanked population"
[2] Tanzania Invest, Mobile Money
[3] World Bank, Digital Financial Services
[4] In 2015, service costs in Tanzania were lower than other countries in the region, at USD 0.17 for transferring an amount of USD 20, compared to USD 0.37 in Kenya.
[5] World Bank, The Global Findex Database 2021
[6] World Bank, Digital Financial Services

Table 1 | Mobile Money Growth in Tanzania

Mobile Money Growth in Tanzania					
	2019	2020	2021	2022	2023
No. of Transactions	3.02 billion	3.41 billion	3.57 billion	4.2 billion	-
Value of transactions (TZS)	101.97 trillion	127.94 trillion	137.22 trillion	-	-
No. of mobile money subscribers*	25.86 million	32.27 million	35.28 million	40.95 million	44.35 million

Source: TCRA
* number of mobile money subscribers reflects total number of subscriptions, not unique subscribers

- **While partnerships between banks and telecoms allowed banks to reach more customers, growth in mobile money accounts has outpaced that of financial institution accounts, especially among female customers.** Commercial banks began offering mobile banking services shortly after telecoms, leading to increased deposit mobilization and brand visibility, with financial institution account ownership increasing from 17.3 percent in 2011 to 23.3 percent in 2021.[7] Bank branch growth is flat and expected to decline, underscoring the strong preference for e-banking services.[8,9] But while mobile money can be an on-ramp to a wider array of more formal financial services—both digital and non-digital—45 percent of adults owned a mobile money account in 2021 compared to just 23 percent who owned a financial institution account.[10] Such a significant difference suggests that mobile wallets are better-suited to lower-income people's needs and are in many cases complementary to, rather than a pathway towards, formal financial services. It is clear that continued progress in financial inclusion will depend more on mobile money and/or new partnerships between financial institutions and digital financial service providers (DFSPs) than on traditional financial institutions themselves.

- **Continued progress is essential because despite significant growth in account ownership over the last decade, millions of people remain excluded from or underserved by the financial sector.** The potential for digital technology to enable more meaningful usage of financial services remains high, especially for

[7] World Bank, The Global Findex Database 2021
[8] Lema, "Factors influencing the adoption of mobile financial services in the unbanked population"
[9] IFC, DFS Market Overview
[10] World Bank, The Global Findex Database 2021

Figure 3 | Account ownership 2011-2021 (%, Age 15+)

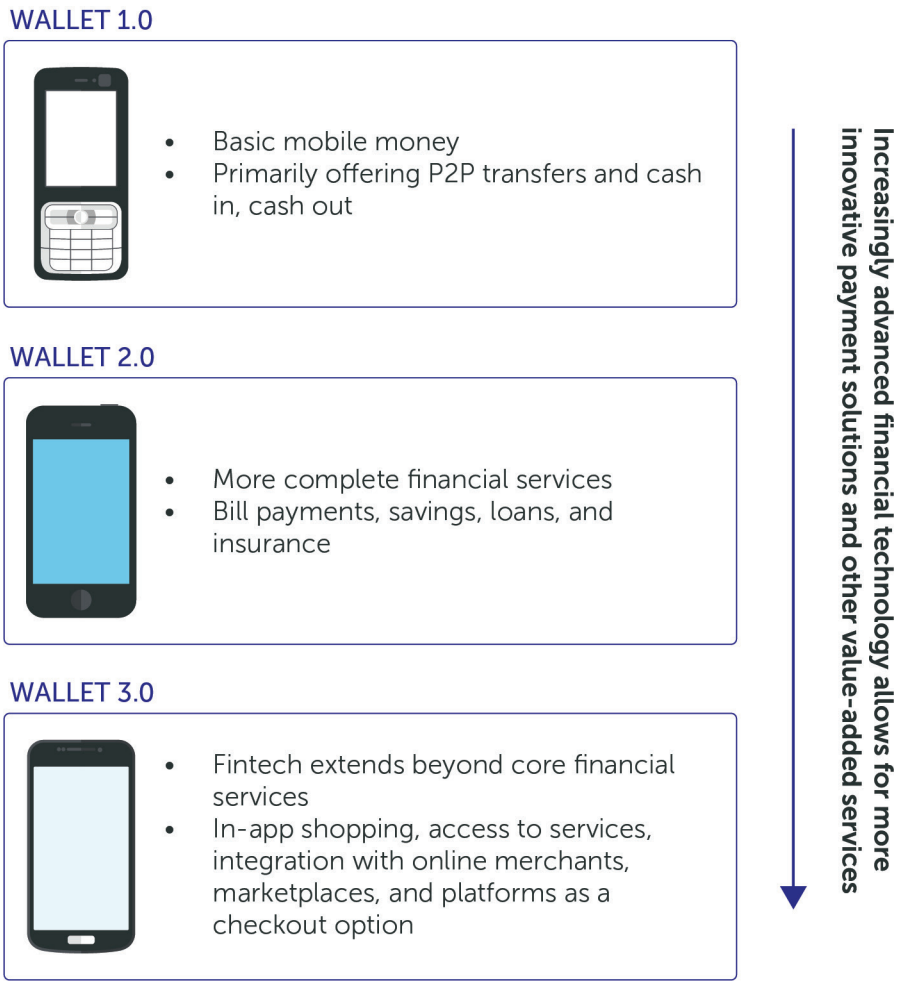
While banks have partnered with telecoms to reach more customers, growth in mobile money has outpaced that of financial institutions, especially among female customers.

It is clear that continued progress in financial inclusion will depend more on mobile money and/or new partnerships between financial institutions and digital financial service providers (DFSPs) than on traditional financial institutions themselves.

women, people living in rural areas, and owners of micro-, small-, and medium-sized enterprises (MSMEs). Realizing this potential will require applications of new technology that promote affordable and relevant financial products and services, build consumer trust in digital financial systems, and challenge traditional social norms.

- **While mobile money is fueling growth in account ownership, fintech companies are gaining increasing relevance, filling gaps left by telecoms, banks, and other existing DFSPs—often through partnerships that add value to existing services.** Between 2007 and 2018, the number of active fintech companies operating in Sub-Saharan Africa (SSA) increased almost tenfold. Four countries—Nigeria, Kenya, South Africa, and Egypt—dominate in the region, but growth in Tanzania's fintech ecosystem is notable.[11]

Figure 4 | The evolution of the mobile wallet



[11] UNCDF, The Fintech Start-up Landscape in Tanzania

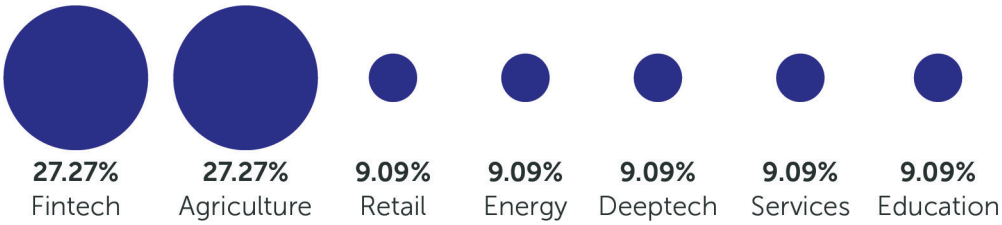
As with mobile money, a conducive enabling environment is contributing to growth in Tanzania's information and communications technology (ICT) and fintech sectors. The most recent Five-Year Development Plan (FYDP III), the 2020 establishment of the Ministry of Information, Communications, and Information Technology (MICIT), and initiatives led by the Tanzania Commission for Science and Technology (COSTECH) all underscore the government's commitment to leveraging digital technology for job creation and inclusive growth. Likewise, the Financial Sector Development Master Plan (FSDMP), draft regulatory sandbox regulations published in 2023 by the BoT, and the recent launch of the third National Financial Inclusion Framework (NFIF3) reflect government efforts to ensure that the legal and regulatory frameworks governing the financial sector evolve with the pace of innovation.

There is a small but growing community of entrepreneurs supported by a range of innovation ecosystem facilitators including incubators, accelerators, and innovation hubs run by government, the private sector, and development partners. According to a 2023 report published by the Tanzania Start-up Association (TSA), there was a 15 percent increase in the number of registered start-ups between 2021-2022.[12] While only 7.2 percent of these were fintechs, fintech and ag-tech start-ups received the most funding in 2022, suggesting there is growing market demand and potential for increased competition in these sectors.[13,14] Start-up generated jobs rose by 14.7 percent from 78,071 in 2021 to 89,509 in 2022.[15]

On the supply side, **limited access to capital is arguably one of the biggest hurdles for start-ups.** Local venture capital and angel investment is scarce, and perceived risk among foreign investors is high due to a lack of knowledge about the fintech sector and related investment regulations. There is a need for interventions that increase start-ups' investor readiness and unlock patient capital. Digital infrastructure is also a challenge, with 82.5 percent of start-ups reporting unaffordable and/or unstable internet (TSA, 2023). This negatively effects their operating efficiency and ability to expand to larger markets, while also hurting the consumer experience. **The continuation of government efforts to expand fiber-optic networks and invest in broadband projects will be essential to a thriving fintech start-up ecosystem.**

[12] Tanzania Start-up Association, Tanzania Start-up Ecosystem Status Report
[13] Ibid.
[14] By comparison, 25.9 percent of start-ups in Tanzania in 2022 were in the professional services and consulting (including software as a service) sector, 16.6 percent in ag-tech, and 6.6 percent in e-commerce
[15] Ibid. Note, this refers to jobs created by all start-ups, not just fintech start-ups.

Figure 5 | Funded sectors, 2022



- **While there is momentum in the fintech start-up sector, it is still early stages. Start-ups face several challenges when it comes to growth, raising questions around demand for these products and services--especially at the last mile.** There are questions around consumer readiness (e.g. willingness to pay and digital skills), while providers' limited capacity to understand consumer behavior has also been recognized as key challenges. With most start-ups currently targeting middle-income earners, providers need to better-understand spending patterns, needs, and aspirations at the last mile to better-identify opportunities to meet those needs.

Fintech for what?

Financial inclusion is not the end goal, but rather a means to multiple ends. Access to affordable and relevant financial services is critical for poverty reduction and economic growth.

Financial inclusion can increase incomes and smooth consumption, build resilience, and reduce gender inequalities. And, over the last decade, there has been a growing consensus that digital technology will enable this affordability and relevance for millions of people--that gains in financial inclusion will be gains in digital financial inclusion. Both 'traditional' DFS and newer fintech solutions lower the cost of financial services, allow for more tailored, customer-centric services, and facilitate linkages between financial services and services in the 'real' economy—i.e., in agriculture, health, business, and education—to solve everyday problems that increase people's income, and overall wellbeing.

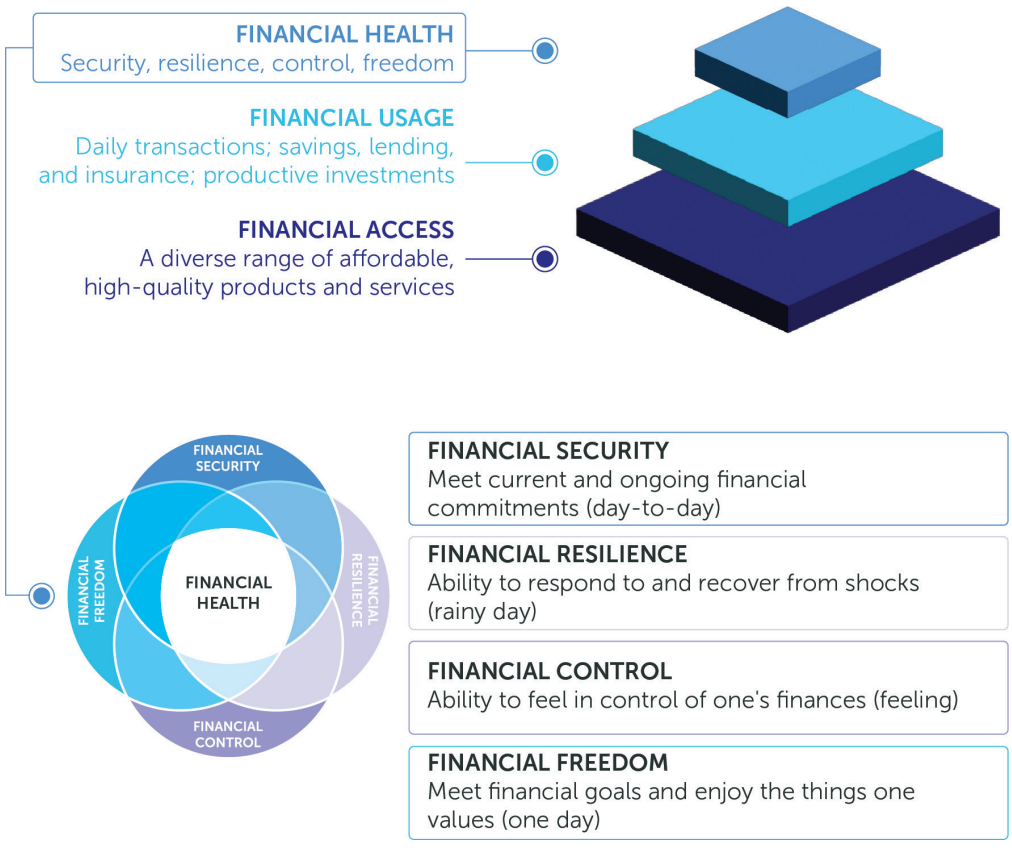
- **DFS and fintech have the potential to be particularly powerful for women, who are disproportionately affected by nearly all barriers to financial inclusion, and to transform lives via digitally driven growth of MSMEs,** which represent 95 percent of all businesses —most of them run by women.[16]

[16] Tanzania Chamber of Commerce, Industry and Agriculture (TCCIA), https:www.tccia.or.tz

But to what extent is this potential being realized? Financial health is an important concept that looks beyond access to and usage of financial products and services and considers the extent to which they help people to better-meet their daily needs, cope with shocks, feel in control of their financial lives,

While fintech presents large potential gains, it also introduces new risks to the financial health of consumers and financial systems at large. For users, lack of digital literacy and/or prior negative experiences may cause distrust in digital solutions. There are real concerns around misuse of personal data, predatory lending, and over-indebtedness in the absence of adequate consumer protection policies and implementation mechanisms. Unless these concerns are proactively addressed, the proliferation of new fintech solutions may further deepen the 'digital divide' for those that are already left behind—between men and women, and people living in urban and rural areas. Policymakers and regulators must work together with financial service providers to engender trust in fintech and protect consumers for DFS and fintech to create *inclusive* digital economies.

Figure 6 | Financial health, usage, and access



and plan. There is no universal way of measuring financial health, but data on people's ability to access emergency funds and their most worrying financial issues offer insights. The data on financial health in Tanzania is troubling, but points to new and important insights that financial service providers (FSPs) can leverage to intentionally design new, high-quality applications, use-cases and business models to better meet people's needs.

Definition of digital financial services and fintech

Digital financial services (DFS) are financial services (e.g., payments, savings, credit, remittances, others) accessed and delivered through digital channels, including through mobile devices.

For the purposes of this paper, **fintech** refers to "technologically enabled financial innovation that could result in new business models, applications, processes, or products with an associated material effect on financial markets and institutions and the provision of financial services."[17] Financial technology enables DFS, but "fintech" colloquially refers to newer solutions built on cloud computing, digital platforms, and distributed ledger technologies. Fintech solutions extend beyond core financial services, spanning peer-to-peer (P2P), business-to-business (B2B), and business-to-customer (B2C) applications that provide access to a wide array of services and integration with online merchants, marketplaces, and platforms as a checkout option.[18]

Previous studies on demand for DFS and fintech in Tanzania

Several models have been used in academic studies on the adoption of technology, DFS, and mobile banking.

The Technology Acceptance Model (TAM) and its extensions, for example, are used to explore the impact of perceived ease of use, usefulness, risk,

[17] UNCDF, The Fintech Start-up Landscape in Tanzania
[18] World Bank, Digital Financial Services

trust and cost of a new service or technology on a user's intention to use it.[19] While different variables are most significant in different contexts—depending on the type of services offered, regulation, pricing, customer service, and geographical coverage—trust, perceived usefulness, and subjective norms are commonly the most significant. Many studies have shown that the significance of perceived ease of use on a user's adoption of an innovation is either directly or indirectly through perceived usefulness. That is, if an individual perceives a technology to be useful, they will likely be more invested in learning how to use it and/or have more opportunities to use it, which will make it easier to use. A 2017 study in Tanzania found significant impacts for social influence, perceived usefulness, and perceived cost, but insignificant impacts for perceived ease of use, perceived trust, and perceived risk.[20]

- **These findings align with those commonly cited in non-academic papers and policy documents,** such as Tanzania's National Financial Inclusion Framework (NFIF), and with UNCDF's 2021 mapping of the start-up fintech landscape. It is clear that many of the key barriers to demand for DFS even more salient when it comes to demand for 'next-level' fintech solution; issues related to low levels of financial and digital literacy, for example, are exacerbated with fintech products requiring higher levels of digital awareness and capability.

- **Low levels of financial and digital literacy, for example, are exacerbated when it comes to fintech**, as fintech products/services require higher levels of digital awareness and capability, including the ability to use a smartphone.

The following section presents an analysis of recent data on the key constraints to digital financial inclusion: perceived cost, perceived usefulness, ease of use, perceived risk and trust, and traditional social norms. These drivers are interlinked; they depend on and reinforce each other. A potential customer will be more willing to pay for a service, for example, if they deem it useful and trust it is safe. Products will become easier to use the more they are used, and social norms may prevent some individuals from gaining financial skills. But, by looking at the latest data in these areas—along with complementary qualitative data gathered through consultations with key experts—and comparing Tanzania to the 'Big 4' markets, we gain insights into which constraints are the most concerning, and potential approaches for overcoming them.

[19] Lema, "Factors influencing the adoption of mobile financial services in the unbanked population"
20 Lema, "Factors influencing the adoption of mobile financial services in the unbanked population"

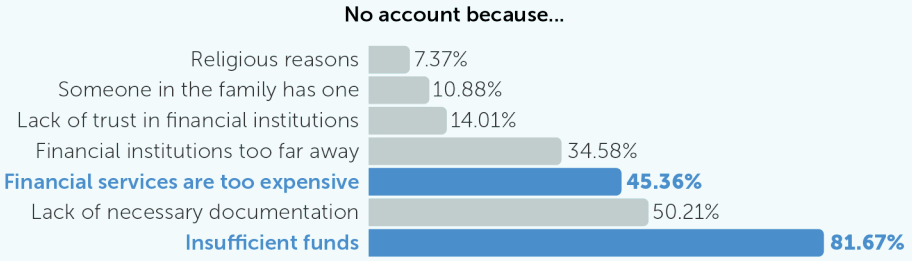
RESULTS AND ANALYSIS

PERCEIVED COST

OF DIGITAL FINANCIAL SERVICES IN TANZANIA

The direct and indirect costs of financial accounts

— or any new service for that matter—are typically among the most significant drivers of their take-up and usage, especially for price-sensitive low-income earners.

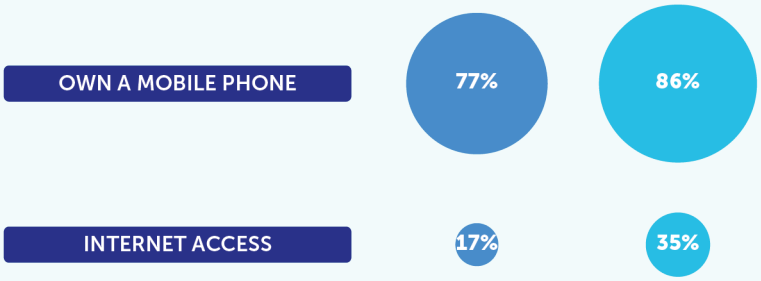


GSMA's Mobile Connectivity Index

which measures the performance of 170 countries against key enablers of mobile internet adoption, affirms our findings, with Tanzania scoring lowest compared to the Big 4 in three out of four affordability indicators.

	TANZANIA	EGYPT	KENYA	NIGERIA	SOUTH AFRICA
MOBILE TARIFFS	**35.3**	87.3	51.6	54.8	74.7
HANDSET PRICE	**36.8**	50.9	40.6	51.3	47.9
TAXATION	**13.4**	21.6	29.5	96.9	85.4
INEQUALITY	**56.5**	21.3	29.8	42.3	--

Source: GSMA, Mobile Connectivity Index



High costs and increasing tax burdens

disproportionately impact existing and potential female customers.

- women
- men

For fintech to realize its transformative potential

it must be demanded at scale and at the last mile. Both the public and private sector must lead efforts to lower costs and/or increase earning power—especially among women and MSME-owners—for demand to keep pace with supply.

Public sector review of sector-specific taxes and levies on the affordability of mobile devices and digital services.

Market-led initiatives to increase affordability of digital finance and fintech services

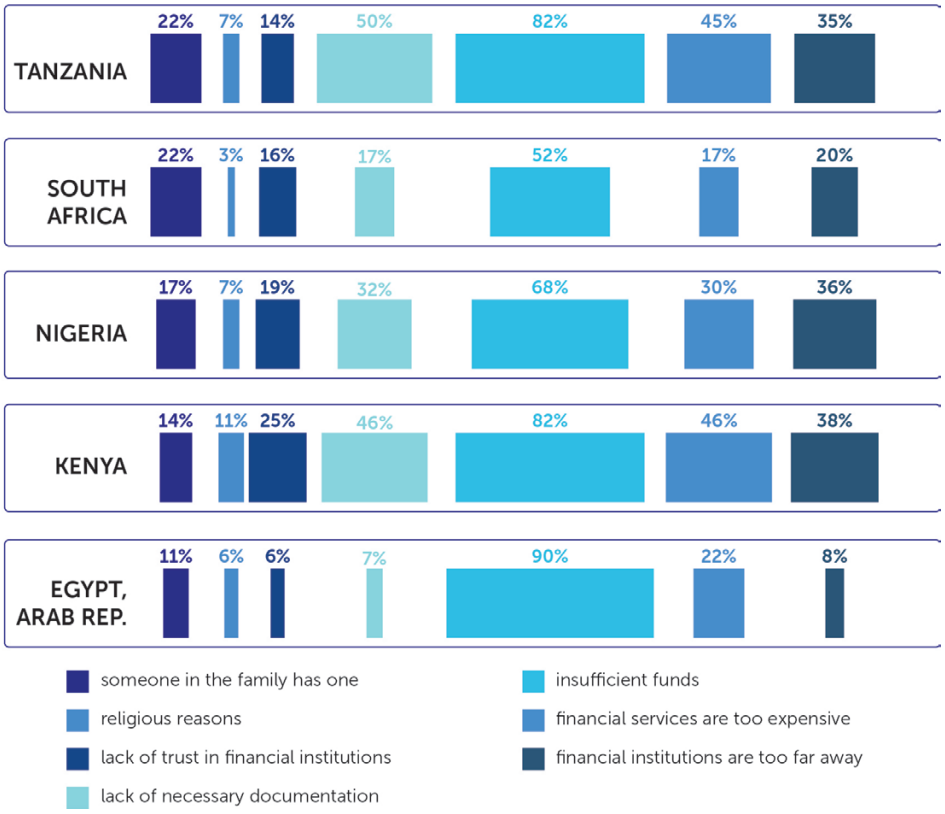
Continued public sector investment in broadband infrastructure, coupled with private-sector efforts to increase quantity and quality of connectivity and reduce the cost of data.

Perceived cost

The direct and indirect costs of financial accounts—or any new service for that matter—are typically among the most significant drivers of their take-up and usage, especially for price-sensitive low-income earners.

Findex and FinScope, two recently-conducted nationally representative demand-side surveys, both show that perceived lack of income is one of the biggest barriers to the take-up of financial services, including mobile money, in Tanzania. Per Findex, 81.67 percent of Tanzanian adults without an account report not having one because of insufficient funds, and 45.56 percent report that financial services are too expensive.[21] Similarly, per FinScope, only 4 in 10 mobile money users believe the cost of mobile money is reasonable. This negatively effects the recency and frequency of the most penetrated financial service in the country, especially among low-income earners in rural areas.

Figure 7 | No account because (% without an account, age 15+)



Source: The Global Findex, 2021

[21] World Bank, The Global Findex Database 2021. Respondents were allowed to choose more than one response option.

- **While data plans in Tanzania are competitively priced and some of the lowest in East Africa, device prices, levies on mobile transactions, and relative income levels make DFS and fintech products/services unaffordable for many Tanzanians.** As shown in the table below, Tanzania and Kenya are the only two countries in the East African Community region where the average price for 1 GB is below 1 US dollar. While this should theoretically be favorable to demand for DFS, high taxes on digital and mobile services, especially in recent years and as compared to the Big 4, have increased transaction costs in Tanzania. When taxes increase transaction costs, even by a relatively small amount, there is a significant negative effect on consumer appetite for the service, especially for low-income earners. It's interesting that while sector-specific taxes are higher in Tanzania than other countries like Kenya, Findex shows that the two countries have similar proportions of people reporting expensive accounts or insufficient funds. This could be because both financial institution accounts and mobile money accounts are considered, but should be explored further.

Table 2 | Average price for 1GB data

Average price for 1GB data			
	2020	2022	Note
Tanzania	$0.71	$0.73	29.1 million internet users in 2022
Nigeria	$0.71		
Kenya	$0.84	$1.05	23.3 million internet users in 2022
South Africa	$2.04		
Source: Worldwide Mobile Pricing and Tanzania Daily News			

The cost of digital devices is also high—and increasing. the cost of a smartphone as a fraction of average monthly income was 34 percent in 2019, and there was an 8 percent increase in the price of mobile devices generally between 2014-2021. While total mobile phone penetration is 88 percent, FinScope shows that only 19 percent of Tanzanian adults own a smartphone.[22,23] Mobile money and other basic DFS can be delivered through basic phones, but this is a significant barrier to the take-up and usage of more advanced fintech products and services that require 4- or 5-G connectivity—and which have the potential to be the most transformative. millions of potential customers are excluded from the e-commerce market, for example, because they cannot afford smart devices or strong internet connection that generates high-quality images of products for sale.

[22] GSMA Intelligence; total number of SIM cards divided by population.
[23] Finscope 2023

In June 2023, the Government of Tanzania passed the Finance Act, amending the National Payment Systems Act to limit the scope of applicability of the electronic money transfer levy to withdrawal transactions. Prior to this change, customers were paying this levy on numerous mobile money transfer transactions, e.g.: (i) from a user's mobile money account to another mobile money account, (ii) from a user's mobile money account to a bank account, (iii) from a user's bank account to another bank account, (iv) from a user's bank account to a mobile money account, (v) withdrawal of cash from either a mobile money account or a bank account at a collector, collector's agent, or Automated Teller Machine.

Moreover, the amendment can be viewed as a response to the negative impact of the mobile money transaction levy introduced in June 2021. Following this levy, which significantly increased taxes as a proportion of transaction fees, there was a sharp decrease (-38 percent) in the total number of P2P transactions. The average transaction fee had increased to about three times the average fee for East Africa. Many mobile money users turned back to cash and there was an estimated 12 percent decrease in the mobile money market compared to pre-tax levels. Impact analyses of the tax pointed to potential negative long-term effects on stability in the financial sector and overall socio-economic growth, warning that it could reverse recent gains in financial and digital inclusion.

The 2023 amendment is thus a welcome change; stakeholders interviewed for this report expressed hope that usage of mobile money for value-added services would increase as transaction costs decrease. There is still a levy on withdrawals, however, and the Act has not been accompanied by a growth in digital payment POS to allow people to transact digitally, especially in rural areas. While the intention may be to keep money in the digital ecosystem and transition to a cash-lite economy, policymakers and the private sector should look to increase the prevalence of affordable digital payment options that reduce the need for taxed withdrawals.

GSMA's Mobile Connectivity Index, which measures the performance of 170 countries against key enablers of mobile internet adoption, likewise scores Tanzania low compared to the Big 4 in three out of four affordability indicators.[24] These indicators measure the affordability of mobile services and devices at price points that reflect the level of income across a population, looking at mobile tariffs (monthly cost of mobile broadband data plans), handset price (cost of an entry-level internet-enabled device), taxation (cost of overall and mobile-specific taxation), and income inequality.

Table 3 | Affordability Country Comparison

GSMA Mobile Connectivity Index: Affordability Country Comparison				
Country	Mobile Tariffs	Handset Price	Taxation	Inequality
Tanzania	**35.3**	**36.8**	**13.4**	**56.5**
Egypt	87.3	50.9	21.6	21.3
Kenya	51.6	40.6	29.5	29.8
Nigeria	54.8	51.3	96.9	42.3
South Africa	74.7	47.9	85.4	-

Source: GSMA, Mobile Connectivity Index
To ensure consistent units of measurement, all indicators have been normalized to have a value within a range of 0 to 100, with a higher score indicating stronger performance.

- **High costs and increasing tax burdens disproportionately impact existing and potential female customers, who are more likely to have lower incomes and lack financial autonomy within the household.** According to the GSMA 2019 Mobile Gender Gap Report, 77 percent of women in Tanzania own a mobile phone, compared to 86 percent of men, and only 17 percent of women have mobile internet access compared to 35 percent of men. MSME-level customers are also disproportionately affected, with many small businesses hesitant to use digital technologies, including DFS, because they are cautious of becoming 'visible' and incurring the same taxation requirements as formal businesses.[25]

- **What's more is that these cost increases are occurring as progress in poverty remains stagnant.** Between 2014 and 2021, the portion of people living below $2.15/day remained at approximately 45 percent and median monthly household consumption expressed in national prices rose by 9 percent, lower than the rise in consumer prices, suggesting a drop in real household

[24] The GSMA, Mobile Connectivity Index, https://www.mobileconnectivityindex.com/connectivityIndex.html#year=2021&secondaryMenu=about-the-index
[25] CGAP, No Small Business

Figure 8 | Mobile gender gap

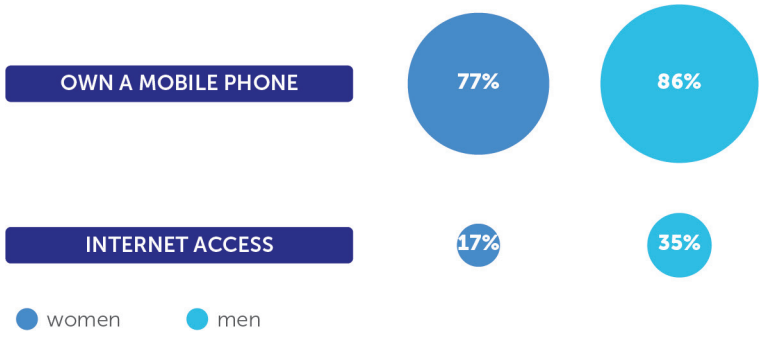
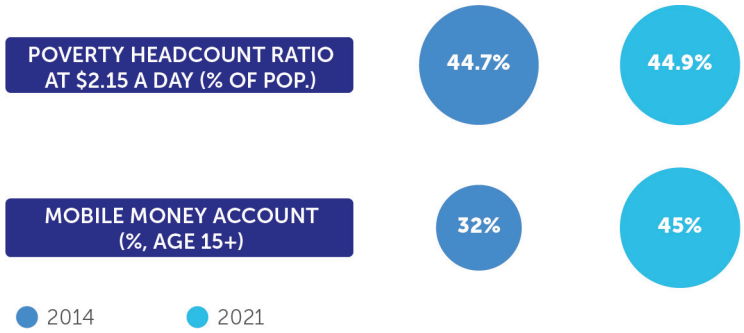


Figure 9 | Growth in mobile money, stagnant progress in poverty



consumption. There was no increase in nominal household consumption in Dar es Salaam during this period–where usage of DFS and fintech is greatest — in 2021, only 15 percent of the adult population could come up with emergency funds without much difficulty and two-thirds of Tanzanians struggle to keep up with regular expenses. Interviews with experts in the innovation sector echoed that even if data bundles are priced low compared to other countries in the region, regular people are aware of and sensitive to recent price increases, and they remain prohibitively high for many.

This is troubling because, at a basic level, it calls into question the relationship between financial inclusion and poverty reduction. With mobile money account ownership increasing and poverty levels remaining stagnant, can we conclude that financial inclusion reduces poverty? This is a complex question that requires the exploration of more than two indicators. But when it comes to DFS and fintech, even if mobile money can theoretically provide an on-ramp to a wider array of life-enhancing digital services, when it comes to cost, the ramp is steep.

Recommendations

For fintech to realize its transformative potential, it must be demanded at scale and at the last mile.

Both the public and private sector must lead efforts to lower costs and/or increase earning power—especially among women and MSME-owners—for demand to keep pace with supply. This may include:

- **Public sector review of sector-specific taxes and levies on the affordability of mobile devices and digital services.** Recent changes enacted through the Finance Act are welcome and reflect the government's commitment to increasing the affordability of DFS. This should continue, with a view towards ensuring affordability of digital payment options and other fintech products/services as well as , data and mobile devices.
- **Public and private sector promotion of merchant payments and/or access to affordable POS to incentivize digital transactions.** While it is costly to withdraw cash in the current environment, people are often left with no other option when digital payments are unavailable or even more expensive.
- **Continued public sector investment in broadband infrastructure, coupled with private-sector efforts to increase quantity and quality of connectivity and reduce the cost of data.**
- **Market-led initiatives to increase affordability of digital finance and fintech services,** such as tiered account opening fees, subsidies, and flexible payment plans for mobile devices and internet services. These initiatives should have a view towards addressing the additional cost constraints faced by women.

Table 4 | Indicators

Indicator	2011	2014	2017	2021	2023
Financial institution account ownership (%, age 15+)	17	19	21	23	-
Mobile money account ownership (%, age 15+)	-	32	39	45	-
Poverty headcount ratio a $2.15/day (2017 PPP) (% of population)	44.7	-	44.9	-	-
Gini Index*	37.8	-	40.5	-	-
Food price inflation**	-	-	-	-	9.3

*Gini index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. A Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality.

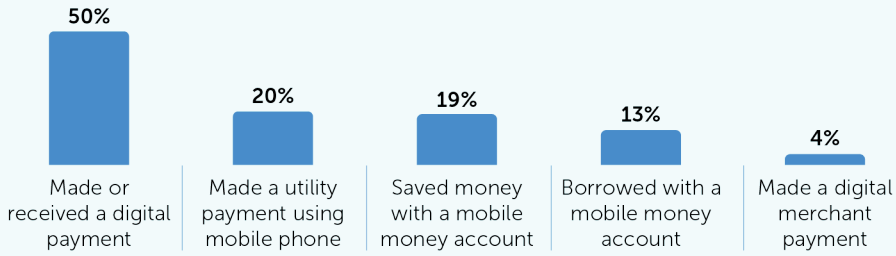
*While food insecurity in 2021 was lower than in 2014 the proportion of people saying they did not have enough to eat dropped by a third in rural areas, it increased in Dar es Salaam where it is now higher than anywhere else in the country

PERCEIVED USEFULNESS

OF DIGITAL FINANCIAL SERVICES IN TANZANIA

The most recent FinScope data shows that almost a quarter of people

without a mobile phone still utilize mobile money services—suggesting it's highly relevant even among the poorest people.

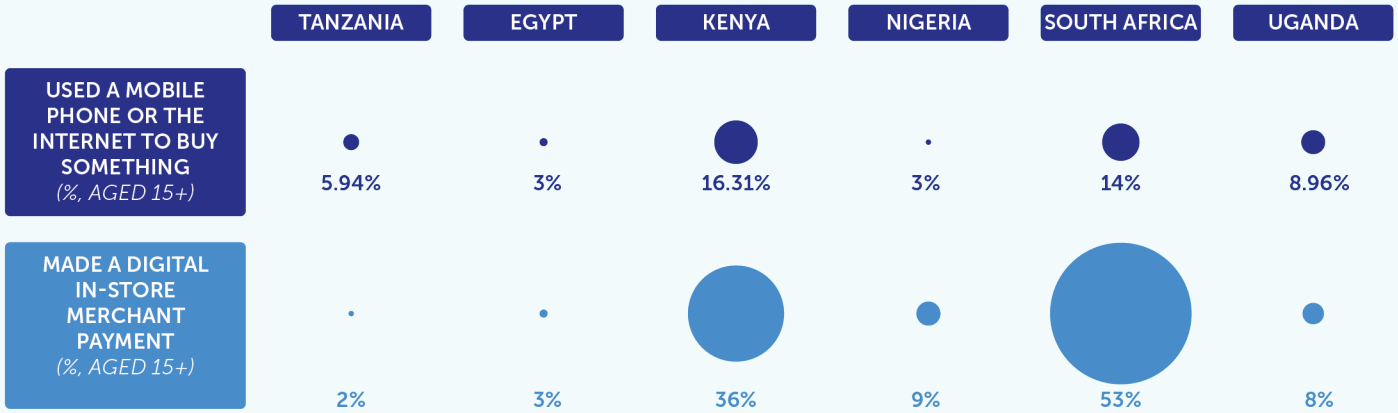


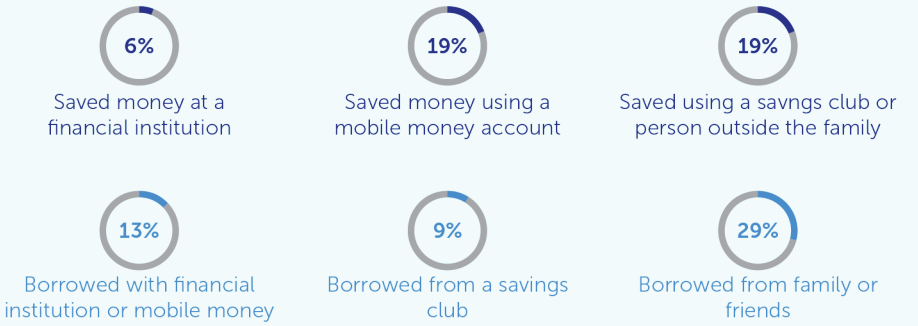
The above data refers to the quarter of people without a mobile phone but utilising mobile money

Source: Global Findex - % of adults 15+

With a large base of mobile money subscribers,

the potential market size for merchant payments and e-commerce in Tanzania is large. But merchant payments are low and the country's e-commerce market remains largely untapped.





When it comes to saving and borrowing

digital tools are on the rise, but there is a continued preference for informal finance.

It is not that fintech is irrelevant,

but that there is a lack of cost-effective value-added services. Products and services can be better-tailored and become more useful through multi-stakeholder efforts to expand:

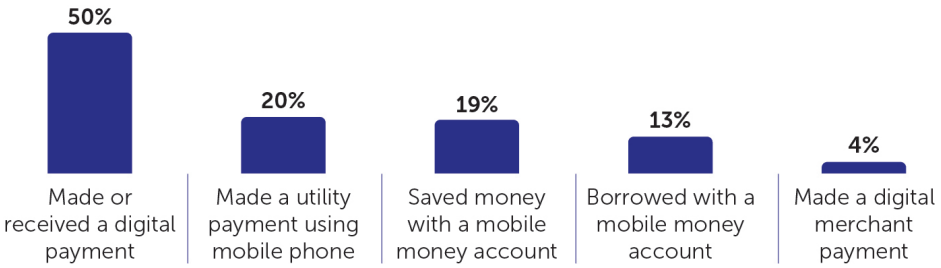
- **Digital savings products** that use traditional savings groups as entry points
- **Embedded finance solutions** that integrate products into customer journeys and third-party platforms
- **Repayment plans/services aligned** with specific, often cyclical, business needs and agricultural cycles
- **A human-centered design (HCD)** approach to product design
- **The use of Artificial intelligence (AI)** and alternative data sources
- **Merchant payment interoperability**

Perceived usefulness

Closely related to a product's cost is its perceived usefulness, or relevance. People will only take up and continue to use a financial product or service if it is useful and if the benefits outweigh the costs.

Several experts interviewed said that usefulness, not cost, is often customers' first consideration. Especially at the base of the pyramid, if a product or service is simple, addresses a key challenge, and can be used daily, people will find a way to pay for it. With mobile money, for example, FinScope shows that almost a quarter of people without a mobile phone still utilize mobile money services—that they find a way to do so suggests that mobile money services are highly relevant even among the poorest people. One expert referred to the saying in Tanzania that "everything is a priority." This highlights the need for FSPs to give people good reason to part with even USD 1; without it, they will allocate scarce resources elsewhere.

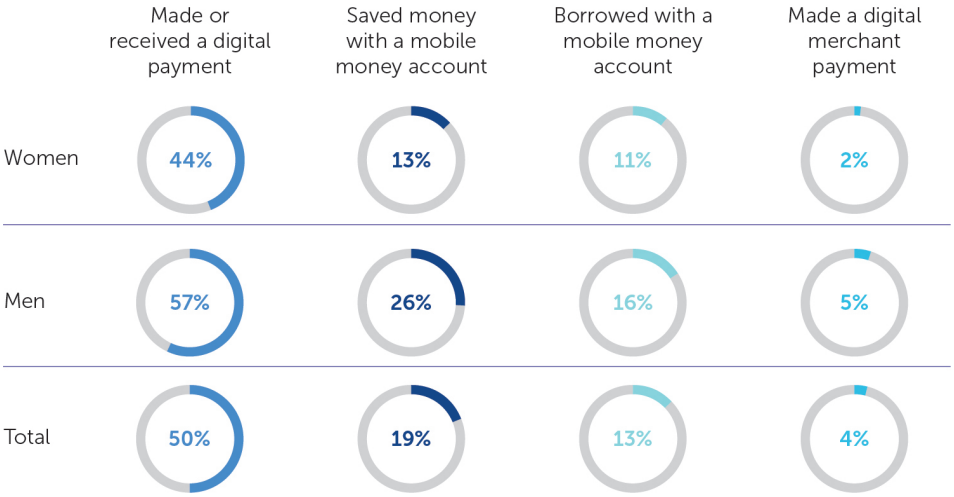
Figure 10 | Mobile money usage in 2021 (%, Age 15+)



- **With a large base of mobile money subscribers, the potential market size for merchant payments and e-commerce in Tanzania is large.** But while digital payments are booming globally, with many African markets leading the transformation in the way people pay for goods and services, merchant payments in Tanzania are low and the country's e-commerce market remains largely untapped.[26] Only 5.9 percent of Tanzania's adult population making an online purchase in 2021, compared to 8.96 percent of Uganda's adult population and 16.31 percent of Kenya's. Likewise, while the agricultural sector

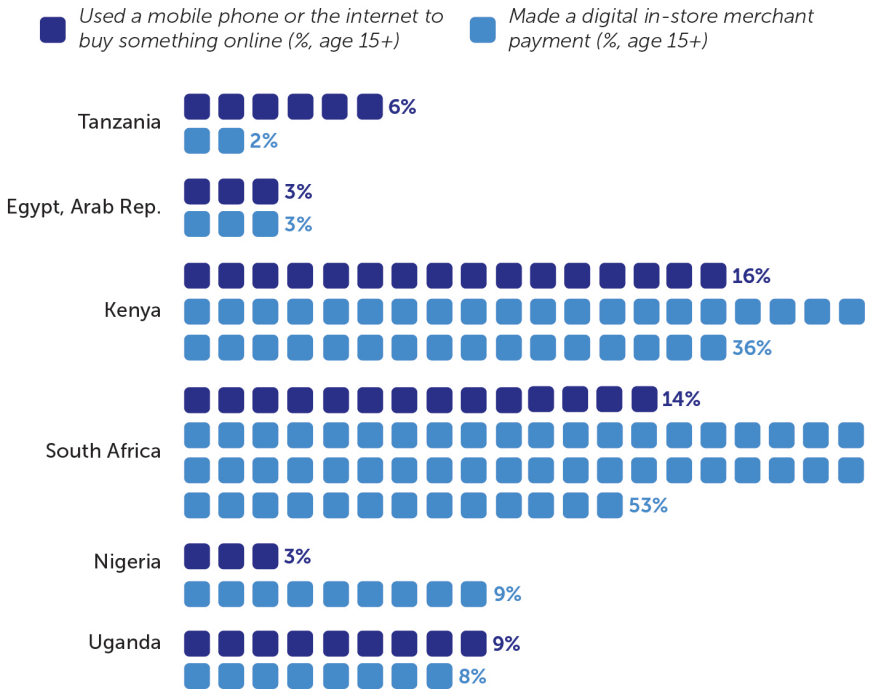
[26] McKinsey, The Future of Payments in Africa

Figure 11 | Gendered mobile money usage in 2021 (%, Age 15+)



is a backbone of the Tanzanian economy, 67 percent of agricultural payment recipients received payments for products in cash only. While this indicator is comparable in Uganda, at 64 percent, it is much lower in Kenya at 34 percent (and where 63 percent of agricultural payment recipiences received payments for products into an account).[27]

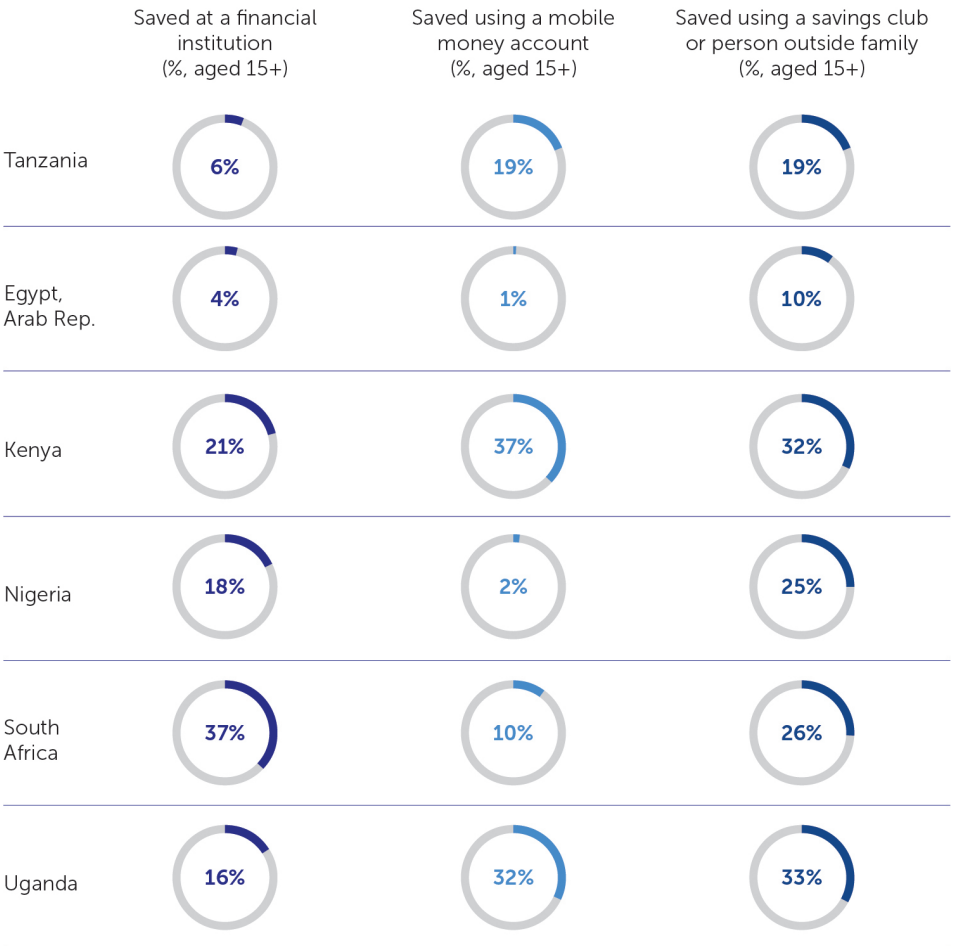
Figure 12 | Digital merchant payments and e-commerce (%, aged 15+)



[27] World Bank, The Global Findex Database 2021

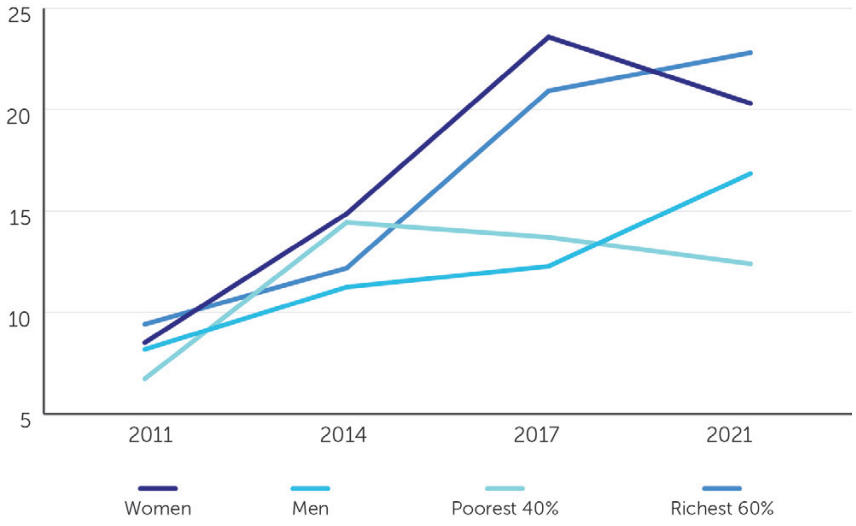
- **When it comes to saving and borrowing, digital tools are on the rise, but there is a continued preference for informal finance.** Half of the population reported saving any money in 2021, but the proportion of people saving through a mobile money account (19.2 percent) was only slightly higher than the proportion that saved using a savings club or person outside the family (18.6 percent). It's also notable that growth in mobile money has been accompanied by an expansion in people using multiple forms of financial services (bank, non-bank formal, informal), suggesting that for many people, digital tools do not replace informal tools, but rather supplement them.[28] This is true in more advanced markets too, like Kenya, Nigeria, and South Africa, where saving using a saving club or person outside the family remains common, even as demand for fintech grows.

Figure 13 | Comparative savings patterns (%, aged 15+)



[28] Finscope 2023

Figure 14 | Saved using a savings club or person outside the family (%, aged 15+)



- **With borrowing, there is an even more persistent preference for informal tools.** A total of 46.9 percent of adults in Tanzania borrowed any money in 2021, with 39.3 percent of adults borrowing informally.[29] While digital technology can be leveraged to overcome some traditional constraints to borrowing, there is a long way to go in making digital credit easily accessible and convenient in terms of repayment. For example, while there is potential for mobile money usage and MSME-digitization to generate data that can be used for credit scoring, this requires baseline levels of digitization and access to digital skills and devices among individual and MSME-customers. Lack of collateral also remains a key constraint to borrowing, especially among women and MSME-owners. Finally, growth in digital credit may be hindered by concerns about over-indebtedness, though this is worth exploring further. By some measures, 31 percent of formal borrowers have defaulted, three times higher than the rate in Kenya, and 56 percent have repaid a digital loan late.[30] Concerns around formal borrowing might be linked to a lack of financial literacy, with almost 1/3 of digital borrowers reporting experiencing unexpected fees, withdrawals by the lender, misunderstanding the cost and terms of the loan. Further, only 7 percent of Tanzanian adults are aware of a credit reference bureau, which may limit their ability to effectively manage their credit score.

[29] 29.2 percent from family or friends and 9.1 percent from a savings club
[30] The World Bank, Digital Financial Services

On the other hand, Finscope shows that although 62 percent of those borrowing borrowed more than once in the past 12 months, around 9 in 10 borrowers evaluate their current debt as manageable.

- **Finally, Tanzania ranks low on GSMA's content and services indicators**, which measure local relevance (the amount of content developed within a country that is likely to be relevant) and availability (the amount of content likely to be accessible to a country's population, irrespective of where it is developed).

Recommendations

Several key informants said that while product relevance is a big challenge for the fintech sector, the good news is that the market is open, with many problems and manual processes for fintech to solve. It is not that fintech is irrelevant, but that there is a lack of cost-effective value-added services. Products and services can be better-tailored and become more useful through multi-stakeholder efforts to expand:

- **Digital savings products that use traditional savings groups as entry points and that encourage targeted savings for group-specific needs.** While savings groups are popular among women, men are also using them with increasing frequency in Tanzania, and they remain popular in economies with more advanced fintech markets. Fintechs should endeavor to add value to savings groups, not replace them.
- **Digital credit and/or other products with repayment plans/services aligned with specific, business needs and agricultural cycles.** According to FinScope 2023, 79 percent of Tanzanians earn income seasonally (money from trading, including farmers) or occasionally (piece work/casual labor), 89 percent of people receive income in cash, and farming or business expenses are regarded as priority expenses. Financial sector products need to meet these realities.
- **The use of Artificial intelligence (AI) and alternative data sources** (e.g., mobile money transactions, digital books and records) for credit scoring individuals or businesses without a formal credit history.
- **Embedded finance solutions** that integrate lending, payments, and other products into customer journeys and third-party platforms. Examples of potentially relevant use-cases include mobile money to pay for health insurance, traffic fines, and VAT taxes.

- **Across the above, a human-centered design (HCD) approach to product design.** While many products/services attempt to solve real problems, HCD ensures, through testing and iteration based on customer feedback, that all elements of the product—from its interface to marketing and distribution—are developed with the customer in mind.
- **Merchant payment interoperability.** The 2022 launch of the Tanzania Instant Payment System (TIPS), which offers more people the opportunity to benefit from seamless digital payments, may also be favorable to demand for digital payments. The fact that 52 percent of those that did make an in-store digital merchant payment in 2021 did so for the first time after the start of the COVID-19 pandemic suggests there is momentum to build upon and that concerted efforts to promote the benefits of digital payments can be effective.

Figure 15 | Borrowing patterns (%, aged 15+)

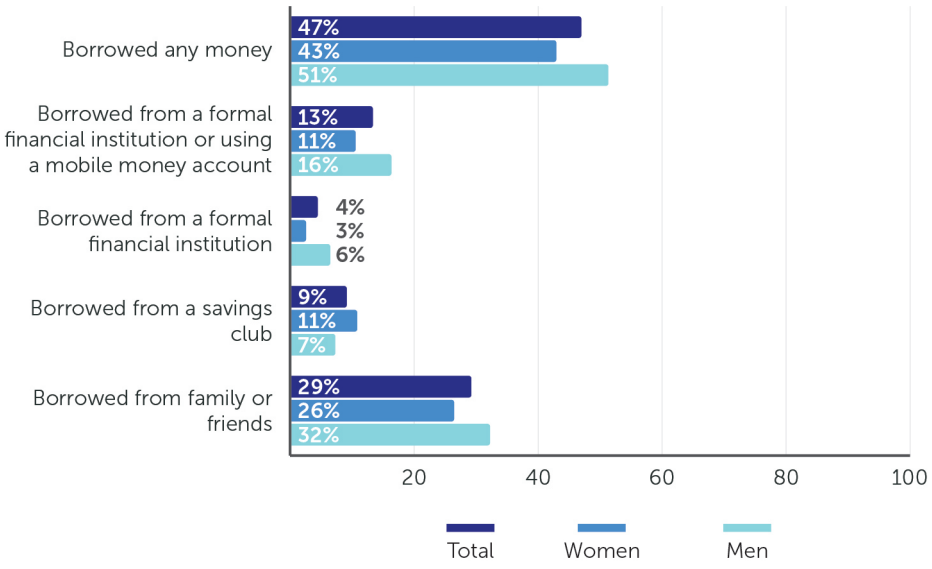


Table 5 | Content and Services

GSMA Mobile Connectivity Index: Content and Services		
Country	Local Relevance	Availability
Tanzania	**35.2**	**59.6**
Egypt	52.9	86.7
Kenya	47.5	58.3
Nigeria	39.3	53.0
South Africa	64.6	63.6

Pesatech Accelerator

UNCDF is currently supporting PesaTech, a fintech accelerator for post-MVP and growth-stage fintech start-ups in Tanzania. PesaTech selects innovative start-ups that are filling niche gaps in the market and that have potential to scale. It builds their capacity to raise investment through an investor readiness program, also acting as a marketplace between start-ups, investors, and other strategic partners.

PesaTech's first cohort was implemented by Sahara Ventures in partnership with ENEA Advisors, Hindsight Ventures, and iPF Softwares with funding from the European Union and SIDA.

UNDP is implementing FUNGUO, which is working to increase the number of successfully scaled impact ventures in Tanzania, through activities that focus on innovation financing, innovation service delivery, and the innovation enabling environment.

The case studies below include: Dawa Mkononi, Laina Finance, and Kilimo Maendeleo, which are members of PesaTech's first cohort and TEchy8, a FUNGUO grantee.

Dawa Mkononi

Transforming pharmeceuitcal procurement in Africa

Dawa Mkononi is an innovative B2B health and fintech application that is transforming the pharmaceutical procurement landscape in Tanzania and throughout Africa. The platform offers an e-commerce solution for pharmacies, accredited drug dispensaries (ADDOs), and healthcare outlets to purchase pharmaceutical products in bulk online. Dawa Mkononi's efficient and digitalized approach streamlines procurement, reduces costs, and enhances inventory management for healthcare providers.

Dawa Mkononi distinguishes itself through its intuitive platform, delivering convenience, safety, and reliability to pharmacies, ADDOs, polyclinics, and other healthcare facilities. With just a few clicks, users in Dar es Salaam can register, order, pay, and receive delivery of medications within hours. Boasting over 2,000+ stock keeping units (SKUs), the platform's easy-to-navigate categories and visual aids minimize errors. Unique features, such as discounts and reorder options for returning customers, add value to the user experience. In this way, Dawa Mkononi is a good example of a fintech company that is tailoring its products and services to the specific needs of specific customers -- in this case, healthcare providers.

Kilimo Maendeleo

Digitizing Agriculture

Kilimo Maendeleo is a start-up that is revolutionizing agricultural value chains with KM360, an Agriculture Digital Economy Platform that harnesses ag-tech and fintech to digitize processes, stakeholders, and assets. This solution serves smallholder farmers by responding to several challenges including scalability, traceability, visibility, and sustainability across multiple value chains.

Digital assets offered by Kilimo Maendeleo, including mobile apps and web-based consoles, as well as tools like cloud computing, machine learning, and artificial intelligence enable seamless integration of financial and insurance services, market linkages, and advisory services.

With over 89,000 farmers in 16 Districts and plans to expand, Kilimo Maendeleo is an example of a fintech company responding to the specific challenges of a specific customer segment -- farmers.

Laina Finance

Pioneering Digital Finance

Laina Finance is a digital financial service provider and fintech company committed to delivering affordable and accessible financial services to underserved populations in developing countries.

Understanding the challenges of accessing credit and finance due to irregular income, strict collateral requirements, asymmetric information, and the absence of sharia-compliance financial products, Laina Finance partners with service providers to offer instant credit as a point-of-purchase payment plan within the East African market.

Utilizing blockchain technology and AI, their platform combines diverse data sources to inform credit decisions. Their extensive offerings also encompass insurance, premium finance, device finance, TV subscription, cash loans, overdraft and agro financing. Their service platform engages a broad spectrum of partners, including mobile network operators, banks, insurance companies, and credit information providers. They aim to empower credit-based payment for any purchase, with a core mission of enhancing financial service accessibility and affordability.

With a subscriber base of half a million individuals, and a total addressable market in the region of around 100 million, Laina is addressing the growing demand for credit designed to meet the specific yet diverse needs of low-income customers.

Techy8

Bridging the gap between business & tech

Techy8 is an innovative, women-founded tech company that provides IT solutions and consulting services.

One of its core products is an online marketplace called Kiafrika, which provides an online market platform for local designers, crafters, and artists that lack an online presence, enabling them to sell their creative work both locally and globally.

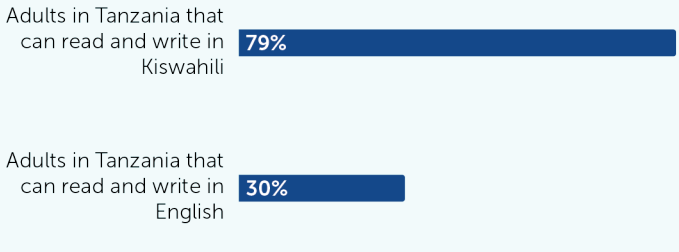
Kiafrika opens the local and global market to these vendors and allows customers, designers, and producers to interface smoothly.

PERCEIVED EASE OF USE

OF DIGITAL FINANCIAL SERVICES IN TANZANIA

Basic financial and digital literacy are prerequisites for demand-driven DFS

In terms of basic literacy, Tanzania does not fare much worse than neighboring countries. While many existing DFS and fintech solutions have Swahili user-interfaces, low English literacy may be an issue for the take-up and usage of more advanced solutions



DIGITAL LITERACY CHECKLIST: WHAT DO FIRST-TIME CUSTOMERS NEED TO UNDERSTAND?

- potential benefits of a product/service
- how to use product/service
- how to access support, if needed

It is not always language, but rather communication that is the problem:

the use of jargon and a failure to clarify to customers how particular financial services fit their needs often excludes potentially strong and profitable customers.

Demand for DFS and fintech also requires basic digital skills, which are low in Tanzania.

Low levels of digital awareness and skills not only prevent people from utilizing digital tools altogether, but from utilizing them to their full potential and with confidence.

41% of attendees at the 2020 Tanzania Youth Digital Summit indicated that they lacked awareness of the benefits of the internet

3.3 Tanzania ranked 13 out of 16 African countries, with a score of 3.3 out of 10 for digital skills by the Digital Skills Gap Index (2021)

99% of attendees at the 2020 Tanzania Youth Digital Summit said that they needed better digital skills to improve their business and career prospects

62.6 of adults with a mobile money account can use one without help from anyone

Efforts to improve usefulness must be accompanied

by efforts to make them easier to use and to increase financial and digital skills, especially as products and services become more complex. This should include:

- **The elimination of jargon and technical terms** that first-time customers and/or people with basic financial literacy will not understand.
- **Increased attention to customer support,** also delivered through digital and non-digital channels.
- **The delivery of financial and digital education** through a variety of channels, both digital and non-digital, including through products and services themselves.
- **Public-sector led revision of primary and secondary school curricula** to incorporate courses on core digital skills, enhanced teacher training in digital skills, and investment in basic digital skills programs in other social structures

Perceived ease of use

While a product's ease of use is tied to its usefulness—there will be greater incentive to use a product if it is useful, and it will become easier to use the more it is used—basic financial and digital literacy are still prerequisites for demand-driven DFS.

- **In terms of basic literacy, Tanzania does not fare much worse than neighboring countries: 79 percent of adults can read and write in Kiswahili.** While this suggests that literacy is not a key differentiator from more advanced markets, over 3 in 10 adults end schooling after the primary level and English literacy is low at only 30 percent.[31] While many existing DFS and fintech solutions have Swahili user-interfaces, low English literacy may be an issue for the take-up and usage of more advanced solutions, especially those imported from foreign markets. A founder in the e-commerce space expressed that, relatedly, even if platforms are in Kiswahili, integration with supporting services (e.g., logistics companies, payment gateways) is often in English. It will take time, and fintech sector growth, for Kiswahili to become a recognized working language among larger international companies.

Table 6 | Literacy rate, 2021 (% of people age 15+)

Literacy rate, 2021 (% of people age 15+)			
Country	Adult Total	Adult Female	Adult Male
Tanzania	**82**	**78**	**86**
Egypt	73	67	79
Kenya	83	80	85
Nigeria	62	53	71
South Africa	95	95	96
Source: The World Bank			

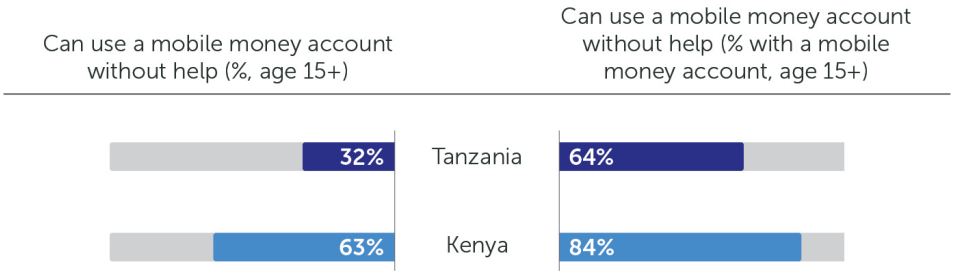
- **On the other hand, it is not always language, but rather communication that is the problem: the use of jargon and a failure to clarify to customers how particular financial services fit their needs often excludes potentially strong customers.**[32] Potential first-time customers need to clearly understand the potential benefits of a product/service, how to use it, and how to access support if needed. FSPs need to avoid jargon and technical terms that require

[31] Finscope 2023
[32] CGAP, No Small Business

computation to comprehend (e.g., interest rates), and rather communicate in a way that is more visual or example driven.

Multiple fintech founders interviewed for this report expressed that while financially literate customers might read the fine print (i.e., terms of service), many people are unaware of it or view it as too long or dense. A founder of Laina (*see page 38*), spoke about a customer who came to Laina when they wanted to return a device bought from a third party but financed by Laina. While Laina was able to cancel the loan and the customer returned the device to the vendor, this example highlights the need to go back to basics when it comes to consumer awareness. Laina now supplements paper-based instructions with phone calls immediately after they have used the service, giving customers the chance to ask case-specific questions in real time. With business models that often rely on partnerships, fintechs must not only make their terms of service accessible and clear, but they must also work with partners that do the same.

Figure 16 | Ease of use, 2021



- **Demand for DFS and fintech also requires basic digital skills, which are low in Tanzania.** Although digital skills are typically higher among youth and millennials, 41 percent of attendees at the 2020 Tanzania Youth Digital Summit indicated that they lacked awareness of the benefits of the internet, and 99 percent said that they needed better digital skills to improve their business and career prospects. The Digital Skills Gap Index (2021) by Wiley, which considers factors such as the existence of supporting educational institutions and the supply/demand of personnel with appropriate digital capabilities ranked Tanzania 13 out of 16 African countries, with a score of 3.3 out of 10 for digital skills.[33] By comparison, Kenya ranked second with a score of 4.8, South Africa fourth with a score of 4.4, and Nigeria eleventh with a score of 3.6. Tanzania also ranks low compared to the Big 4 according to GSMA's consumer readiness

[33] GSMA, Opportunities for Digitalization

indicators, which include mobile ownership (levels of mobile usage), basic skills (literacy levels and participation in formal education), and gender equality (socioeconomic factors, legal rights and technology use by gender). A key informant echoed these findings, saying that the lack of digital literacy is the biggest constraint to demand for fintech.

There are still a significant number of people, particularly in peri-urban and rural areas, that still don't have basic digital skills; as more services move from USSD to mobile application, new skills - such as how to access and download apps - are required.

- **If low levels of digital awareness and skills do not prevent people from utilizing digital tools altogether, they prevent them from utilizing them with confidence and to their full potential.** For example, while 45 percent of adults in Tanzania own a mobile money account, only 28 percent report being able to use one without help from anyone, including a mobile money agent and only 62.6 percent of adults with a mobile money account can use one without help from anyone.[34] These indicators are comparatively higher in neighboring Kenya, where literacy rates are also somewhat higher, and where English is an official language. Digital skills issues are exacerbated for women, who are more likely to need help using a mobile money account, less confident about independently acquiring the digital skills required to use a mobile phone, and more concerned about the consequences of making mistakes.[35]

Table 7 | Digital skills global index

Digital Skills Global Index		
Rank	Economy/Location	Score
1	Mauritius	5
2	Kenya	4.8
3	Rwanda	4.5
4	South Africa	4.4
5	Botswana	4.2
6	Ghana	3.9
7	Namibia	3.8
8	Uganda	3.7
9	Zambia	3.6

[34] World Bank, The Global Findex Database 2021
[35] https://www.wider.unu.edu/publication/gender-disparities-financial-inclusion-tanzania

Digital Skills Global Index		
Rank	Economy/Location	Score
10	Senegal	3.6
11	Nigeria	3.6
12	Cameroon	3.4
13	**Tanzania**	**3.3**
14	Benin	3.2
15	Zimbabwe	2.8
16	Ethiopia	2.8
17	Guinea	2.4
18	Mali	2.4
19	Madagascar	2.4
20	Mauritania	2.3
21	Malawi	2.2
22	Burkina Faso	2.2
23	Angola	2.2
24	Burundi	2.1
25	Chad	1.9
26	Mozambique	1.8
Source: DSGI, Wiley		

Table 8 | GSMA Mobile Connectivity Index: Consumer Readiness

GSMA Mobile Connectivity Index: Consumer Readiness			
Country	Mobile Ownership	Basic Skills	Gender Equality
Tanzania	**46.7**	**37.9**	**56.9**
Egypt	76.2	53.3	55.0
Kenya	58.9	43.8	74.0
Nigeria	56.3	40.2	65.8
South Africa	75.5	61.9	85.4

Recommendations

Again, while ease of use is tied to perceived usefulness—users will require less help the more frequently they use a service—efforts to improve usefulness must be accompanied by efforts to make them easier to use and to increase financial and digital skills, especially as products and services become more complex.

This should include:

- **The elimination of jargon and technical terms that first-time customers and/or people with basic financial literacy will not understand.** FSPs should replace this with visual, example-based information on how the product/service works, its terms and conditions, how to seek support, etc.

- **The delivery of financial and digital education through a variety of channels, both digital and non-digital (e.g., paper, SMS, in-person), including through products and services themselves.** People learn best when material is internalized, reinforced, and applied. Educational content should also be tailored to specific customer segments to ensure that financial products and services do not just meet people's financial needs (product relevance), but also to their learning levels and preferences.

- **Increased attention to customer support, also delivered through digital and non-digital channels.** People value both online and offline customer support geared toward awareness, literacy, trust, troubleshooting, and dispute resolution. Providers can make human touchpoints available to users and eliminate risk by allowing trial use periods.

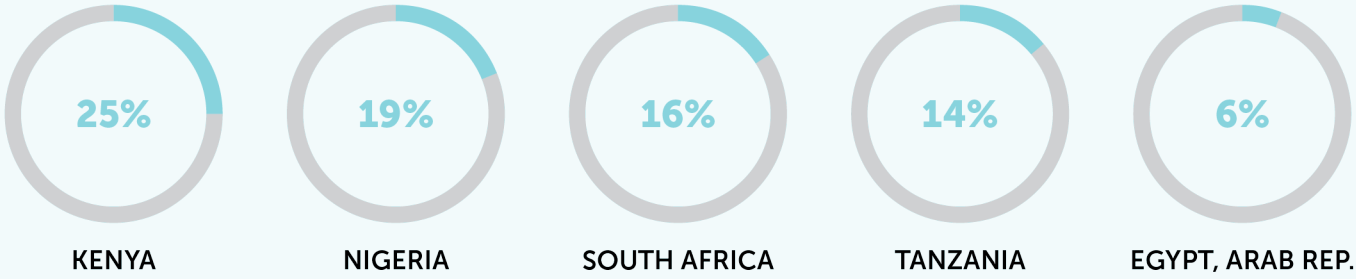
- **Public-sector led revision of primary and secondary school curricula to incorporate courses on core digital skills, enhanced teacher training in digital skills, and investment in basic digital skills programs in other social structures** (community centers, churches, mosques, libraries) to supplement/complement product-based content and build skills among older people or young people who are not in school.

PERCEIVED RISK AND TRUST

OF DIGITAL FINANCIAL SERVICES IN TANZANIA

When it comes to financial and mobile money accounts, a lack of trust in financial institutions is notably ***not***

one of the most cited reasons for lack of account ownership, according to the Global Findex.



KENYA | NIGERIA | SOUTH AFRICA | TANZANIA | EGYPT, ARAB REP.

no account because a lack of trust in financial institutions

But, not all the data and insights into consumer trust in DFS are straightforward

A recent GSMA study, for example, highlighted that lack of trust may be contributing to slow growth in e-commerce.

WHAT IS PREVENTING TRUST?

- deceptive information on goods and services
- misleading advertising
- an inability to sufficiently verify the identity and authenticity of traders
- tedious refund processes
- lack of money-back guarantees
- handling of personal information
- absence of reliable dispute resolution procedures
- lack of financial literacy/awareness

Building trust of digital financial services for consumers should include:

Public-sector led efforts to improve implementation of financial consumer protection regulation

Private-sector led efforts to improve consumer protection policies and procedures

Public and private-sector led efforts to incorporate consumer protection tips into financial/digital skills-building interventions

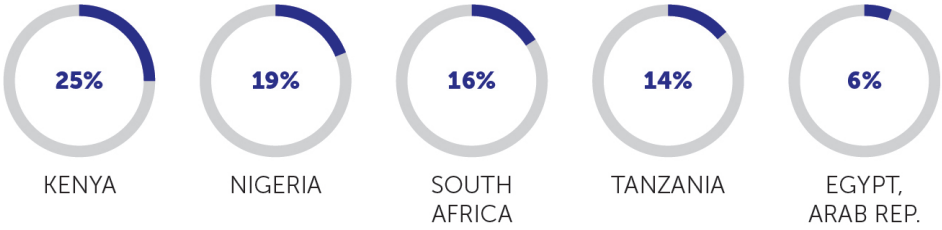
Perceived Risk and Trust

Perceived risk and trust are inherently interlinked; both are fundamental elements of expanding digital adoption and fostering a secure and reliable digital economy.

As financial systems become more complex, consumers need to know that their money is safe and that their data is secure, that services are fair, and that institutions are accountable for recourse. Users must believe that service providers have their interests and wellbeing—financial or otherwise—in mind.

- **When it comes to financial and mobile money accounts, a lack of trust in financial institutions is notably *not* one of the most cited reasons for lack of account ownership, according to the Global Findex.** The proportion of adults who report lacking trust in financial institutions, 14 percent, is lower in Tanzania than it is in Kenya (25 percent), Nigeria (19 percent), and South Africa (16 percent). While this is promising for perceived trust in fintech, these solutions are inherently more complex, and may entail reputable institutions working with lesser-known third parties. Maintaining and building consumer trust will remain an important consideration as providers try to onboard first-time customers, many of whom have low levels of digital literacy.

Figure 17 | No account because of a lack of trust in financial institutions (%, age15+)



- **Moreover, not all the data and insights into consumer trust in DFS are straightforward.** A recent GSMA study, for example, highlighted that lack of trust may be contributing to slow growth in e-commerce. This is due to real concerns around the likelihood of deceptive information on goods and services sold, misleading advertising, and an inability to sufficiently verify the identity and authenticity of traders. Consumers are also concerned about tedious refund processes, lack of money-back guarantees, the handling of personal information, and the absence of reliable dispute resolution procedures.

On the other hand, several fintech founders interviewed for this report expressed that Tanzanians are typically very willing to try something new, and that this is especially true at the last mile, when there is a promising, relevant solution. One hypothesized that this is a natural progression following positive experiences with mobile money and are looking for other non-bank solutions that target them specifically. While banks have cumbersome KYC practices and finance based on historical performance, new fintechs are leveraging technology to provide quick financing decisions—even if the answer is 'no,' to a loan, they won't waste time arriving at this decision.

Another founder had a different view, pointing out that there is, in some cases, perceived trust is the result of a lack of financial literacy. With e-commerce, for example, an individual might see a photo of something they'd like to buy and purchase it without worrying about whether it's a scam or reading consumer protection policies, because they don't have time to or because it's in a language they don't understand. It's only when they have first or second-hand experiences with fraud that they lose trust.

Finally, a third fintech founder pointed out that because fintech solutions touch many different sectors, it's not just trust between consumers and service providers that matters, but trust between a network of stakeholders and regulatory authorities including the central bank, MICIT, TCRA, the Ministry of Agriculture, and more.

Recommendations

- **Public-sector led efforts to improve implementation of financial consumer protection regulation**, including strengthening of provider policies and procedures on disclosure, transparency, fair access, privacy and data protections, guarantee schemes and insolvency, and enforcing re-dress mechanisms.
- **Private-sector led efforts to improve consumer protection policies and procedures.** This includes making product/service terms and conditions accessible to people with basic literacy and limited (or no) prior DFS experience, and ensuring procedures are gender-sensitive and do not over-burden lower-income earners.
- **Public and private-sector led efforts to incorporate consumer protection tips into financial/digital skills-building interventions.**

Personal Data Protection Act (DPA)

In May 2023, the Personal Data Protection Act (DPA) came into effect. The DPA provides for matters relating to protection of personal data and establishes the principles and guiding conditions for collection and processing of personal data, making it highly relevant to digital financial service providers who collect a significant amount of personal data from customers. The Act also creates a new Data Protection Commission, responsible for monitoring compliance by data controllers and processors, handling complains, enforcing measures, and raising public awareness.

For collectors and processors of data, key principles outlined in the DPA include:

- Data must be processed lawfully, fairly, and transparently
- Data must be collected for legitimate purposes and not used in a way that is incompatible with those purposes
- Data minimization: only the necessary data that is adequate and relevant should be processed
- Data collected should be accurate and up to date
- Data must be secured during processing
- Restrictions on the transfer of data across borders

For consumers, the DPA protects consumers by granting them key rights, including:

- The right to access personal data
- The right to prevent processing that may affect the data subject, including the right to prevent processing of personal data for direct marketing purposes
- The right to challenge decisions based solely on automated processing.
- The right to seek damages from a data controller or processor for breaches of the DPA

The Data Protection Commission is not yet operational, granting fintechs and digital commerce companies time to introduce data protection provisions, update systems as needed, and ensure compliance with the new requirements. This is an opportunity for providers to not only ensure robust personal data protection, but also for them—and government—to build consumer awareness around these regulations, in turn building trust in the digital financial system.

SOCIAL NORMS

OF DIGITAL FINANCIAL SERVICES IN TANZANIA

Social norms are the shared beliefs around acceptable behavior by groups that determine how people and institutions act.

As it relates to DFS and fintech, shared beliefs around who should or should not engage with financial services and/or technology influence who benefits from them.

Traditional beliefs around women's primary role as caretakers and their subordinate position to men limit their

- educational attainment
- relative earnings
- household bargaining power
- demand for DFS

While DFS' contribution to women's financial inclusion should not be overlooked,

women continue to be disproportionately affected by demand-side constraints

Increasing women's demand for DFS and fintech

is not just a matter of increasing their income and educational attainment, it is a matter of changing social norms.

- gender-intentional product design and service delivery
- behavioral change interventions that convince men and other norms influencers of the benefits of women's participation in the digital economy
- increasing women's income and educational opportunities

In addition to wider multi-stakeholder efforts to increase women's earning power and educational attainment

challenging traditional social norms to increase demand for fintech may include:

Private-sector led efforts to promote gender-intentional product design and service delivery. This includes using sex-disaggregated data to better understands the needs and preferences of female customers, understanding when and where female agents may be more effective than male agents, leveraging traditional women's groups, and increasing customer support geared towards women.

Public-private partnerships to implement behavioral change interventions that encourage men and other norms influencers of the benefits of women's participation in the digital economy.

Social norms

Social norms are the shared beliefs around acceptable behavior by groups that determine how people and institutions act, while influencing their ideas, attitudes, and values.

As it relates to DFS and fintech, shared beliefs around who should or should not engage with financial services and/or technology influence who benefits from them. Gendered social norms, for example, heavily influence women's use of DFS. Traditional beliefs around women's primary role as caretakers and their subordinate position to men limit their educational attainment, relative earnings, household bargaining power and, in turn, demand for DFS.

- **While DFS' contribution to women's financial inclusion should not be overlooked, women continue to be disproportionately affected by all the demand-side constraints so-far explored.** Increasing costs impact women more than men due to their relatively low earning power; women have lower levels of basic literacy and digital skills; and they are at greater risk of financial fraud and abuse. Because social norms influence these outcomes, increasing women's demand for DFS and fintech is not just a matter of increasing their income and educational attainment, it is a matter of changing social norms. This means promoting gender-intentional product design and service delivery along with behavioral change interventions that convince men and other norms influencers of the benefits of women's participation in the digital economy. Just as products, services, and skill-building interventions must be tailored to segmented needs of different customers, social norms interventions must recognize that different social norms affect different types of women. For example, Laina, which serves both rural and urban areas on mainland Tanzania, and Zanzibar, must account for the fact that women are less likely to own or control their own phone in rural areas, while complying with Islamic finance laws and religious norms in coastal regions. The founders of Kilimo Maendeleo, which serves smallholder farmers, are thinking through different ways to better-serve women throughout the value chain, considering that while both men and women work the land, men are the ones who bring crops to the market.

- **Gendered social norms are not the only social norms influencing demand for DFS and fintech.** The founder of an e-commerce start-up said, for example, that Tanzanians are very relational people; business transactions, partnerships, and other exchanges are based on who you know. A person might travel to see

Table 9 | Gender gap for digital financial services; a compilation of research

The DFS gender gap in Tanzania		
Indicator	Score	Source
Access to economic opportunities	81/100	World Bank, 2019
Household duties	Women engaged 3.7 times more than men	OECD, 2019
Mobile internet costs	33% gender gap in mobile spending	GSMA, 2019
ID ownerships	5% gender gap	World Bank, 2019
Handset, SIM costs	Barrier for 64% of women	GSMA 2019
Labor participation	4% gender gap	World Bank, 2021
Mobile internet use gaps	52% gender gap	GSMA 2019
(compiled by the UNCDF Policy Accelerator, 2023)		

a tailor their mother has used for years, for example, rather than use the one down the street who is equally talented. This is a challenge for her business and other e-commerce platforms, which remove person-to-person exchanges for the sake of convenience and cost. To overcome these challenges, she is introducing her company to reputable and well-connected groups like the Tanzania Women's Chamber of Commerce (TWCC), to put a face and name behind the company and, in turn, vendors that sell on the platform.

Recommendations

In addition to wider multi-stakeholder efforts to increase women's earning power and educational attainment, challenging traditional social norms to increase demand for fintech may include:

- **Private-sector led efforts to promote gender-intentional product design and service delivery.** This includes using sex-disaggregated data to better understands the needs and preferences of female customers, understanding when and where female agents may be more effective than male agents, leveraging traditional women's groups, and increasing customer support geared towards women.
- **Public-private partnerships to implement behavioral change interventions** that encourage men and other norms influencers of the benefits of women's participation in the digital economy.

Providers' ability to understand, meet, and increase consumer demand

There are several supply-side constraints to growth in the DFS and fintech markets that are out of scope for this report: limited access to capital, inadequate infrastructure, and perceived risk among foreign investors, to name a few. It is important, however, to explore demand-side constraints from the provider perspective. For example, while better tailored and therefore more useful products and services could increase demand for fintech, do providers have the capacity to create these at scale?

- **On one hand, many fintechs and FSPs are generating transactional data that can provide valuable insights into consumer behavior and preferences.** The proliferation of digital products and services in various sectors of the economy—and increasing linkages between financial services and services in the 'real' economy—mean that FSPs interested in creating evidence-based solutions often have the data to do so.

- **What they often lack, however, is the capacity to turn that data into meaningful information.** In some cases, this is due to inadequate data management or AI systems, while in others it is a lack of human capacity for data analysis.

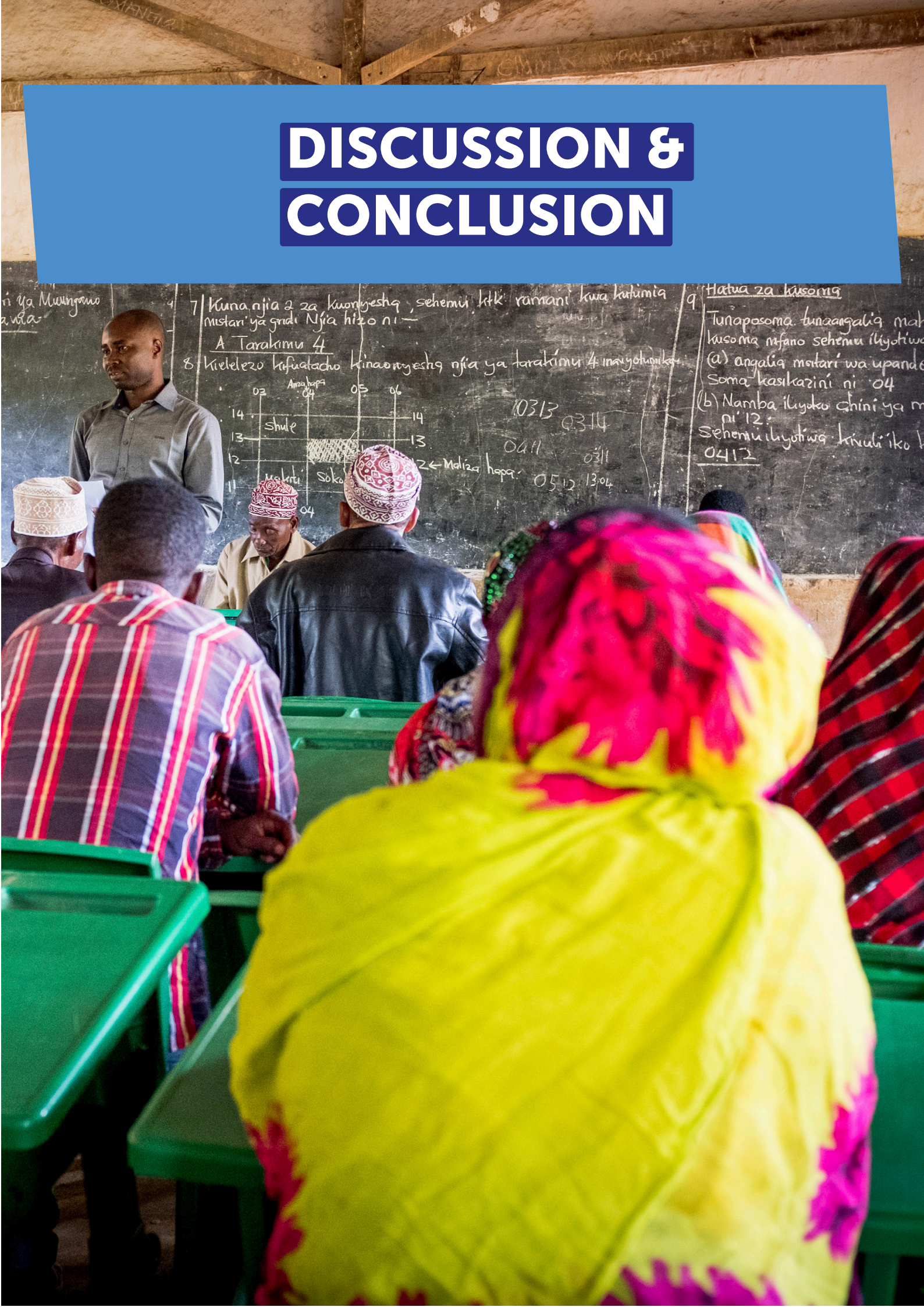
- **On the other hand, because transactional data is deepest where digital engagement is deepest, it is more limited for customers at the last mile, and inherently non-existent for non-users—pointing to a need for more data.** Almost all of the stakeholders interviewed emphasized the need to better-understand preferences, needs, and aspirations among lower-income earners through human-centered design if fintechs are to reach these customers, let alone transform their lives. They said that while many start-ups do a good job identifying a niche problem to solve, a failure to deeply understand the customer journey prevents them from operationalizing the idea well. The ones that succeed invest a significant amount of time upfront, throughout the product design phase, to speak with people about their needs, test ideas, collect feedback, and refine services accordingly. Laina, for example, is exploring income-earning patterns in the informal sector, while Kilimo Maendeleo plans services around agricultural cycles and business calendars. There is a focus on how solutions are built, not just what they are trying to do in theory.

- **Conducing HCD well, though, may also be easier said than done.** One founder expressed that they have been lucky: because people perceive potential benefits, they are very willing to speak with their teams and have provided information that has enhanced their products and services. Another, however, said that oftentimes people tell you what they think you want to hear, rather than what they really think or feel. Likewise, while collecting customer feedback via surveys incorporated into products or through phone calls is a good idea, the proportion of customers who complete such surveys is often quite low.

Recommendations

- **Public and private sector-led efforts to build FSPs' capacity to leverage existing data (e.g., transactional and administrative data) to design and refine customer-centric products.** This may include technical assistance for lean data collection and analysis, gender-sensitive data analysis, and best practices for human centered design. Accelerators, development partners, and private consulting firms may have a role to play here.
- **Increased focus among start-ups on first principles thinking to solve niche problems.** Start-up founders should not just try to replicate solutions that work in other markets, but rather spend more time engaging with customers to understand their needs and study the socio-cultural dynamics. The market is big and cash is still king, but start-ups need to identify specific problems and develop solutions that add value.
- **Increased collaboration among service providers.** While there will always be competition, service providers stand to gain from collaboration – e.g., sharing data and/or insights on customer trends and partnering to add value to existing solutions.

DISCUSSION & CONCLUSION



The DFS and fintech sectors in Tanzania are rapidly expanding, with many people pointing to the high potential for continued innovation in these areas to finally bring financial services those who remain excluded and to address persistent gaps in usage. These innovations may include new business models and partnerships between financial service providers, mobile network operators, and the next-generation of fintechs, as well as the application of new technologies to make financial services more affordable, useful, and safe. But, while technology is evolving quickly, is growth in demand keeping pace? Persistent gaps in account ownership, low smartphone penetration, and limited digital skills, especially as compared to more advanced economies, raise questions.

Perceived cost, relevance, ease of use, risk, and social norms all influence demand for DFS in fintech in an interconnected way. A consumer's willingness to pay, for example depends on the extent to which they perceive the product or service to be useful and relevant to their everyday lives. While products that are easy to use may be more useful, useful products will be used more regularly and require less effort over time. Financially literate consumers will have a stronger understanding of a product's risks and benefits and the recourse mechanisms in place.

The data and interviews analyzed for this report do not suggest that one driver of demand is more important than the other. Rather, for fintech to realize its potential, its applications must address all of these areas; they must be simple, affordable, and customer-centric. Advancements in financial technology must be accompanied by efforts to improve financial literacy and digital skills; to influence social norms to be more favorable to women's participation in the digital economy; to ensure the enabling environment is favorable to demand for DFS and fintech at the last mile; and finally, to equip providers to better understand and meet the needs of lower-income consumers.

In general, fintech founders and key stakeholders in the ecosystem are positive about their ability to continue to add value to existing products/services and to identify new, niche, and demand-driven solutions.

Impact Capital
for Development